

# Tellius 4.1

*Better Decision-Making through  
Improved Context and Collaboration*



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The screenshot displays several key features of the Tellius 4.1 interface:

- Unemployment Chart:** A line chart showing unemployment trends over time. A tooltip for the date "November 18th, 10:10:44 am" shows a value of "1,12" with a green "+16.65%" change, and a note: "Unemployment increased by 16.65% from 2019 to 2020".
- Track a New Metric:** A prominent orange button with a hand cursor.
- Revenue Vizpad:** A button labeled "Schedule Refresh" with a hand cursor.
- Measure Definition:** A tooltip for the "# ship\_cost" measure, stating: "The cost of packaging and dispatching the items from warehouse to the customer".
- Table:** A table with columns: Column Name, Display Name, Synonym, Rank, Description, and Include in Insight. The "ship\_cost" row is highlighted, and a dropdown menu is open over the Rank column, showing options 1, 2, 3, and 4. The "Include in Insight" column for "ship\_cost" has a "YES" toggle.

Column Name	Display Name	Synonym	Rank	Description	Include in Insight
ship_cost	Shipping Cost	Shipping Charge Shipping Fee	3	of packaging and dispatching the warehouse to the customer	YES
Order_id	Order		4		NO

**LIVE WEBINAR**

**Thursday Feb 16, 2023**  
**11am ET | 8am PT**



# Agenda

February 2023

- Intro to Tellius
- Tellius 4.1 Product Themes
- Innovations in 4.1
  - ◆ Key Features
  - ◆ Demo
- Q & A

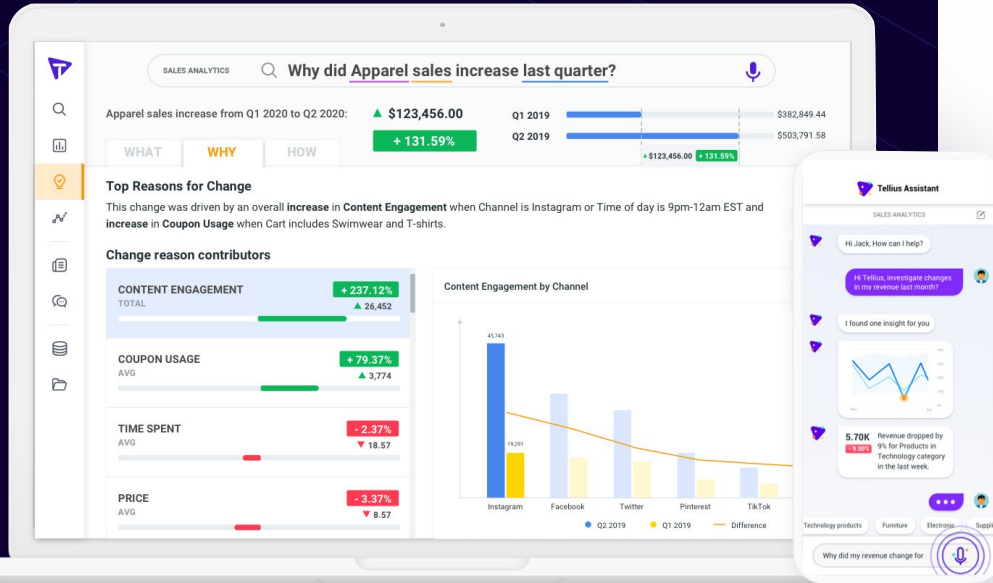


# What Is Tellius?

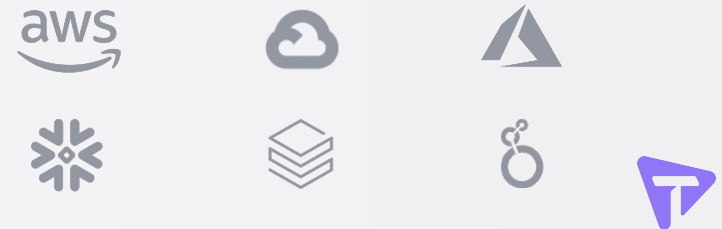
**Faster decisions**  
with *better* understanding of the  
**'what' and 'why'**  
from your *business data* using  
**AI-Powered Insights**

## Trusted by Innovative Global Brands

Pharmaceutical	NOVARTIS	AstraZeneca
Finance & Insurance	homepoint	UNIBERS
CPG	PEPSICO	P&G
Telecom & ICT	NOKIA	genpact
Retail	ebay	FRESHMART [...es para todos]
Technology	Teletrac Navman	Pelmorex Corp



## Partners





# Recognition from the **industry & analysts**

Market Validation and Customer Growth

Tellius named a **VISIONARY**



2022 Analytics & BI Platform  
*Magic Quadrant*



FORRESTER®

Now Tech:  
Augmented BI  
Platforms 2021



BI & Decisioning Software  
Solutions 2021

INNOVATOR

451 Research®

“[Tellius]’s automated  
detection of key business  
metrics and anomalies  
has really started to sizzle”

Gartner

COOL  
VENDOR  
2019



## Connect

to your data

## Augment

+ expedite analysis

## Decide & Act

on insights



### What happened?

NLQ  
Search

Autoviz  
& Vizpads

Anomaly  
Detection

### Why did it happen?

Key  
Drivers

Trend  
Changes

Cohort  
Comparison

### How to proceed next?

Segments

What-if

Predictions

Cloud  
Apps  
On-prem  
Files  
...



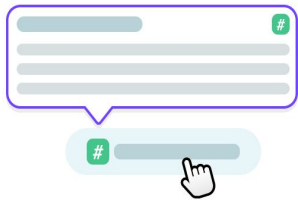
In Tellius

Analytics  
ecosystem

APIs

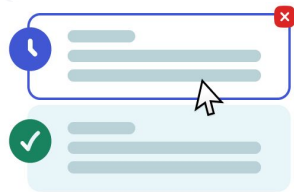


# Tellius 4.1 Key Themes



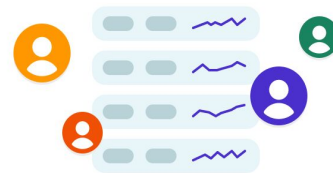
## Context

Establish context for every dataset with contextual metadata



## Transparency

Provide visibility on scheduled jobs via periodic alerts



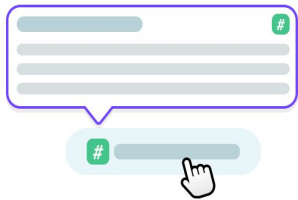
## Collaboration

Boost cross-team collaboration via multi-user subscription to Feed



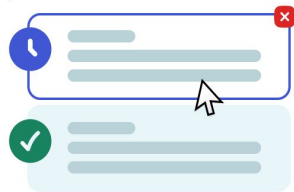


# Tellius 4.1 Key Themes



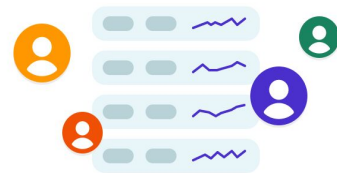
## Context

- ① Metadata for Columns
- ② Data Dictionary for Columns
- ③ Include/Exclude Columns for Insights/Predict
- ④ Rank Columns for Live Insights



## Transparency

- ⑤ Metadata for Notifications
- ⑥ Scheduled Jobs View and Subscribe
- ⑦ Processing Queries on Sample Data



## Collaboration

- ⑧ Feed Subscription





# Major: Metadata for Columns

Understand the context of data

## Why

- **Easier** and **faster** to **view** and **edit** metadata
- **Provides context** - data dictionary, user preferences (*rank, include/exclude columns, index*)
- Enables **context driven analysis**

## What

- Provides optimal view of all the **information about data in one place**
- Easily **edit** and **sort** columns
- Apply **changes in bulk**
- Values reflected across Tellius

Column Name	Display Name	Data Type	Column Type	Feature Type
order_id	Order ID	Integer	a Dimension	Categorical
profit	Profit	Integer	# Measure	Categorical
quantity	Quality	Integer	# Measure	Continuous
ship_date	Shipped date	Date	a Dimension	Discrete
country	Country	String	a Dimension	Categorical

Feature Type	Aggregation	Data Format	Synonym	Rank
Categorical	N/A	N/A	Order number × ID ×	5
Categorical	Avg	Number	Revenue ×	1
Continuous	Sum	Decimal	Click to add	2
Discrete	N/A	N/A	Dispatch Date ×	4
Categorical	N/A	N/A	Click to add	3







# Major: Data Dictionary for Columns

Understand the context of each column

## Why

- Informs and educates the users with data context
- Column **description, definition/calculation, lineage, source, and business context** can be presented across the platform
- Promotes **context driven analysis**

## What

- Data dictionary to help understand the **context** of each column
- **Contextual tooltip** across the platform
- Set up data descriptions in the **Metadata** view with flexibility to enable/disable descriptions in **Settings**

Column Name	Index Column	Description
Order_Date	Don't Index	Date of order
Ship_Mode	Default	Mode of shipment
Segment	Default	Segment of the ordered item
City	Default	City to be shipped
State	Default	State to be shipped
Country	Default	Country to be shipped
Orders_Market	Don't Index	Market where the order was placed
Orders_Region	Don't Index	Region where the order was placed

Column description

Show column description  ⓘ

Search inspector

We Analyzed:

top 4  
top 4 = top 4  
Quantity  
Quantity(Sum)  
display\_city  
display\_city  
In:  
bv\_Retail\_1511

We Analyzed

467 Rows  
In 0.334 Sec  
and returned 4 Rows result.

SQL code  
View SQL generated for this search →

Ordered Market dimension  
Market where the order was placed

Geo\_Dimensions  
Order Date  
City  
Country\_Display  
Ordered Region  
State

Calculated Columns  
ppts

Others  
count\_of\_records  
Discount  
Profit  
Quantity  
Sales  
Category  
Market  
Order\_ID  
Order\_Priority  
Ordered Market  
People\_Region  
Person  
Product\_Name



# Major: Include/Exclude Columns for Insights and Predict

Easily select columns for analysis

## Why

- **Generate meaningful Insights**
- Provide **context** on why certain **columns are excluded**
- **Reduced time spent** on repeated column selection for analysis across Insights

## What

- **Select columns to be included** for Insights and Predict in Metadata view
- **Flexibility to override** selections during Insights configuration
- Insights configuration and summary displays **exclusion reasons**

The screenshot displays the 'Insight Summary' and 'Column Selection' panels. The 'Insight Summary' panel shows the insight title 'Displaying Insights for 'What drives ITEM white\_zipper\_jogger?'' and lists columns included and excluded. The 'Column Selection' panel shows a list of columns with 'INCLUDED' and 'EXCLUDED' status, and a table for overriding these selections.

**Insight Summary**

**Explain**

Displaying Insights for 'What drives **ITEM** white\_zipper\_jogger?'

**By Including** 3

- COST
- DEPARTMENT
- PROFIT

**By Excluding** 21

Based on feature importance

- CUSTOMER\_ID
- TRANSACTION\_ID
- store city
- COMPETITION\_DISTANCE

User excluded during Insight Configuration

- brand name

Based on cardinality

- DATE

Selected as target column

- ITEM

User excluded during Data Preparation

- REVENUE
- PAYMENT\_TYPE
- STORE\_ID
- STORE\_LAT
- STORE\_TYPE

Show all

**Column Selection**

Type of insights: Insight Creation (Trend)

Select features you want to use for your customized insights. The insight will investigate change in Beds (count) From Aug 17, 2015 - Aug 23, 2015 to Last 7 Days

To: Airbnb

Search Column

**INCLUDED** 8

- Name
- Neighbourhood\_
- Number\_of\_Records
- Number\_of\_Reviews avg
- Price\_of\_Room sum
- Property\_Type
- Review\_Scores\_Rating avg

**EXCLUDED** 6

- Beds (count) (Selected as target column)
- Host (User excluded during Data Preparation)
- Host\_Since (Selected as column type (Date))
- Postal code (User excluded during Data Preparation)

BACK CREATE

Include in Insight	Include in Predict
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>





# Major: Rank Columns for Live Insights

## Prioritize columns for Live Insights

### Why

- Removes randomness in column selection for live insights
- Allows **prioritization of columns** for Live Insights
- Future: Will power search, recommendations etc. in subsequent releases

### What

- **Rank columns (1-20)** to be picked for **Live Insights** in Metadata view
- Ranked columns can still be excluded from Insights
- Available **only for Live Data** sources

Type of insights      Insight Creation (Comparison)      Column Selection

1      2      3

Select features you want to use for your customized insights. Current system settings allow for 20 columns to be selected. The insight will investigate **difference in Quantity (avg)** Between **Florida** and **Georgia**

bv\_RetailAnalytics\_live\_test

Search Column

**INCLUDED** 8 / 20      **Select All**

- 1 Orders\_Region
- 7 Discount **AVG**
- 6 Country Rank:6
- 7 Sales **AVG** Rank:7
- 8 Sub\_Category Rank:8
- 8 Category Rank:12
- 8 Person Rank:14

**EXCLUDED** 13      **Select All**

- 8 City Rank:4  
User excluded during Data Preparation
- 8 Market Rank:20  
User excluded during Data Preparation
- 8 Order\_Date Rank:1  
User excluded during Data Preparation
- 8 Order\_ID Rank:1  
User excluded during Data Preparation
- 8 Order\_Priority Rank:11  
Based on cardinality
- 8 Orders\_Market





# Major: Metadata for Notifications

## Improved Notifications module

### Why

- Improves **transparency** by providing **additional context** on the job metadata and failed jobs
- **Improves visibility** and enables the user to correlate the executed job with an actual object

### What

- Provides **additional metadata** for each job executed
- Added **object name and object type** in the Notifications module
- Job details shown for each job executed
- Ability to **re-run specific failed jobs**

Notifications (12353)

Filters: All, All, Last Created. Actions: MARK ALL AS READ, DELETE ALL.

Navigation: All, Insights, Models, Data, Scheduled Jobs.

OBJECT NAME	OBJECT TYPE	JOB TYPE	CREATED AT	CREATED BY	STATUS	TIME TAKEN	VIEW DETAILS
ecommerce3	BusinessView	SegmentDiscoveryIn	30 Jan, 2023 - 10:49am	superUser	FAILURE		VIEW DETAILS
test 202212291314	Vizpad	PipeLineExecute	30 Jan, 2023 - 10:48am	superUser	SUCCESS	16s	VIEW DETAILS
listtest	Vizpad	PipeLineExecute	30 Jan, 2023 - 10:26am	superUser	SUCCESS	16s	VIEW DETAILS
test 202212291314	Vizpad	PipeLineExecute	30 Jan, 2023 - 10:19am	superUser	SUCCESS	16s	VIEW DETAILS
test 202212291314	Vizpad	PipeLineExecute	30 Jan, 2023 - 10:18am	superUser	SUCCESS	16s	VIEW DETAILS
test 202212291314	Vizpad	PipeLineExecute	30 Jan, 2023 - 10:13am	superUser	SUCCESS	194s	VIEW DETAILS
Vizpad 2022	Vizpad	Refresh	30 Jan, 2023 - 10:06am	superUser	SUCCESS	0s	VIEW DETAILS
tellius_usage_tracker	DataSource	Refresh	30 Jan, 2023 - 09:37am	superUser	FAILURE		VIEW DETAILS
test		PipeLineExecute	30 Jan, 2023 - 09:25am	superUser	SUCCESS	195s	VIEW DETAILS
my	Vizpad	Refresh	28 Jan, 2023 - 05:51am	superUser	SUCCESS	0s	VIEW DETAILS
my	Vizpad	PipeLineExecute	28 Jan, 2023 - 05:50am	superUser	SUCCESS	33s	VIEW DETAILS
Vizpad 2022	Vizpad	Refresh	28 Jan, 2023 - 05:06am	superUser	SUCCESS	0s	VIEW DETAILS
Vizpad 2022	Vizpad	Refresh	28 Jan, 2023 - 04:06am	superUser	SUCCESS	0s	VIEW DETAILS
Vizpad 2022	Vizpad	Refresh	28 Jan, 2023 - 03:06am	superUser	SUCCESS	0s	VIEW DETAILS

### Job Details

**Status:** SegmentDiscoveryInsight **failure**.

**Report:** Applying filter or timerange is returning 0 rows of data

[RECONFIGURE](#) [RETRY JOB](#)





# Major: Scheduled Jobs View and Subscribe

## Subscription to scheduled jobs

### Why

- Improves **transparency** by providing **visibility** of scheduled jobs on shared objects
- Users can **subscribe** to the required jobs to receive **regular email notifications on job runs**

### What

- New tab in Notifications module to **display** and **track all scheduled jobs**
- Ability to **subscribe** to scheduled job and receive email notifications
- Helps users to stay informed about **status** of scheduled jobs on shared objects

OBJECT TYPE	OBJECT NAME	JOB TYPE	LAST EXECUTION	NEXT EXECUTION	REPEATS	STATUS	DETAILS	SUBSCRIBE
vizpad	rc_tickets - Clone	Refresh	2023-02-01 @ 09:43 IST	2023-02-08 @ 09:43 IST	Every 1 week(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets - Clone	Refresh	2023-02-01 @ 08:13 IST	2023-02-08 @ 08:13 IST	Every 1 week(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets	Refresh	2023-02-01 @ 17:01 IST	2023-02-02 @ 17:01 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
insight	test	Refresh	2023-02-01 @ 17:03 IST	2023-02-02 @ 17:03 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets	Refresh	2023-02-01 @ 16:55 IST	2023-02-02 @ 16:55 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	TEL-3097	Refresh	2023-02-01 @ 16:49 IST	2023-02-02 @ 16:49 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets	Refresh	2023-02-01 @ 14:48 IST	2023-02-02 @ 14:48 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets	Refresh	2023-01-31 @ 14:46 IST	2023-03-31 @ 14:46 IST	Every 2 month(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	rc_tickets	Refresh	2023-02-01 @ 14:39 IST	2023-02-02 @ 14:39 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	my	Refresh	2023-02-01 @ 05:51 IST	2023-02-02 @ 05:51 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
vizpad	my	Refresh	2023-02-01 @ 05:50 IST	2023-02-02 @ 05:50 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input checked="" type="checkbox"/>
dataset	RetailAnalytics_cpy_28_12	Refresh	2023-02-01 @ 16:54 IST	2023-02-02 @ 16:54 IST	Every 1 day(s)	● SUCCESS	<a href="#">View</a>	<input type="checkbox"/>



# Major: Processing Queries on Sample Data

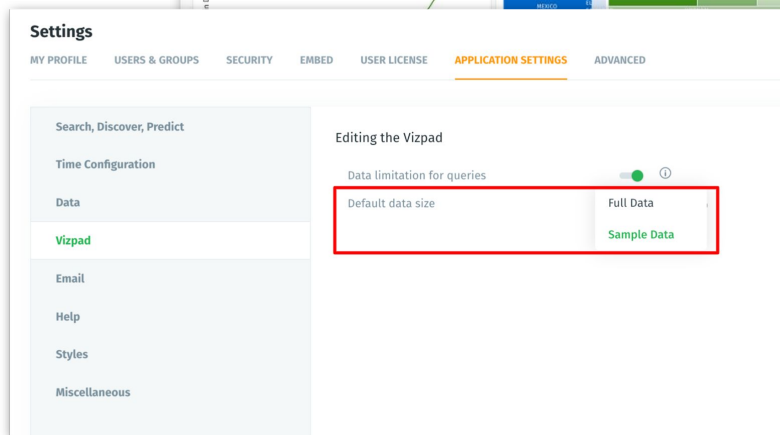
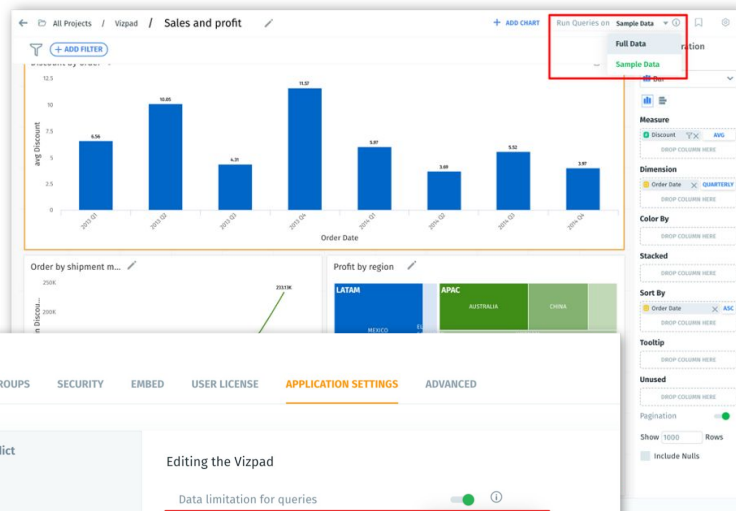
Improved user-experience

## Why

- Saves time for the creator persona by making **Vizpad building process more efficient**
- Especially helpful for **live connections** and/or **large datasets**

## What

- **Run queries on sample data** while building Vizpad
- Provides ability for Admins to determine the default behaviour in **Settings** (Full data vs. Sample data)
- Once the Vizpad is saved, results shown on **full data**



# Major: Feed Subscription

## Multi-user subscription to Feed

### Why

- Allow multiple users **to access the same feed hence eliminating** creation of **duplicate** Feeds
- Foster **collaboration** with multiple users getting **visibility and access to the same feed**
- **Frees up resources previously clogged due to duplicate jobs**

### What

- Multiple users can **subscribe to same Feed** and receive regular email alerts
- New Feed will be created after **checking for any similar Feed**
- User can **subscribe to existing Feed** or **create a new Feed**

### New Feed Subscription

This feed will be tracked using a Trend Insight. Please select the columns you'd like to include in this Insight.

🔗 bv\_feedexce\_unemp

INCLUDED	Select All	EXCLUDED	Select All
📌 Country			
📌 Country_Code			
📌 Year_Date			
📌 Year			
📌 Agricultural_Land_Percentage			
📌 Forest_Area			
📌 Food_Production_Index			

⚠️ The Feed you are trying to create already exist **SUBSCRIBE**

or [Create a new feed](#)







# Minor: Features in 4.1

clusters now available as Dimensions for Analysis

Bill_State	Bill_ZIP	Website	label_predic...
String	Double	String	String
CA	94,583	<a href="http://...	1
CA	94,583	<a href="http://...	1
WI	53,201	<a href="http://...	3
DE	19,898	<a href="http://...	1
DE	19,898	<a href="http://...	1
NY	10,166	<a href="http://...	3
NY	10,166	<a href="http://...	3
NY	10,166	<a href="http://...	3
NY	10,166	<a href="http://...	3

Report generation URL configurations

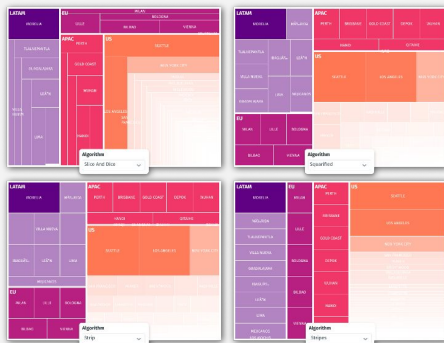
Report Configuration

Offline Render

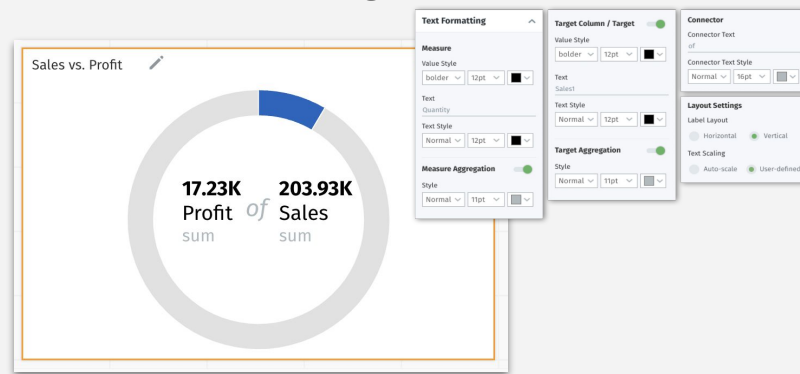
Public URL  [UPDATE](#)

Internal URL  [UPDATE](#)

Treemap algorithms - Slice and Dice, Squarified, Stripes, Strip



Enriched KPI and KPI target chart



# Minor: Features in 4.1

## Minor Improvements

- Kerberos based authentication for Spark SQL
- Proxy support for Salesforce and Google Analytics
- Seamless switching between different tabs in a Vizpad
- Increased timeout limit for the generation of multiple reports on Vizpad
- Added additional Python libraries to forbidden list
- 0 will not be plotted for null values
- Date format in csv download of Vizpad



# Minor: Fixes in 4.1

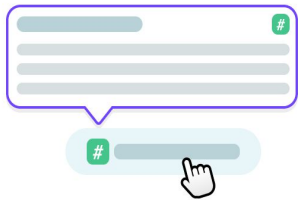
## Fixes

- Vizpad rendering, loading, and performance issues
- Default aggregation for measures
- Visibility of data labels for the waterfall charts
- Filtering of high cardinality columns using a Vizpad list filter
- Conditional formatting and number formatting for KPI charts
- Sanitize HTML tags entered in the Search queries
- Block special characters in names
- Dataset renaming issues with fusion and data load



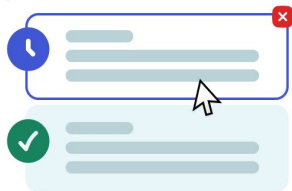


# Summary of 4.1



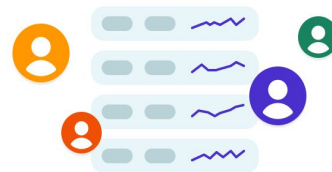
## Context

Establish context for every dataset with contextual metadata



## Transparency

Provide visibility on scheduled jobs via periodic alerts



## Collaboration

Boost cross-team collaboration via multi-user subscription to Feed





**Questions?**  
**Feedback?**

[product@tellius.com](mailto:product@tellius.com)

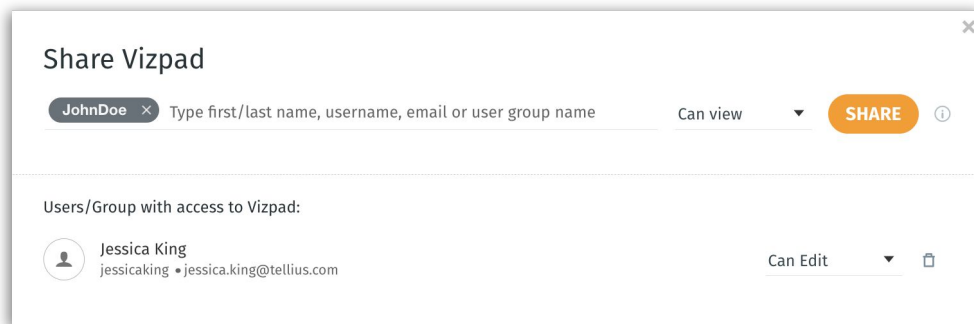
Washington DC • San Francisco • Bangalore

# Appendix

# Minor: Share Objects Using Name

## Share objects using person's name

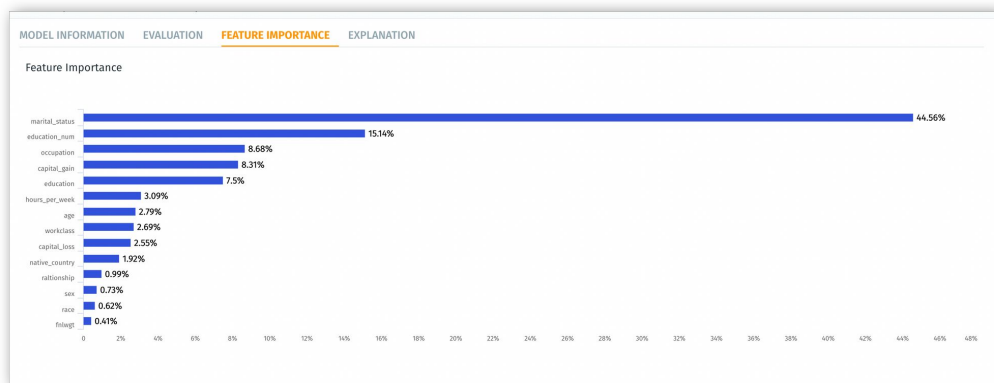
- Ability to **share objects** using person's **first name** or **last name** or **email**
- Now search using first name/last name or email or username while sharing objects
- Available across Tellius - **Data**, **Explore**, **Discover**, and **Predict**



# Major: Feature Importance for XGBoost

Display the feature importance for each column

- For models created using XGBoost algorithm, **feature importance for each column** will be displayed
- New tab called **Feature Importance** added to display the values





# Major: Search Panel Updates

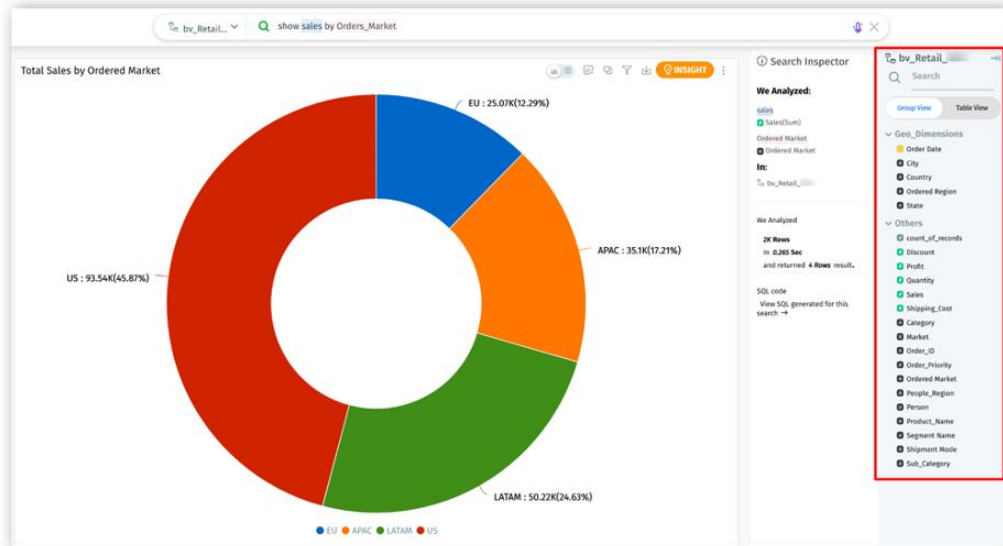
## Display columns in a BV in Search and Tellius Assistant

- **Search**

- When a search query is being typed, **BV panel is always open** unless the user collapses it
- On successful search, BV panel is pinned right next to the Search Inspector

- **Tellius Assistant**

- When a BV is selected, BV panel shows list of columns available
- Option to show/hide columns in Business View



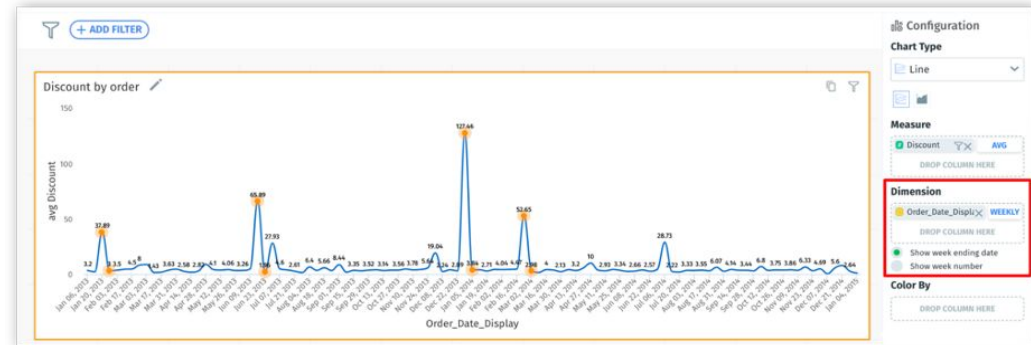
- Enhances Search experience



# Major: Weekly Aggregations Enhancements

## Change default from week number to week ending date

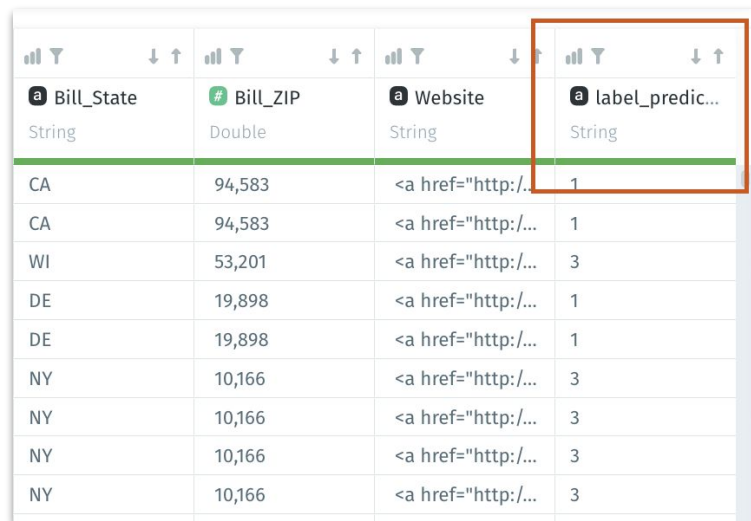
- For date columns with weekly aggregation in charts, default configuration will be **week ending date**
- Provides ability for Admins to determine the default behaviour (week ending date vs week number)
- Flexibility to toggle between week ending date and week numbers



# Major: Data Type of Cluster Labels

## Change clustering labels to dimensions

- Change the cluster labels to dimensions (string) instead of measures (numeric)
- Enable users to easily understand the output and use it



The screenshot shows a data table with four columns: 'Bill\_State', 'Bill\_ZIP', 'Website', and 'label\_predic...'. The 'label\_predic...' column is highlighted with a red box. The data rows show various states and ZIP codes, with corresponding website links and a numerical value in the 'label\_predic...' column.

Bill_State	Bill_ZIP	Website	label_predic...
CA	94,583	<a href="http://..."	1
CA	94,583	<a href="http://..."	1
WI	53,201	<a href="http://..."	3
DE	19,898	<a href="http://..."	1
DE	19,898	<a href="http://..."	1
NY	10,166	<a href="http://..."	3
NY	10,166	<a href="http://..."	3
NY	10,166	<a href="http://..."	3
NY	10,166	<a href="http://..."	3



# Major: Vizpad Generation on Intranet

## Report generation URL configurations

- **Open Vizpads seamlessly** from scheduled emails when connected to an **on-premise network**
- **Configure** required **URLs** in **Settings** to support the rendering of Vizpads
- Improves **adoption** of Vizpads

### Report Configuration

Offline Render

Public URL  [UPDATE](#)

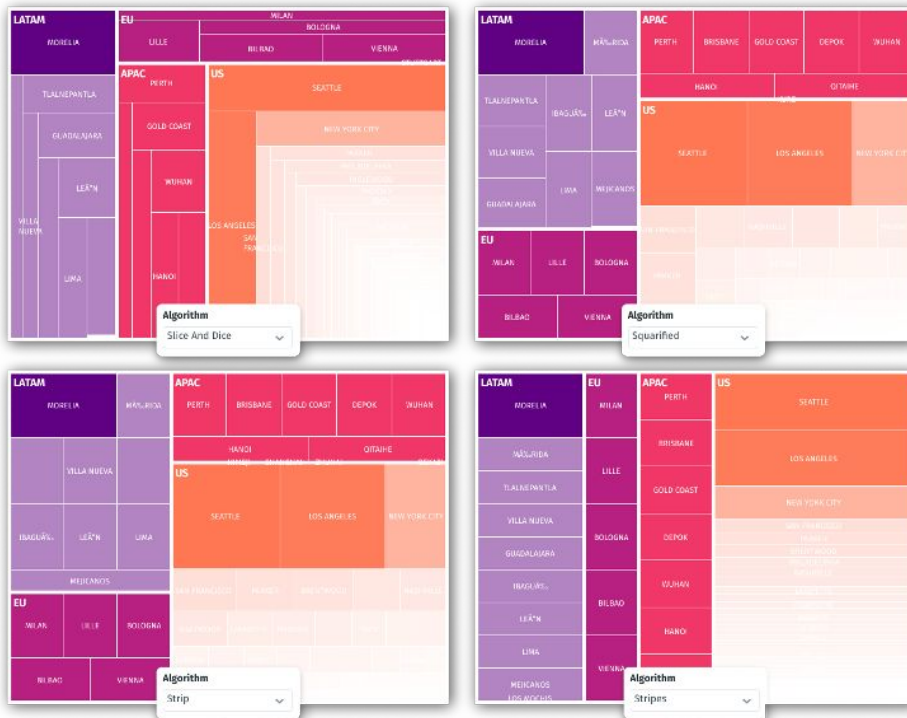
Internal URL  [UPDATE](#)



# Major: Additional Treemap Algorithms

## Improvements to Treemap chart

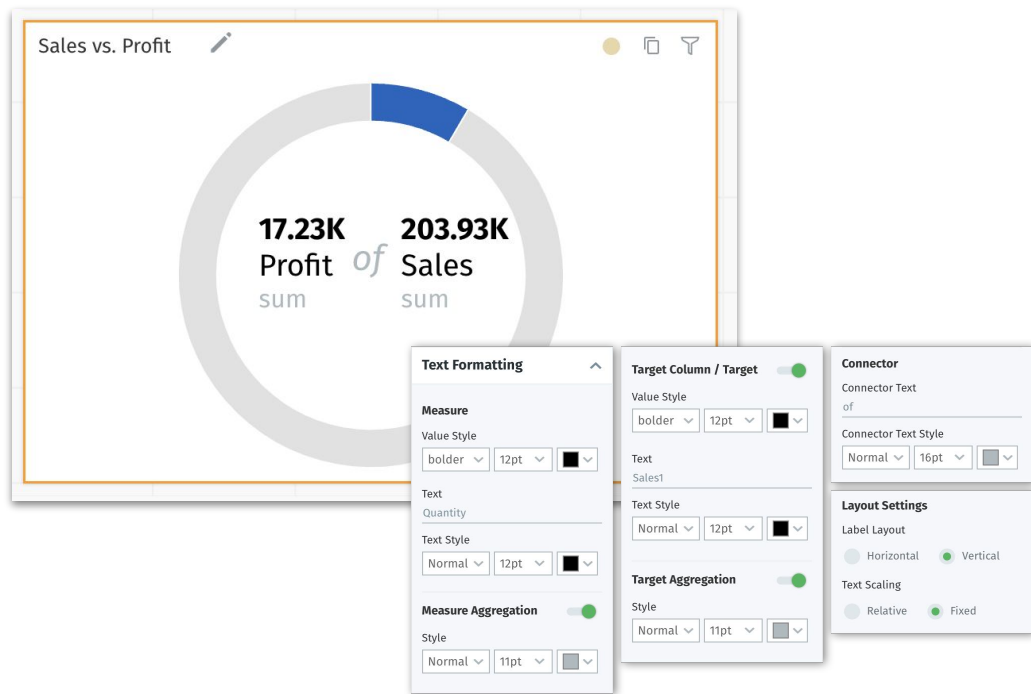
- Users can change the Treemap algorithm to represent **hierarchical data**
- Tellius now **supports all four Treemap algorithms** by Highcharts:
  - Slice and Dice (default)
  - Squarified
  - Stripes
  - Strip
- Option available in **Configuration** panel



# Major: Enriched KPI Chart

## Improvements to KPI chart formatting

- Flexibility to easily **customize** and **format** (text size, colour, style, layout) the measure, target and connector text
- Ability to customize the font size:
  - **User Defined** - Font size set by users
  - **Auto Scale** - Responsive sizing based on the chart size



# Minor: Kerberos Based Authentication

## Kerberos based authentication for Spark SQL

- Spark SQL connector supports Kerberos based authentication
- After getting authenticated, the user can access tables (list and load)



# Minor: Remove Python Libraries

## Add Python Libraries to Forbidden List

- The following libraries have been removed and cannot be imported in Python during data preparation
  - shlex
  - sh
  - plumbum
  - pexpect
  - fabric
  - envoy
  - commands
  - os
  - subprocess
  - requests

