Release Notes
DB Gene 4.0.3-fp2

June 16th, 2023

Important Notes

Please take into account the following important information when using the new version of

***DB Gene 4.0.3-fp2** released on June 16th, 2023.*

Updates

DB Gene 4.0.3-fp2 introduces the following infrastructure updates:

AG Grid Update

DB Gene 4.0.3-fp2 now uses AG Grid 29.3.5.

MongoDB Update

DB Gene 4.0.3-fp2 now uses MongoDB 6.0.5. It was formerly version 4.4.17.

PostgreSQL Update

DB Gene 4.0.3-fp2 now uses PostgreSQL 15.2. It was formerly version 12.

Deprecations

DB Gene 4.0.3-fp2 introduces no major infrastructure deprecation.

End-User Features

DB Gene 4.0.3-fp2 introduces several end-user features and enhancements regarding a new default font and version information feature, a new button to copy the API key, a clearer display of fields in the Filter widget, and many improvements on the Chart, KPI, Data Explorer, Data Grid, and Scenario Timeline widgets.

New Application Font: Lexend Deca

Gene applications now use the font **"Lexend Deca" by default**. It was formerly "Monserrat". Users can still configure their application to use the previous font through the application settings `--gene-font-family`.

Version Information in Application

In any application, users can now display, from the menu ⚙ **(Help) About**, version information regarding the Platform and the DB Gene services.
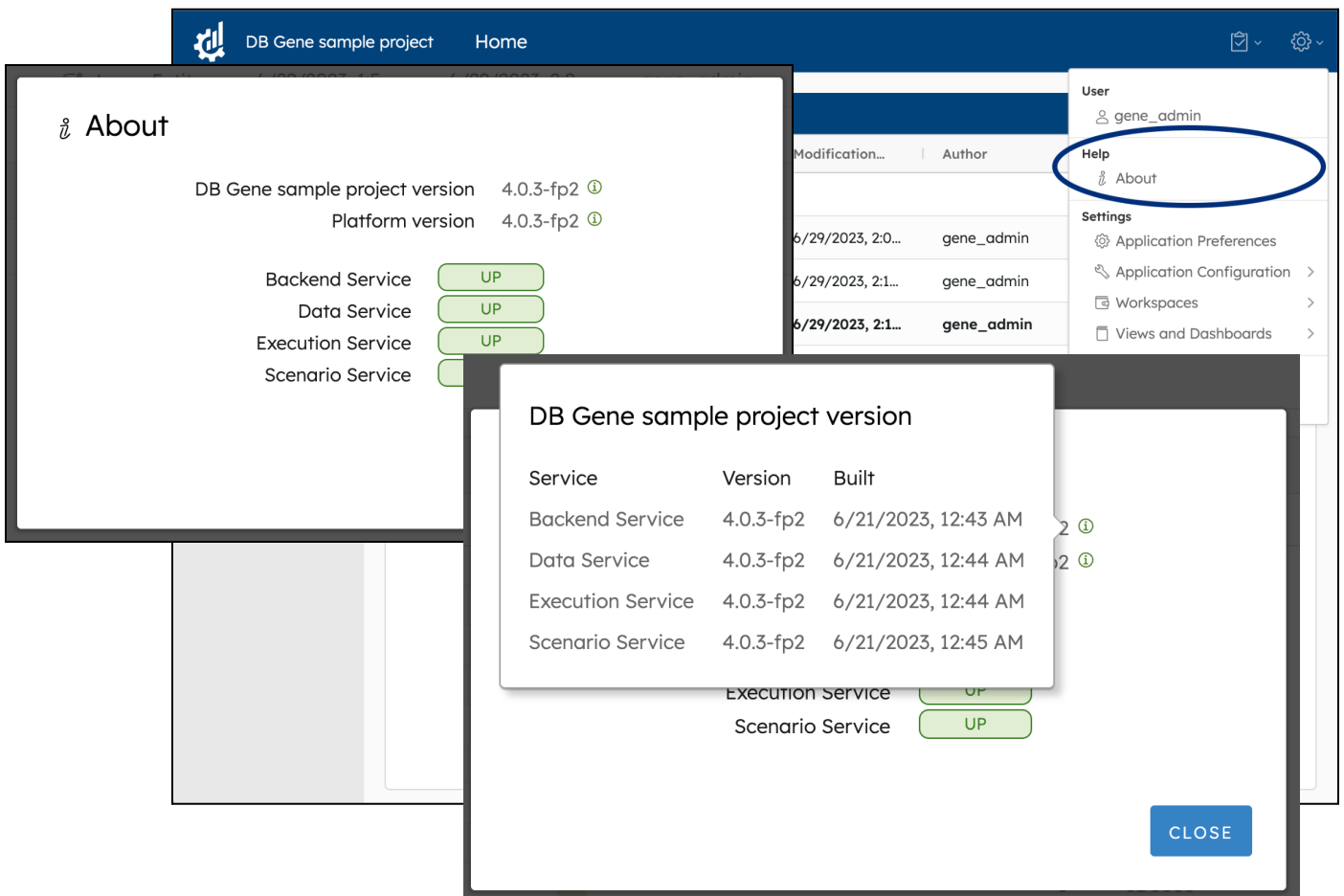
Dedicated Button to Copy API Keys

When creating an API key from the view ⚙ **(Settings) Application Configuration > API Key Management,**

the last page of the process now provides users with a dedicated button to copy the key at once.
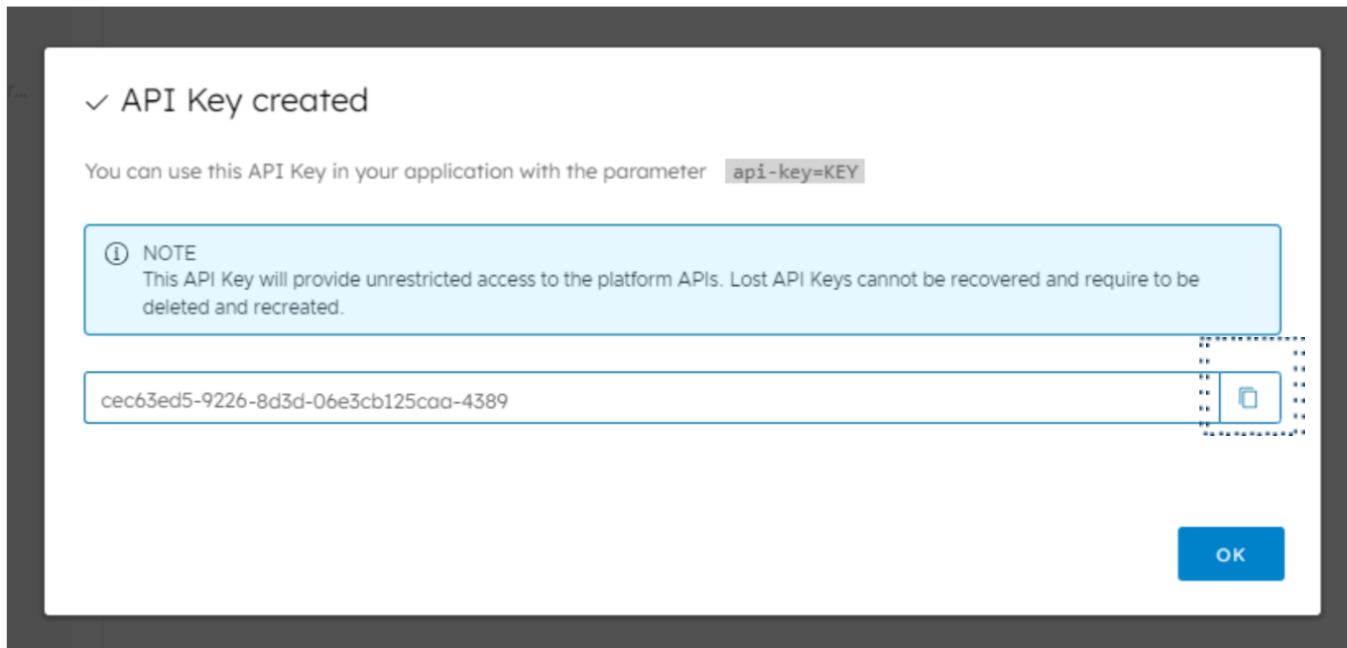
Detailed "Applies to" Menu in the Filter Widget

In the Filter widget configurator, the option **"Applies to"** was displaying labels based on each field "type".

Those **fields are now labeled based on their "name"** as described in the JDL.
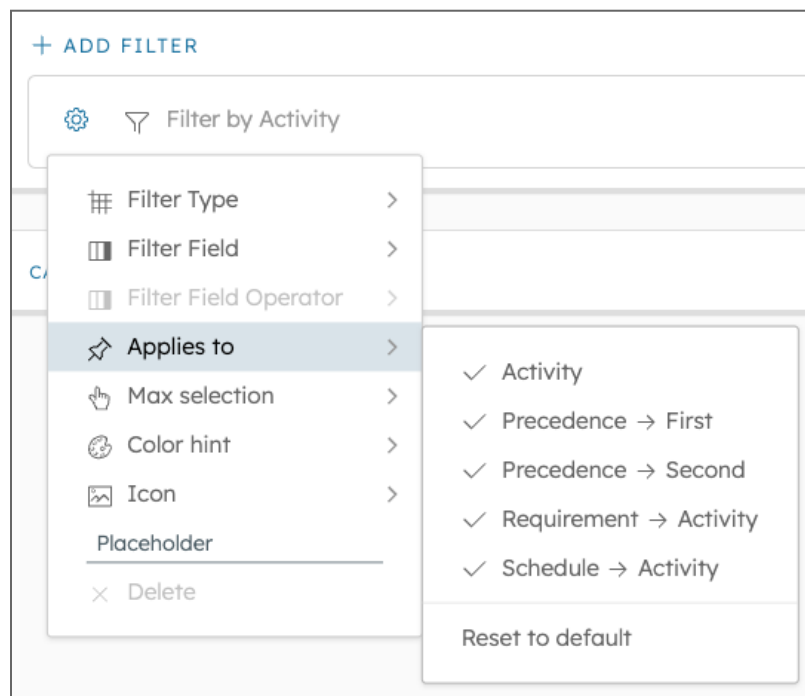
Improved Chart Widget

The Chart widget improved in many ways. For instance, users can now **configure the X/Y axis labels** as well as **use a logarithmic scale in** Trend or Vertical charts or **set a time axis for Trend charts**. In the tab Chart Series, users can now **configure the chart sorting**, and it is now also possible to **specify a "Value" format** without having to write a custom code or controller. Finally, it is possible to **configure the Tooltip** content to display only the necessary information.

Highly Customizable X/Y Axis Labels

The Chart Properties now allow in-depth configuration of the X and Y-axis labels. For example, users can now **tilt X-axis labels** in one direction or the other. They can also **configure the Y-axis ticks**, by setting the minimum and upper bounds of their scale, and the interval between the ticks.
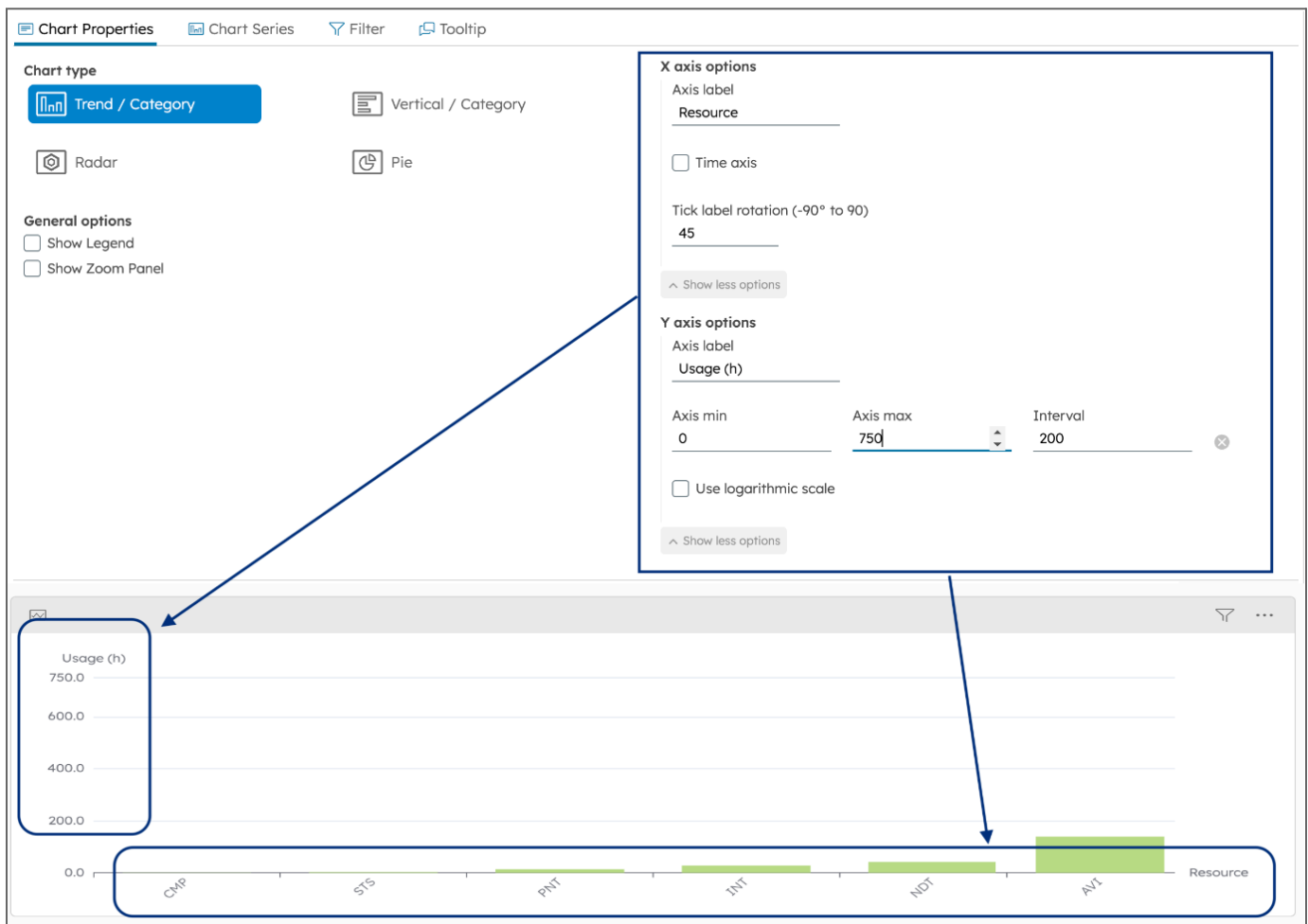
Configurable Logarithmic Axis Representation for Bar Charts

In addition to the label customization features mentioned above, the Chart Properties now also allow to **use a logarithmic scale** for the Y-axis in order to display values over a very wide range in a compact way.
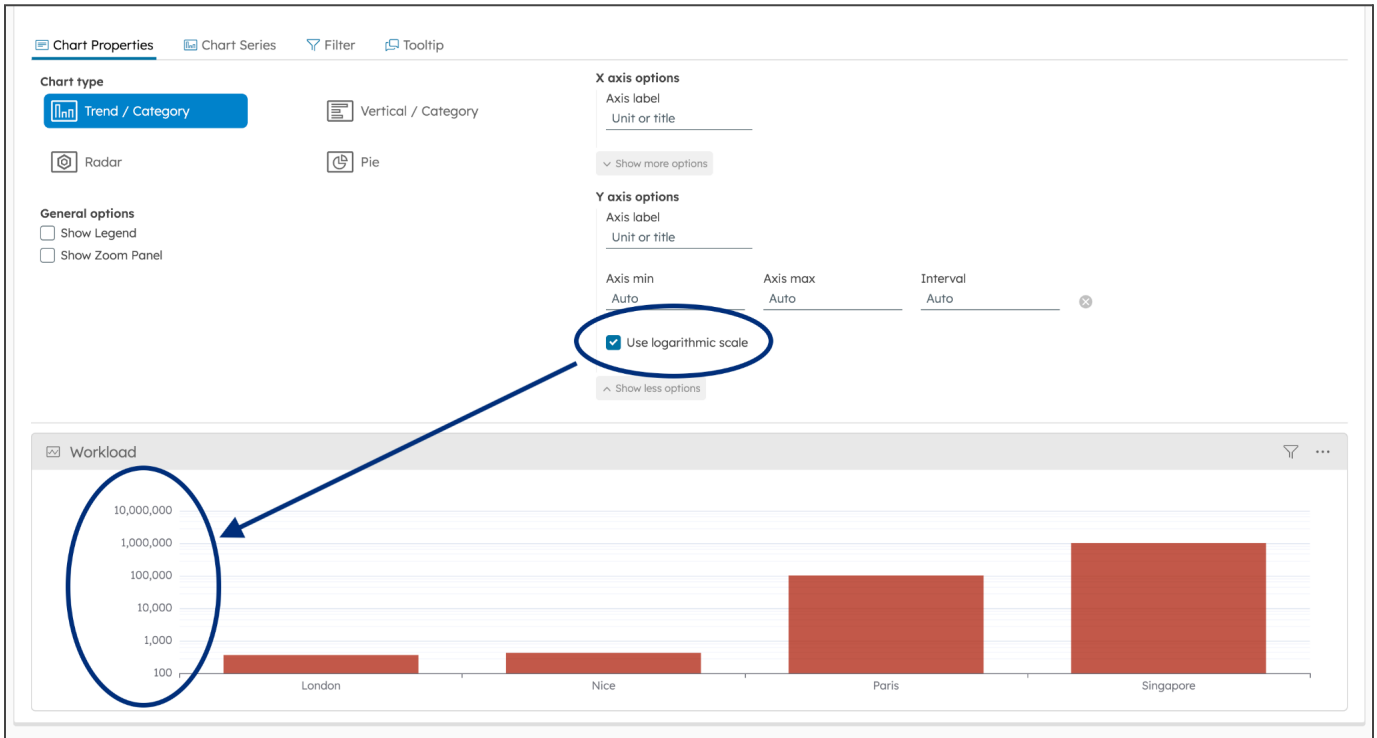
Configurable Time Axis for Trend Charts

Finally, the Chart Properties now allow to **configure a time axis** for Trend charts depending on:

- Time and day

- Day and month

- Day and week

- Day, week and month

- Week and year

- Month and year
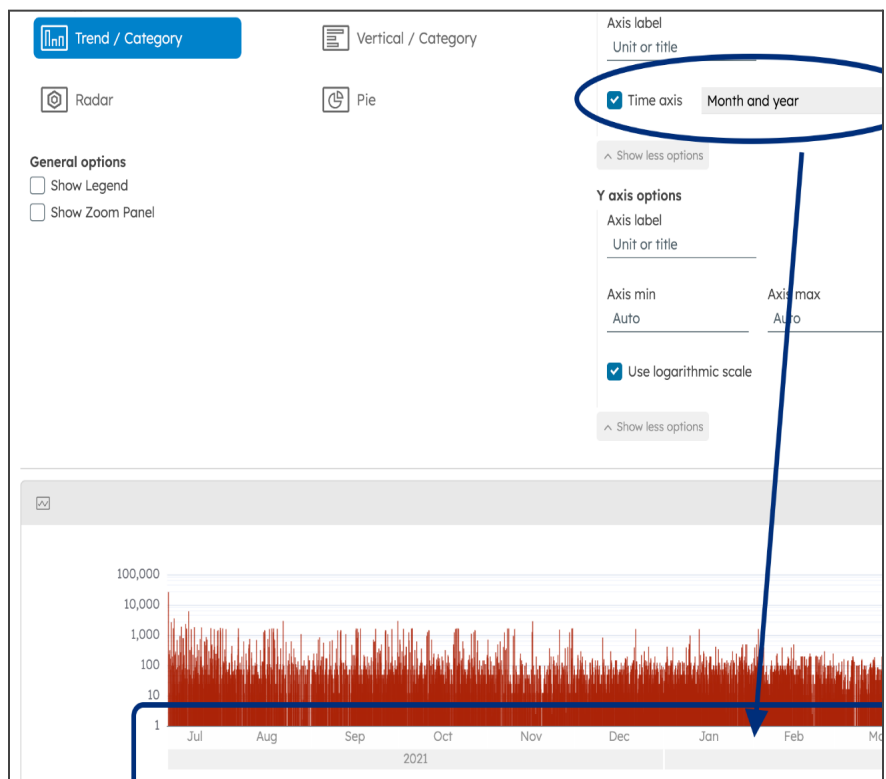
Configurable Sorting for Chart Series

In the Chart configurator, the tab Chart Series now includes a dedicated option allowing users to easily "**Use data to sort chart**", in ascending or descending order. This option is available for any chart, whether Trend, Vertical, Radar or Pie, and any Series Type as long as the option *Split by is set to "None"*.

Value Formatter for Charts

When configuring a series in a Chart widget, users are now provided with the field *"Value format"* which allows them **to format the labels of the Y-axis**.
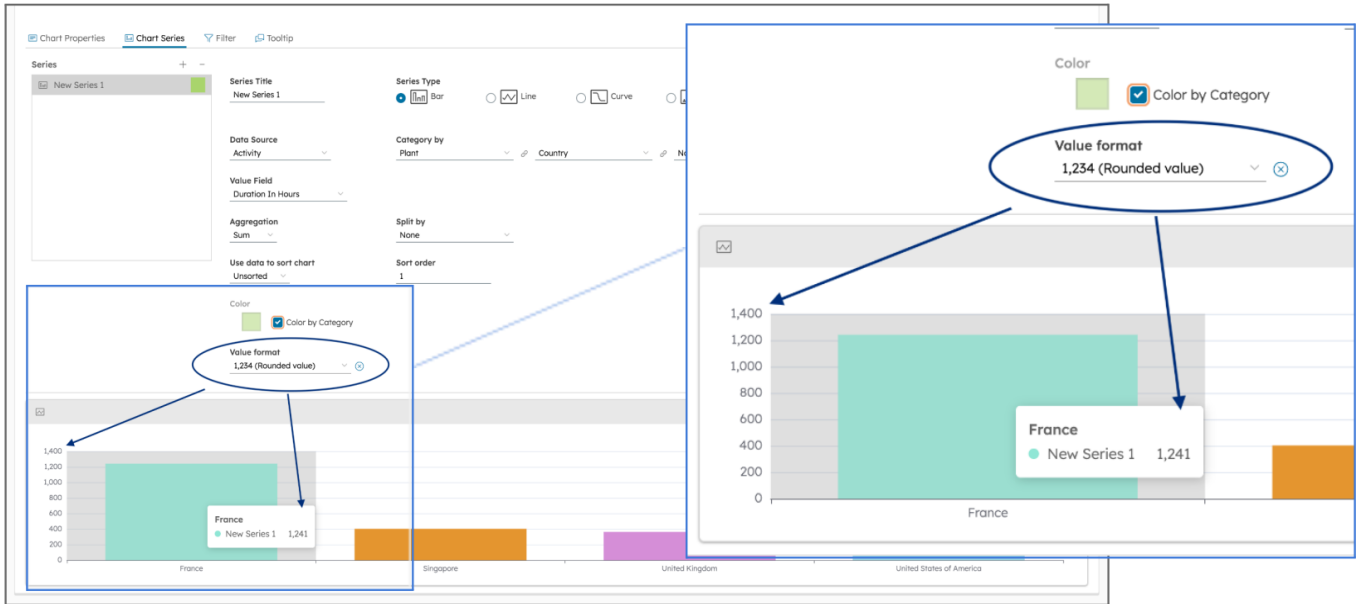
Configurable Content for Chart Tooltip

In the Chart configurator, users can now configure the tooltip content. For instance, one can select whether to **display the tooltip for a whole category** or **a single data point**, if it should **skip items with missing values** as well as **limit the number of items** to display and **how they are sorted**.
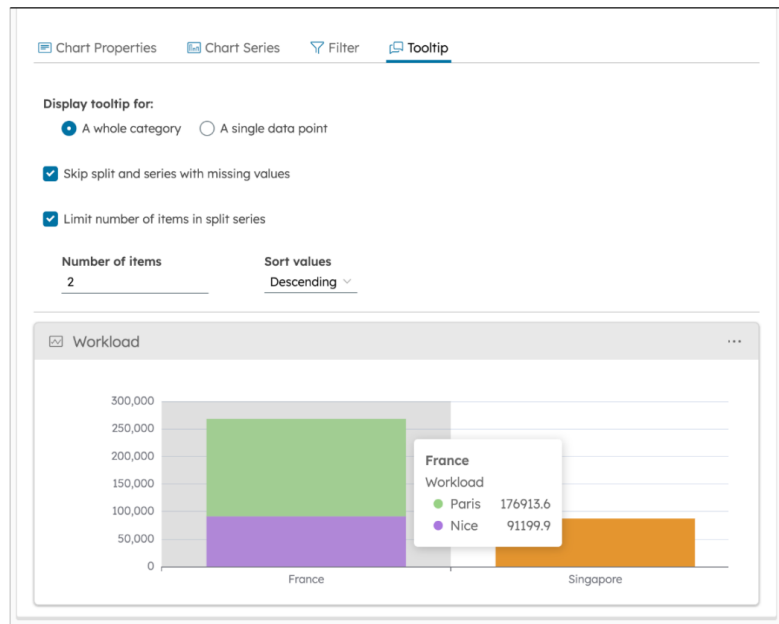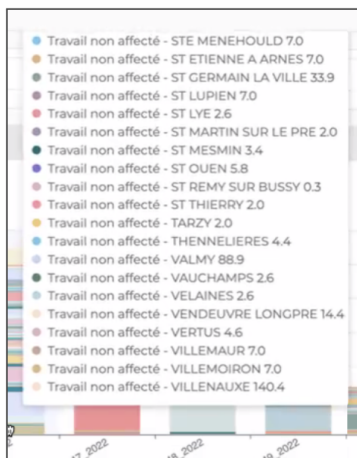
Improved KPI Widget

The KPI widget now provides users with **wrapped labels** and **scenario comparison based on a "Value"**.
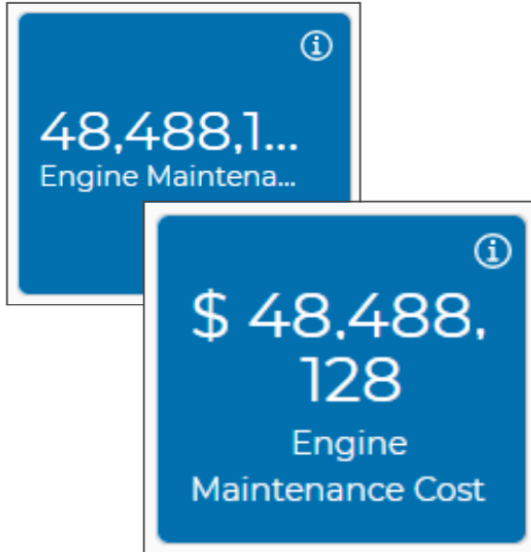
Wrapped KPI Labels

In the KPI widget, when the KPI label did not fit on a single line, it was being cut by an ellipsis "…".

It is now automatically **wrapped to be displayed on multiple lines** instead.

"Value"-Filtered KPI Scenario Comparison

The KPI widget now supports **scenario comparison when the comparison filter is a "Value"** from the table.

Improved Data Grid and Data Explorer Widgets

Both the Data Grid and Data Explorer widgets now provide users with **case-insensitive filtering** and the options *"Delete all Rows"* and "⚠ **(Show issues only)"**.
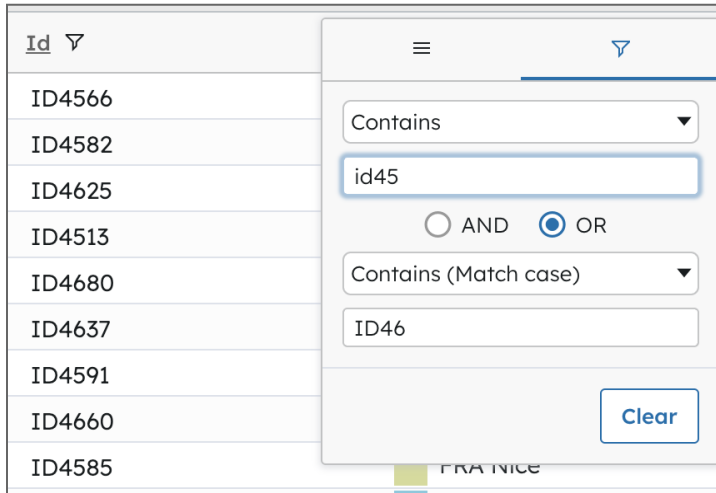
Case-Insensitive Filters by Default

In the columns of both the Data Grid and the Data Explorer widgets, the data filtering is now case-insensitive by default. This setting is **labeled as *"Contains"*** but can also be set to *"Contains (match case)"*.The opposite options *"Not contains"* and *"Not contains (match case)"* are also available.

Global Data Deletion

In addition to the already existing feature *"Reset Widget"*, the Data Grid and Data Explorer menus now include the option *"Delete all rows"* to remove, at once, all data from a table.
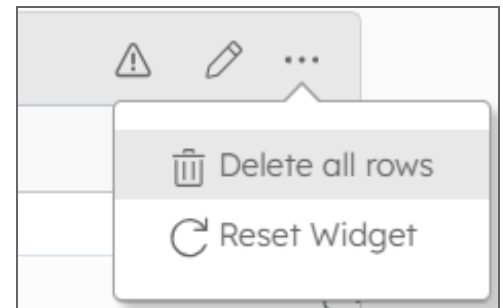
Issue Filtering

Finally, the option "⚠ **(Show issues only)"** is now available in both widgets toolbar. It allows to only display rows containing issues.
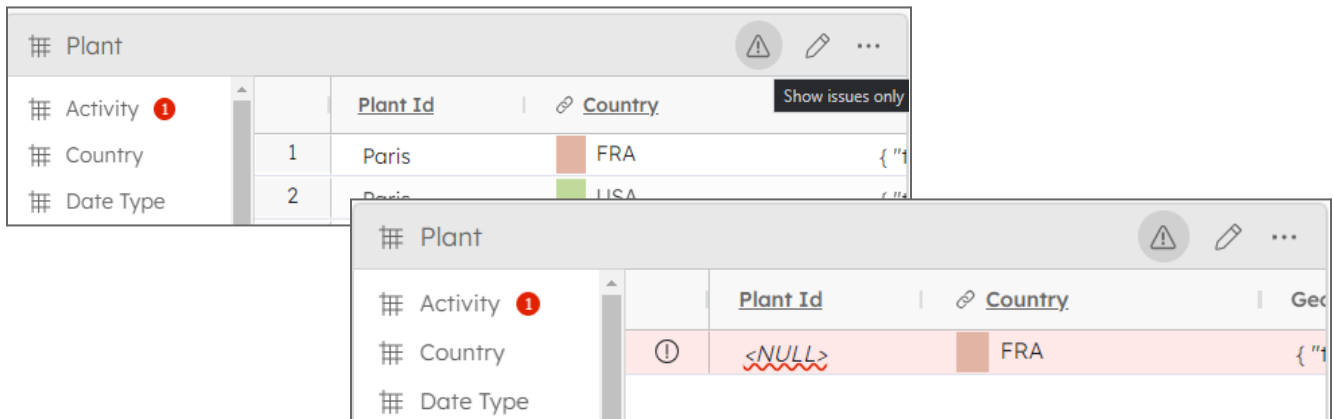
Improved Scenario Timeline Widget

The Scenario Timeline widget, which only displayed user comments and lock-related events, can now **display different types of events**. Users can now choose, via the widget configurator, to also show events regarding scenario creation and edition as well as information on jobs.

Technical Features

DB Gene 4.0.3-fp2 introduces several technical improvements, such as an improved Composite Widget, enhanced system usage monitoring, mergeable configuration files, an improved task output statement, as well as visible Jobs from the DBOS console for users using identity providers, configurable polling timeout for Tableau, an increased backoff limit for WoDs, the charts Zoom panel hidden by default and, finally, customizable generated DOM Java classes and updated Keycloak URLs.

Improved Composite Widget

The GeneCompositeComponent now provides users with a way to **set a *"Custom Controller"* via the widget configurator**.

In addition, the integration of GeneAwareChanges now triggers **confirmation alerts when trying to leave the Composite Widget without saving** the modifications.

System Usage Monitoring through Prometheus

Gene now exposes **system usage metrics through Prometheus**, an open-source system monitoring and alerting toolkit. This allows, for instance, to set up a Grafana dashboard that queries Prometheus for data.

Mergeable Configuration Files

The "app-config" files, that store the UI settings, are no longer stored in serialized JSON but in plain JSON thus allowing users **to easily merge two different configurations**.

Improved Task Output Setting Statement

When declaring tasks, the method `SetTaskOutputStatement.of`, which is a variant of `SetTaskOutputStatement`, now **allows using an expression to compute the output name**.

Jobs in DBOS Console for Keycloak Identity Providers Connexions

Users connecting to Keycloak, via an identity provider mapping, can now **see jobs in the DBOS console**.

```
polling:
  job-status:
    delay-seconds: 5
    timeout-seconds: 300
```

Tableau Widget Configurable Refresh

In the Tableau REST API, **polling timeout and delay properties** now allow to override the `600s` it takes, by default, for the Tableau widget to refresh.

Increased Backoff Limit for DBOS Workers-on-Demand

To force the system to **retry as many times as necessary** until completion, the backoff limit on DBOS workers-on-demand has been raised to 50. Depending on the situation, it was formerly 6 or 10.

Zoom Panel Hidden by Default

In the Chart configurator, the option *"Show Zoom Panel"* is still present but is now **unticked (disabled) by default**.
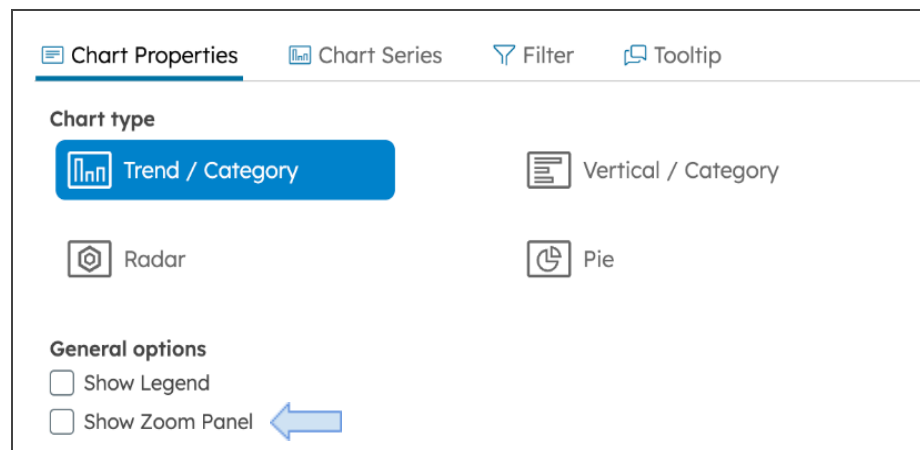
Customizable Generated DOM Classes

It is now possible to generate DOM Java classes, **customize any part of the code**, regenerate the DOM, and still have the custom code present at the end of the files.

Updated Keycloak URLs

Since DB Gene 4.0.3, Keycloak has stopped using the suffix `/auth` in its URLs. All the remaining **occurrences in the code have been removed**.

DecisionBrain

Changelog

Improvements

DB Gene 4.0.3-fp2 introduces the following improvements:

Application - Access Control	**DBPF-4795**	A button now allows to copy API keys to the clipboard
Application - Configuration	**DBPF-4494**	Gene now stores "app-config" files in plain JSON allowing to easily merge two UI configurations
Application - General	**DOC-130**	In Settings > Help > About, information on the application version is now available
Data - Model	**DBPF-4892**	Users can now customize generated DOM classes
DBOS - Master	**DOC-429**	The backoff limit for on-demand workers is now 50
DBOS - Web Console	**DBPF-5059**	In the DBOS chart configurator, the profile "integration", enabled by default in values, is now obsolete
Dev - 3rd-party Components	**DBPF-4018**	Improvements on Helm chart default configuration are now available
	DBPF-4865	The "momentjs" dependency is now removed from Gene
	DBPF-4877	Gene and DBOS now rely on Mongo 6
	DBPF-4879	Gene and DBOS now rely on Postgresql 15
	DBPF-4964	Gene now relies on Keycloak 21
	DBPF-4977	Gene Backend Service now relies on common gene Jackson configuration
	DBPF-4979	Gene now exposes system usage metrics that can be scrapped by Prometheus
	DBPF-5070	Application Mongo connexion can now be configured using an URI

Dev - Build	*DBPF-3870*	Gene base Docker image for java services now relies on Red Hat UBI instead of AdoptOpenJDK
	DBPF-4449	The Docker Gradle plugin is now compatible with intermediate images
	DBPF-4743	The DBOS secret JWT key is now randomly generated when deploying Helm charts
	DBPF-5001	Declaring an additional worker using the generator script "new-task", which was deprecated, is now no longer possible
	DBPF-5026	Helm now includes the parameters 'nodeSelectors' and 'toleration'
Dev - Deployment	*DOC-417*	In Helm charts, the worker deadline is now 7 days
	DBPF-5063	The DBOS demo chart is now available for Kubernetes 1.22
Dev - Documentation	*DBPF-3990*	Documentation on Workers-on-Demand is now enhanced
Dev - Python	*DBPF-4980*	The Python engine is now available in the virtual environment without having to configure "PYTHONPATH"
Dev - Tableau	*DBPF-4742*	Users can now configure the data refresh through "delay" and "timeout" properties
	DBPF-4959	Improvements on data status feedback is now available
UI - Charts	*DBPF-4940*	Users can now configure use a time Axis in trend charts
	DBPF-5048	Users can now configure logarithmic axis representation
	DOC-369	GeneCompositeComponent now supports custom controllers and GeneAwareChanges
	DOC-372	Users can now sort chart categories based on data values
	DOC-373	Users can now configure Tooltip content in charts
	DOC-374	Users can now configure Axis labels in charts
	DOC-406	Users can now configure a value formatter

DecisionBrain

UI - Charts	**DBPF-4916**	The Custom controller now exposes a "postProcess(chartOptions)" method
	DOC-434	The option "Show zoom panel" is now disabled by default
UI - Filter	**DOC-376**	Filters display is now improved
UI - Gantt	**DOC-421**	Improvements on the Color palette implementation are now available
Scripted Tasks - Definition	**DBPF-5057**	"SetTaskOutputStatement" now accepts a computed output name
UI - KPI	**DOC-377**	In the KPI widget, labels are now wrapped
	DOC-387	The KPI widget now allows Scenario comparison with a "Value" as "Filter field"
UI - Look & Feel	**DBPF-4787**	In Settings > Application Configuration > Colors, the configurator now displays a badge to visually notify the user of unsaved changes
	DBPF-4789	In Settings > Application Configuration > Colors, the configurator now displays the button "Discard changes" instead of "Revert changes"
	DBPF-5020	The application font by default is now Lexend Deca
	DOC-403	Missing translations for some configuration menus are now available
UI - Map	**DBPF-4633**	Users can now use a button to re-focus the map
UI - Tables	**DBPF-4969**	In the Data Explorer widget, column filters are now case-insensitive by default
	DOC-444	In the Data Explorer and Data Grid widgets, the button "Delete all rows" now allows removing all data in a table
	DBPF-4938	In the Data Explorer and Data Grid widgets, the button "⚠ (Show issues only)" now allows displaying only rows with issues
UI - Timeline	**DBPF-4890**	The Timeline widget now displays all events

Bugfixes

DB Gene 4.0.3-fp2 introduces the following bugfixes:

Application - General	**DBPF-5066**	GeneSettingsService#getSettings was first returning Application settings instead of User settings
Application - Workspaces & Scenarios	**DBPF-3184**	The home view was not displaying the name of a scenario that is duplicated
	DBPF-5103	In some case the Schema checker was failling
	DOC-471	The schema checker was failing to process big scenarios
Data - Built-in Import/Export	**DBPF-3625**	Implementation of consumer "EntitySource" was causing memory leaks
Data - Database	**DOC-389**	The Data Service configuration was not allowing a database schema different from 'public'
DBOS - Master	**DBPF-4834**	Jobs created from the web-console were displaying when using the API Key and vice-versa
	DOC-425	Jobs status could remain "SCHEDULED" indefinitely
DBOS - Web Console	**DBPF-3757**	The "Jobs Execution Chart" was not displaying properly
	DBPF-5027	The button "Abort" was not working properly and was triggering an error
Dev - 3rd-party Components	**DBPF-4878**	Keycloak URLs were still containing the suffix "/auth"
Dev - Build	**DBPF-4867**	The functions "shareReplay" and "ReplaySubject Observable" were causing memory leaks
	DBPF-4932	The default Keycloak realm configuration was using an incorrect "clientId"
	DBPF-4935	After migrating to 4.0.3-fp1, when building the WebUI module, the Docker "gradlew" was triggering the Yarn build twice

Dev - Build	**DBPF-5085**	The Python Gradle plugin was not taking "pythonVirtualenv" configuration of children projects into account which impacted scaffolding
	DBPF-5104	Scaffolding was generating a project with the wrong names of HTTP timeout properties which were not taken into accounts
Dev - Deployment	**DBPF-5098**	Helm was not allowing to disable parts of the "dbos-infra" deployment
Dev - REST API	**DBPF-4967**	Using REST API service "getAll" without "sortParams" was triggering a NullPointerException
Dev - Tableau	**DBPF-4850**	The Web Data Connector configurator was allowing to set an invalid "Name"
Scripted Tasks - Routines	**DBPF-4339**	The "executionContext.markModified" method was not updating the task scenario internal ID properly
UI - Calendar	**DBPF-4695**	The widget was not displaying "Event" labels properly
	DBPF-4941	The configurator was not displaying the "Conditional formatting" dropdown menus properly
UI - Charts	**DBPF-4424**	In Comparison mode, the Chart widget was displaying all legends in front of the first chart
	DBPF-4622	In Scenario Comparison mode, the drop-down menu "Split by" could be missing
	DBPF-4663	It was possible to create Composite Widget with an Issue List containing errors
	DBPF-4664	In the Composite widget, setting no title nor icon was not triggering an error and the configurator was not displaying the corresponding tab
	DBPF-4732	The "Vertical/Category" chart in "Scenario Comparison" mode "Split by: Scenario" was not displaying properly
	DBPF-4733	The X-axis label could overlap with legends
	DBPF-4915	The Custom controller method "getChartOptions" was not including the argument "comparisonMode"

UI - Charts	*DBPF-4990*	When removing all series, configuration validation was failing and triggering an error in the console but not in the UI
	DBPF-4991	Creating a chart without defining series was not triggering an error
	DBPF-5002	Using the "Vertical/Category" display was inverting the axis labels
	DBPF-5005	Zooming on a "Bar" chart could make some data disappear
	DBPF-5028	Clicking on the button "Magnify" was not resizing the chart to full page height
	DBPF-5036	The Chart widget was remaining in Comparison mode when comparison was disabled
	DBPF-5053	Gene was not correctly applying colors to "Line" series
	DBPF-5090	Setting a "Time axis" could display an empty chart
	DBPF-5110	The "Time axis" value "Month and year" was missing
	DBPF-5114	The "Week/Year" display was splitting the label of "Week 52" that overlapped on two years
	DOC-375	Legends were not displaying properly
	DBPF-5060	In the Composite widget, focusing on a Data Grid widget was not displaying the edition controls
	DBPF-5061	In the Composite widget, the Data Grid widget was not preserving filtering and sorting when navigating
UI - Filter	*DBPF-5047*	Setting multiple filters was not working properly
	DOC-457	Pressing ENTER on a proposed entry was not removing typed text

UI - Gantt	*DBPF-4843*	On a same Dashboard, changing a Filter widget was not automatically refreshing the corresponding Gantt chart widget
	DBPF-4844	The widget was displaying empty rows with no labels for groups and resources with no data
	DBPF-4961	The Gantt chart widget was not using the font specified for the application
	DOC-422	Changing the timezone of the browser was impacting the tasks display
	DOC-432	On a same Dashboard, changing a Filter widget was not automatically refreshing the corresponding Gantt chart widget
UI - General	*DBPF-4757*	In the Data explorer configurator, depending on the zoom, the text could get cut out
	DBPF-4971	In the Run New Job configurator, the Task drop-down list was displaying the same label for both new and 'Legacy' "Export scenario to Excel" items
	DBPF-4992	When the service was down, the pop-up was displaying the wrong information and the "i" icon instead of "!"
	DBPF-4996	The Scenario Selector item "Other Scenarios (N)", was containing a typo
	DBPF-5043	In responsive mode, the main panel was not extending to the page full width
	DBPF-5073	In the Conflict Editor, when editing an entity that has already been edited by another user, clicking on SAVE was not saving the edition
	DOC-409	In the Task button configurator, clicking on SAVE was not saving the "Task - inputs" settings
UI - Job	*DBPF-5041*	Creating quickly two jobs on the same scenario was failing and triggering an error

UI - Look & Feel	**DBPF-4876**	The menu "Base tasks" was containing capitalization typos
UI - Tables	**DBPF-3742**	In the Data Explorer, the header was displaying the title of the first table instead of its own
	DBPF-4817	After removing entities from the JDL model, the Data Explorer widget was still displaying them
	DBPF-4822	In the Data Grid widget, on MacOS, selecting multiple issues using the [command] key was not working properly
	DBPF-4827	In the Data Grid widget, when selecting a single cell, the button "Duplicate" was not working properly
	DBPF-4836	In the Data Explorer widget, deleting all data in an entity was leaving the last number of selected rows in memory
	DBPF-4930	The Issue list widget could be empty and be triggering a NPE a NullPointerException in the logs
	DBPF-4933	When processing large datasets, selecting all rows using [CMD]+[A] was freezing the application
	DBPF-4968	In the Data Explorer widget, the option "Display Color Hint" was having no effect
	DBPF-4997	In the Data Grid widget, the effects of the button "Reset widget" were not persisting after leaving the view
	DBPF-5003	In the Data Grid widget, copying and pasting could lead to inconsistent status display
	DBPF-5042	In the Data Grid widget, the edition toolbar could be missing
	DBPF-5052	In the Data Explorer widget, switching between valid and faulty scenarios was not updating the issues indicator on the table list

UI - Tables	**DBPF-5074**	In the Data Grid widget, the "Show only issues" button was missing
	DBPF-5102	In some specific cases, navigating while loading an Issue list could trigger errors in the browser console
	DOC-415	In the Data Grid widget, the issue filter was displaying in the widget toolbar instead of the column filter
	DOC-418	In the Data Explorer widget, data pasting was not working properly
	DOC-436	In the Data Explorer widget, clicking on "Edit mode" was not shifting the focus to the table