
# DOC 4.4.0.4.7.0 Release Notes

September 26th, 2025

# DOC 4.4.0.4.7.0 Release Notes



**Note:**

**DOC 4.4.0.4.7.0 introduces several infrastructure updates and deprecations.**
**They are described in more detail in the DOC 4.4.0.4.7.0 Migration Guide, available on the DecisionBrain website.**

**The following information only focuses on the main changes in this release.**

# Important Notes

*Please take into account the following important information when using the new version of the **DOC 4.4.0.4.7.0**, released on September 26th, 2025.*

## Updates

DOC 4.4.0.4.7.0 introduces the following dependency updates.

### Spring Update

DOC 4.4.0.4.7.0 now uses Spring Boot 3.5.5, Spring Cloud 2025.0.0, and Spring Framework (Context) 6.2.10. Formerly, it was version 3.4.5, version 2024.0.1, and version 6.2.6.

### AG Grid Update

DOC 4.4.0.4.7.0 now uses AG Grid 34.1.0. Formerly, it was version 33.3.0.

### Keycloak Update

DOC 4.4.0.4.7.0 now uses Keycloak 26.3.1. Formerly, it was version 26.2.4.

### MongoDB Update

DOC 4.4.0.4.7.0 now uses MongoDB 8.0.12. Formerly, it was version 8.0.9.

### PostgreSQL Update

DOC 4.4.0.4.7.0 now uses PostgreSQL 15.14. Formerly, it was version 15.13.

### RabbitMQ Update

DOC 4.4.0.4.7.0 now uses RabbitMQ 4.1.3. Formerly, it was version 4.1.0.

## Deprecations

- **DBPF-8500** In the DOM, some deprecated JDL features and APIs have been removed. In `model-generator/jdl-model/src/main/java/com/decisionbrain/dom/model/jdl/JdlTag.java`, `DOM_GENERATED_JDL`, `DOM_ENTITY_CLASS`, `DOM_ENTITY_SIMPLE_PRIMARY_KEYS`, `DOM_FIELD_DEFAULT_VALUE`, `OBSOLETE_DOM_ENTITY_SINGLETON`, `DOM_FIELD_FOREIGN_KEY_REFERENCE`, `DOM_FIELD_RELATION_NAME`, `DOM_RELATION_INVERTED_RELATION_FIELD_NAME`, and `DOM_RELATION_FIELD_NAME` are now ignored and should be removed from the JDL.

- **DBPF-8498** In the Execution Service, the deprecated methods `ExecuteRoutineStatement.onBackendService`, `JobInstanceService.eraseJob`, `GeneTask.getPersistSystemLog`, and `GeneTask.setPersistSystemLog` have been removed.

- **DBPF-8499** In the web client, in `gene-data-api.service.ts`, the deprecated method `getEntities()` has been removed. Instead, use `getAllEntities(params)`.

- **DBPF-8497** In the web client, the deprecated interface `GeneWidgetCustomViewToolbarController` has been removed.

- **DBPF-6690** In the web client, the deprecated legacy Issue List widget has been removed.

- **DBPF-7562** In the web client, the deprecated legacy Pivot Table widget has been removed.

- **DBPF-8786** In the Gene Online web client, the deprecated legacy Tableau widget has been removed.

- **DBPF-6696**, **DBPF-8000** In the Gantt Chart widget:

    - The classes `BaseGanttDataSource`, `DefaultGanttDataSource`, and `DynamicGanttDataSource` are now deprecated and no longer used by the framework. They have been replaced by `MultiSeriesGanttDataSource`, but kept for compatibility with existing customizations. The code related to loading the *TASK* series has been moved to `GanttTaskLoader` and `GanttDynamicTaskLoader`.

    - In `BaseGanttDataSource`, the `buildEvents` method is deprecated. Instead, use `DbGanttBuilder.buildEvents`.

    - In `DefaultGanttDataSource`, the `retrieveEvents` method is deprecated. Instead, use `DefaultGanttDataSource.retrieveEventsAndBuildModels`.

- In `DbGanttBuilder`, the `toggleGroup`, `getGroupStates`, and `setGroupStates` methods are deprecated. The responsibility has been moved to `MultiSeriesGanttDataSource`.
- In `DbGanttBuilder`, the `getResourceRequestedFields`, `getResourceIdFields`, and `getAdditionalGroupingFields` methods are deprecated. Instead, use the methods from `gantt-builder-utils`.
- In `GanttController`, since multiple TASK series are possible, the `providesMainRenderer` method will no longer be called. Instead, `getRenderer` will be called for each configured series.
- In `GanttController`, the `processEvents` and `processResources` methods are remnants of the legacy Gantt component. Instead, `postProcessChartModel` should be implemented.

# End-User Features

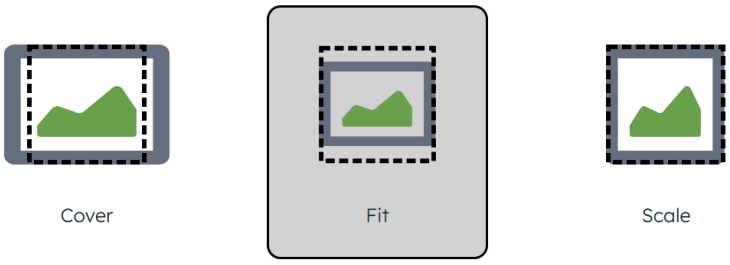
*DOC 4.4.0.4.7.0 delivers several improvements for end users, including a new Image Widget, a Notebook Visualization Widget, and enhanced Chart and Gantt Chart capabilities. Gene Online also benefits from a smoother configuration workflow and better handling of data model rebuilds.*

## New Image Widget

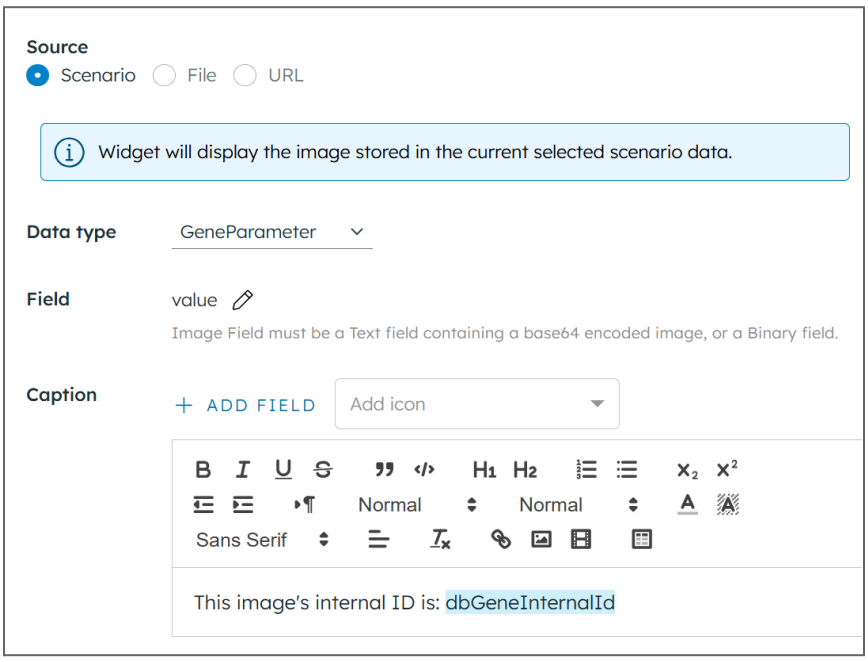
**DBPF-8135 (4.4.0.4.6.1)**

The new Image widget now allows **displaying an image stored in a scenario**.

The entity must be stored as a BINARY or TEXT field containing base64-encoded data.




The option *Display Type* allows **configuring the layout** to *Cover* the whole widget, *Fit* inside the widget, or *Scale* with the size of the widget.





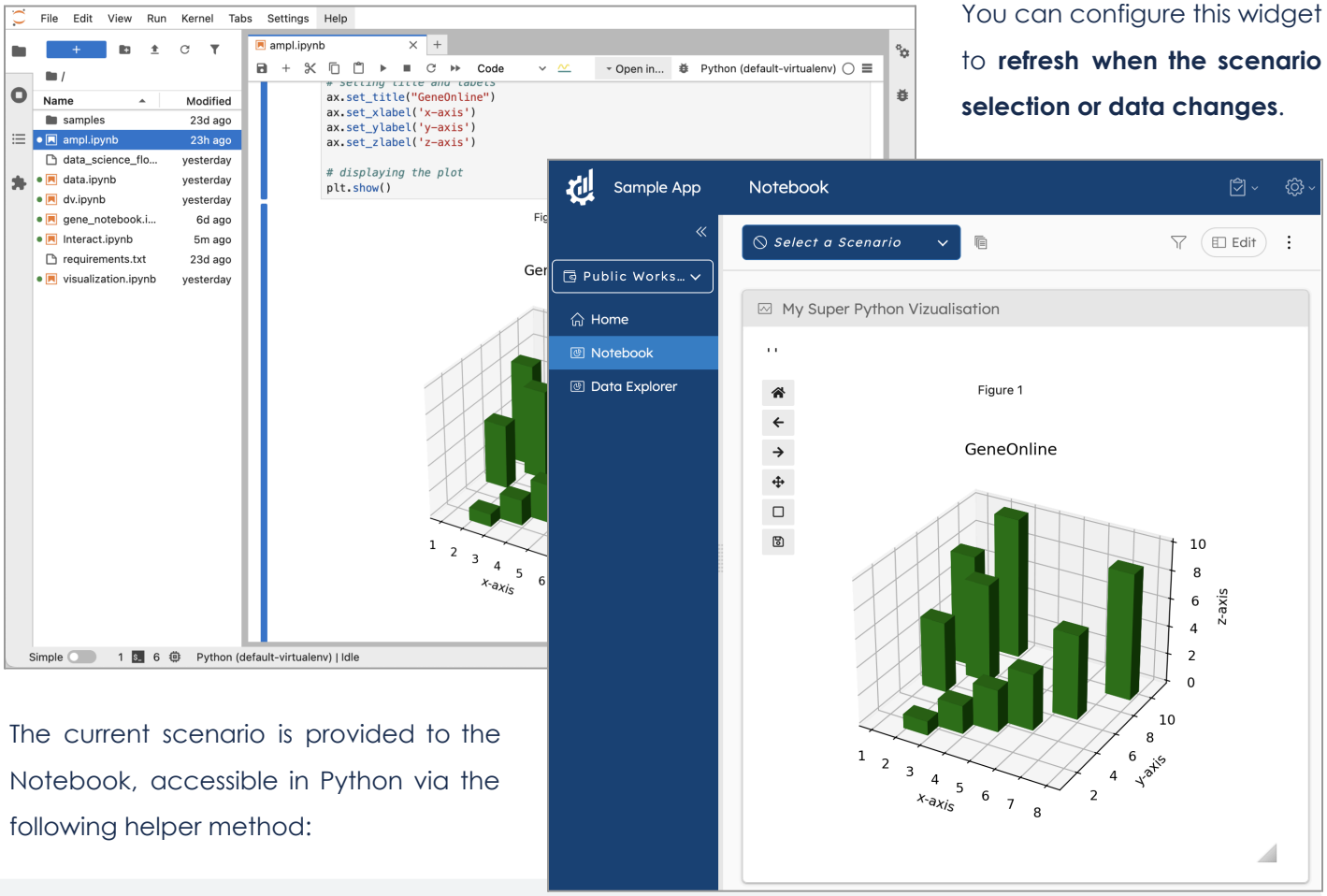
If the query returns multiple images, users can click on the left and right arrows that appear on the image to browse them in **carousel mode**.

The Image Widget also **displays a dynamic caption** that can mix static text, icons, and entity values.

# New Notebook Visualization Widget

**DBPF-8633**

JupyterLab allows for powerful **custom visualizations** for analysts and developers who work directly with code. The new Notebook Visualization widget can now display these visualizations in a **code-free** format that relies on the Voilà server, a tool that converts Jupyter notebooks into standalone web visualizations.




You can configure this widget to **refresh when the scenario selection or data changes**.

The current scenario is provided to the Notebook, accessible in Python via the following helper method:

```python
from dbgene.jupyter import GeneHelper as helper

scenario = helper.get_context_scenario(GeneOnline)
```

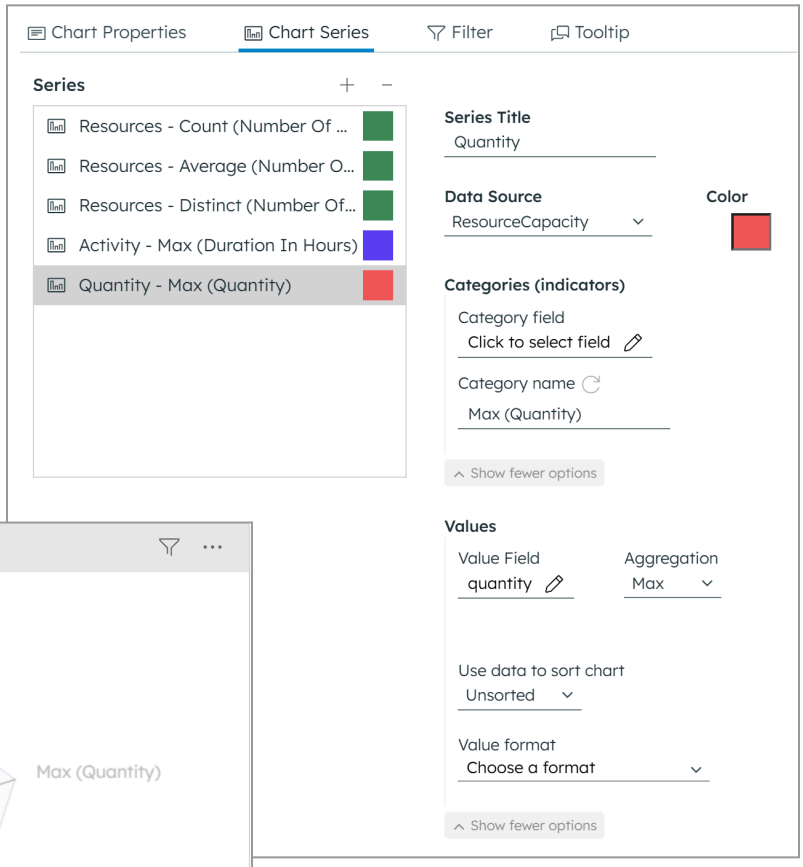
A sample Notebook visualization, `gene_visualization.ipynb`, demonstrates the usage of this API.

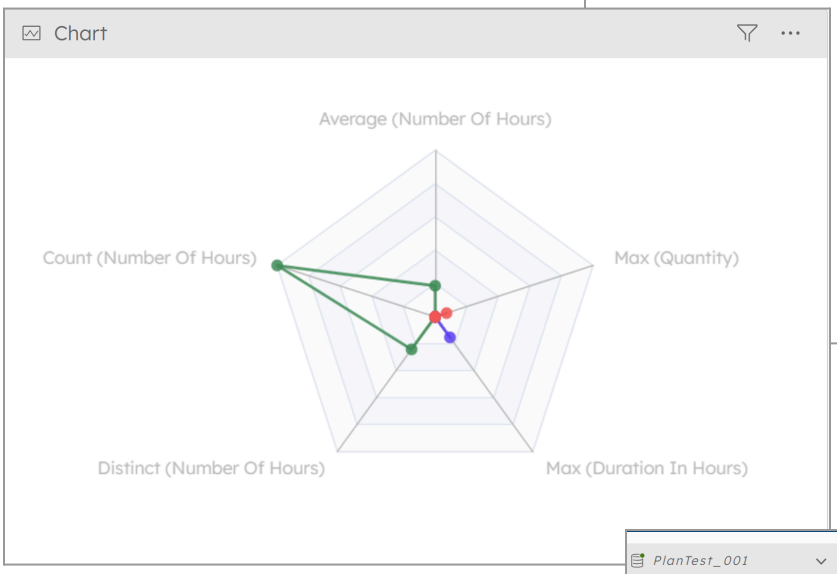
# Improved Radar Chart Widget

**DOC-622**

In the Chart Widget, when using a Radar display, users can now **compare aggregated entity values across one or several scenarios**.

To do so, add a Chart Series for each entity for which you want to aggregate the values. Set the desired entity as the *Data Source* and leave the *Category Field* to *None*.

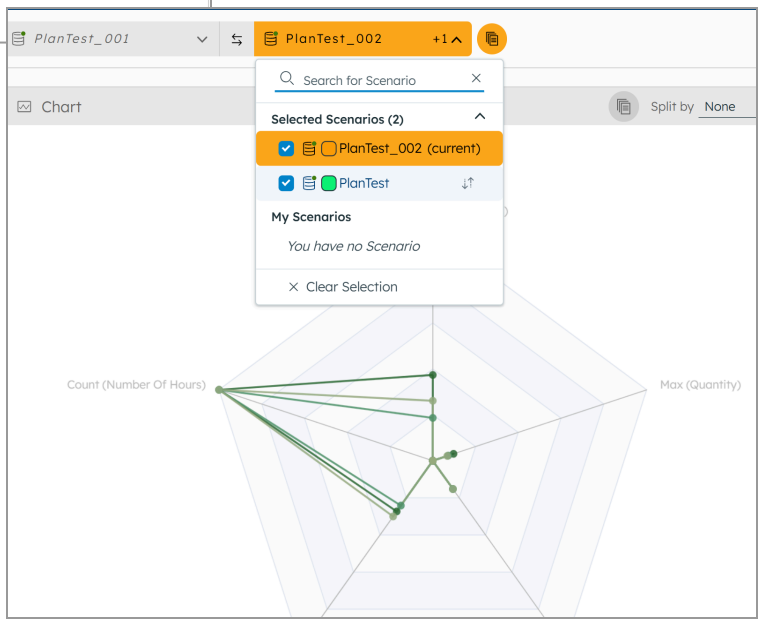



The radar will display **each aggregation as a single point**.

**Series with identical Series Title share the same color**, and each label can be renamed via the Category Name option. By default, the label displays the *Aggregation* and *Value Field*.

It is then possible to **use the Scenario Comparison** feature, where scenarios are represented in the chart with different colors.

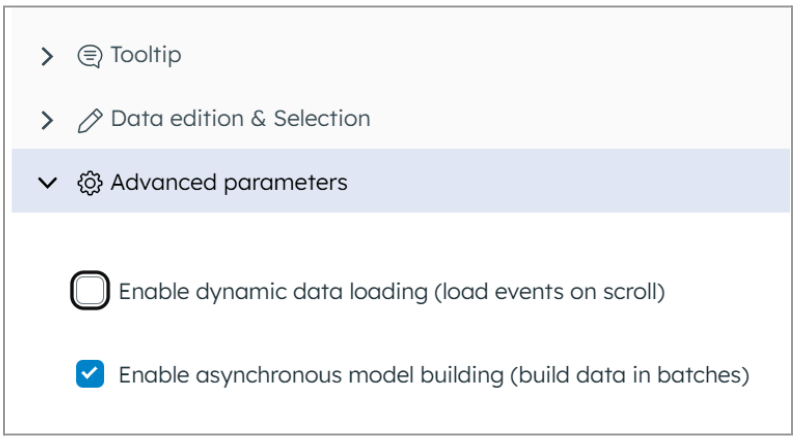


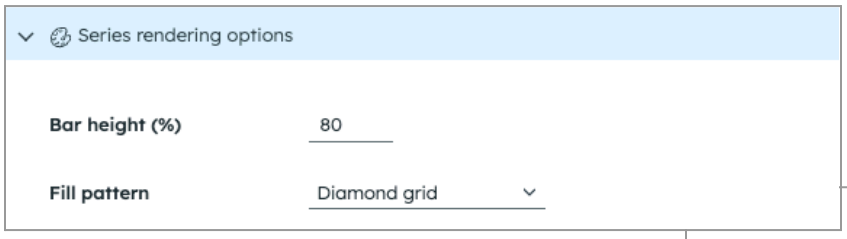
# Improved Gantt Chart Widget

**DOC-1245, DOC-980, DBPF-8691, DBPF-6696, DOC-1280, DOC-1311, DOC-1310**

In addition to dynamic data loading that loads events on scroll, the Gantt Chart widget now allows to *Enable asynchronous model building* for each series.

This option **progressively displays large datasets with numerous resources and updates** from various sources.

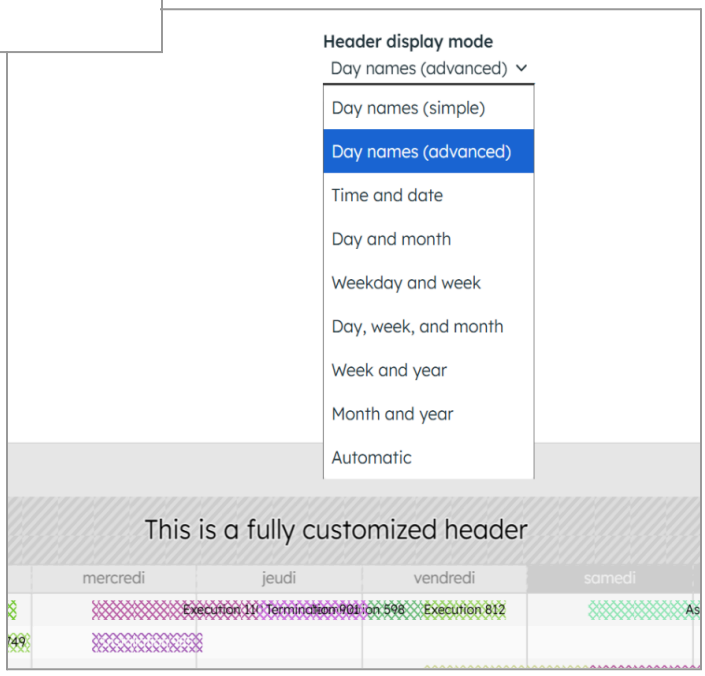


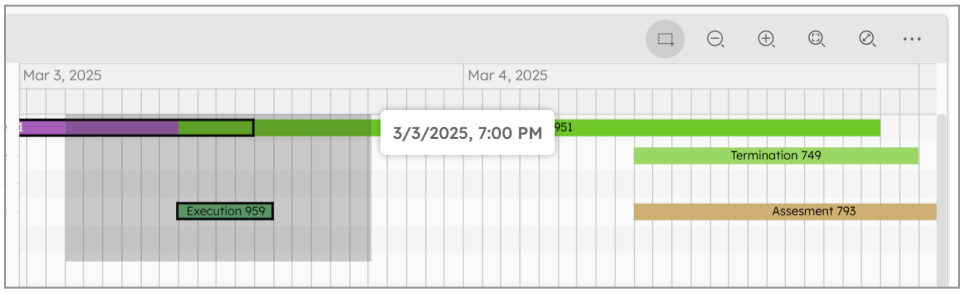




For Task/Event series, users can now **customize the event** *Bar Height* and its *Fill Pattern*.

The **new custom controller sample**, *Header Customization*, allows extending the *Header display mode* with capabilities similar to those of the bar chart time axis. For instance, it proposes two *Day names* implementations that can be copied and edited to **display a fully customizable header**.

In addition, if custom loading is implemented, the Gantt Chart **custom controller has better multi-series support** and no longer requires a series configuration.



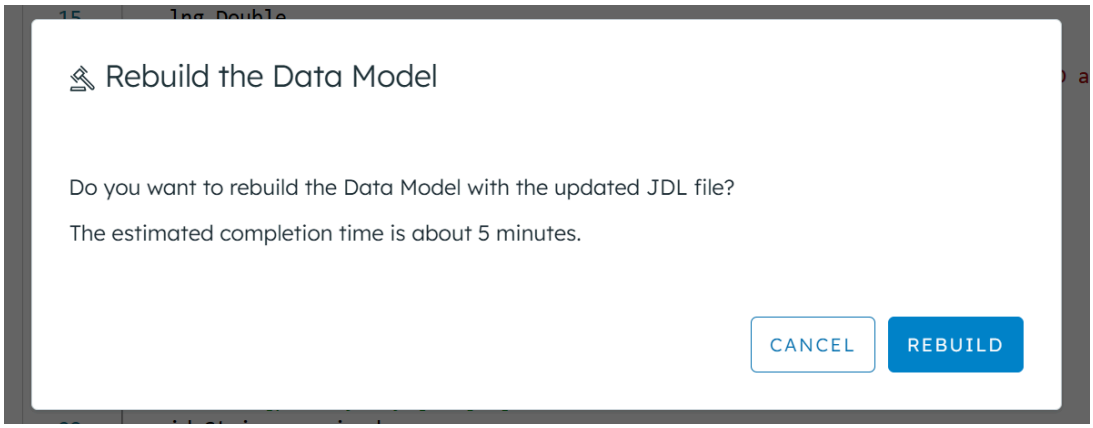

Finally, it is now possible to **select events from different Task/Event series** using the mouse, directly from the widget.

## Improved Gene Online

**DBPF-8729, DBPF-7642, DBPF-7611**

In version 4.4.0.4.7.0, Gene Online has mainly improved on data model handling.

For instance, Gene Online now **preserves scenario data when the data model rebuilds**.




In addition, in Gene Online, the **Application Configuration import and export now include the data model**. This allows importing the data model and application structure in a single step.

# Technical Features

*DOC 4.4.0.4.7.0 improves security, enhances the data model rebuild, and simplifies collector class handling. It also updates API clients, JupyterLab integration, scenario services, and build performance.*

## Improved Security

DOC security has been improved as follows:

- **DBPF-8493, DBPF-8496:** The Gene Generator base image and `Yeoman Generator` have been updated to address the latest CVEs.
- **DBPF-7366** Keycloak password policy has been enhanced for password reuse.
- **DBPF-8469** DBOS now invalidates the JWT token on password change or if it was revoked by an admin, by integrating a session cleaning mechanism.
- **DBPF-7224** The `Permissions-Policy` header has been added to the DBOS web console and documentation to prevent security issues.
- **DBPF-7364** The security context has been hardened to run containers with a user ID above ten thousand, as the user ID "`10001`" is used for every container deployed with the app umbrella Helm chart. The security context has also been hardened to run the containers with a read-only file system.

## Improved Data Model Rebuild

**DBPF-2211**

A newly built-in task now keeps scenarios in the application when changing the data model, by archiving and unarchiving them automatically upon data model rebuild.

## Improved Collector Class Name Handling

**DBPF-8156**

If the JDL provides a collector class name, it will be used by the generator without asking the user.

## Improved Scenario Service Performance

**DBPF-8584 (4.4.0.4.6.2)**

The Scenario Service now notifies all the activities to the UI asynchronously for improved performance.

## Improved Spring Rest API Clients

**DBPF-8640**, **DBPF-8640 (4.4.0.4.6.2)**

In the Data Service, Scenario Service, and Execution Service clients, the URL of the service can now be configured via one Spring property (`services.<service name>.base-url`) instead of two (`services.<service name>.host` and `services.<service name>.port`). The base URL takes precedence if all three properties are declared.

The Documentation has been updated to explain how to configure the Keycloak credentials. For more details, refer to Chapter *Understanding the Data Service API*.

In addition, the Feign clients are now using dedicated Spring properties for credentials.

## Improved JupyterLab Integration

JupyterLab Integration has been improved as follows:

- **DBPF-8630** The Voilà server, used for the Jupyter Notebook Visualization widget, is now available with JupyterLab by default.
- **DOC-1112** The JupyterLab idle metric now reports a more accurate value.
- **DBPF-8633** JupyterLab's default virtual environment now uses a new logging configuration for the default Python logging module. The console log level is now set to `DEBUG` by default. In addition, a 1MB rotating log file, `logs.txt`, is stored in the Notebook folder. It also uses the `DEBUG` level and includes the Jupyter Kernel ID and current Thread ID in all entries. When a Notebook runs through the Voilà server, the default log level is set to `INFO` to avoid cluttering the visualization.