



Grafana Tutorial

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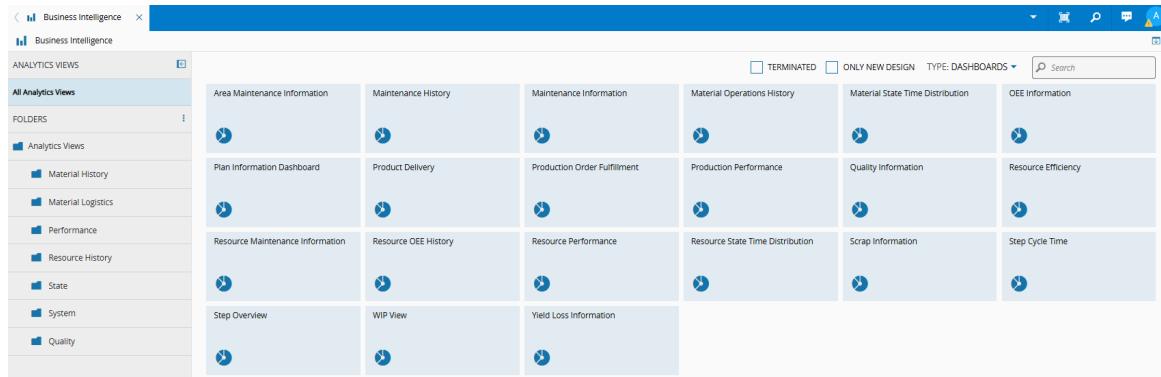
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Grafana Tutorial

This tutorial provides an overview of using Grafana dashboards, including how to navigate and modify their properties. If you require more advanced configurations, see [Grafana Dashboards \(Developer Portal\)](#).

The Grafana dashboards are available under the **Business Intelligence** menu and to access them, you can filter by Type **Dashboards**, as shown below.



The screenshot shows a list of dashboards and analytics views. The left sidebar has sections for 'All Analytics Views' and 'FOLDERS'. The main area displays a grid of 12 items, each with a blue circular icon and a title. The items are arranged in three rows of four. The titles are: Area Maintenance Information, Maintenance History, Maintenance Information, Material Operations History, Material State Time Distribution, and OEE Information. The second row contains: Plan Information Dashboard, Product Delivery, Production Order Fulfillment, Production Performance, Quality Information, and Resource Efficiency. The third row contains: Resource Maintenance Information, Resource OEE History, Resource Performance, Resource State Time Distribution, Scrap Information, and Step Cycle Time. There are also three items at the bottom: Step Overview, WIP View, and Yield Loss Information.

Use Case

In this tutorial, the **Yield Loss Information** dashboard is used as an example. This dashboard is designed to support production and analysis of **Material** Efficiency.

With this dashboard, you can:

- **Monitor key performance indicators (KPIs)** - Track critical metrics to quickly assess overall production performance.
- **Analyze Material Yield Losses** - Identify trends and patterns in **Material** efficiency, helping to pinpoint areas for process improvement.
- **Visualize trends over time** - Use historical data to understand fluctuations in yield and anticipate potential issues.

This use case is ideal for production supervisors, process engineers, and manufacturing analysts who need actionable insights to optimize processes, reduce waste, and make data-driven decisions in real time.

Data source

This dashboard retrieves its information from the Data Warehouse (DWH). Specifically, it uses the **Material Loss Bonus** Data Set and the **Material Movement** cube, which provide insights into material flows, production output, and yield losses.

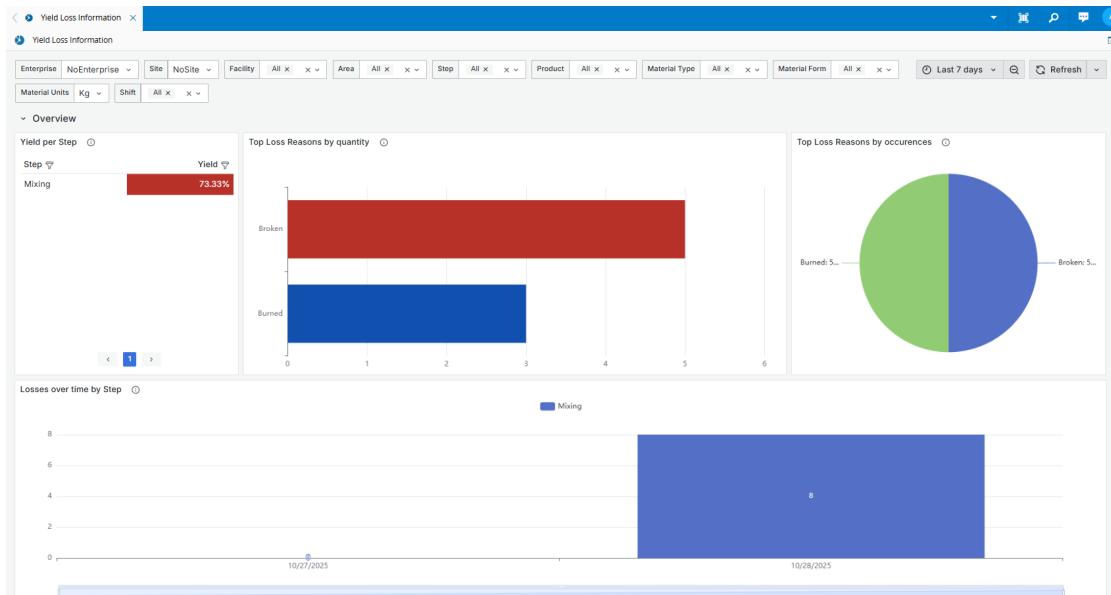
For your own dashboard, you can access these data sources in the **Data Platform** menu. To explore all available options, see [Supported Data Sources](#).

Dashboard Layout

This dashboard is structured around 3 visualization panels, each designed to provide key insights and a clear overview of your data. The layout ensures that essential information is easily accessible, promoting efficient monitoring and analysis.

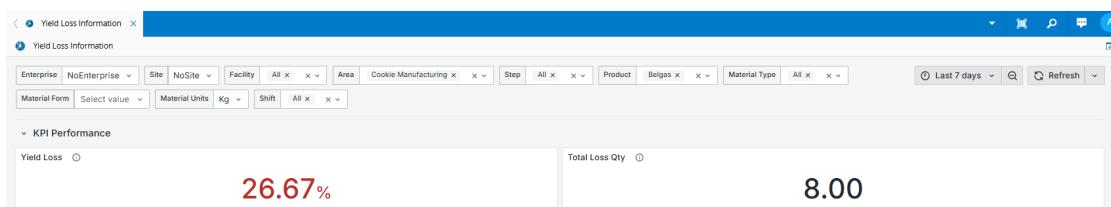
Panel 1: Overview

- **Yield per Step** - Displays the yield for each step.
- **The Top Loss Reasons by Quantity** - Highlights the top loss reasons by quantity.
- **The Top Loss Reasons by Occurrences** - Measures the percentage of occurrences for each loss reason.
- **Losses Over Time by Step** - Shows daily loss quantities.



Panel 2: KPI Performance

- **Yield Loss** - Monitors Material inefficiency during production.
- **Total Loss Quantity** - Measures the amount of Material lost during production.



Panel 3: Material Yield Loss History

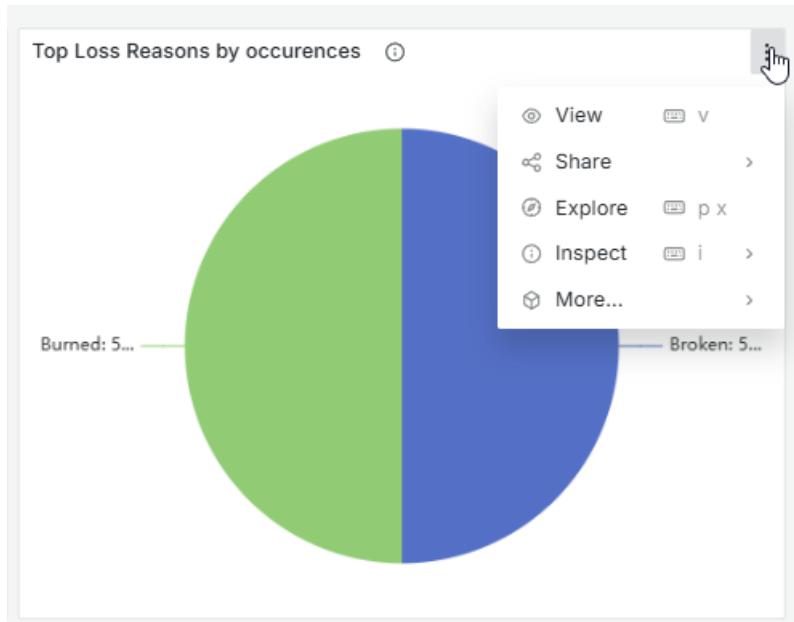
- **Material Yield Loss History** - Presents the historical record of daily Material Loss transactions.

The dashboard interface includes a top navigation bar with filters for Enterprise, NoEnterprise, Site, NoSite, Facility, Area, Step, Product, Material Type, Material Form, and a date range of 'Last 7 days'. The 'Yield Loss Information' section displays a historical record of material loss transactions:

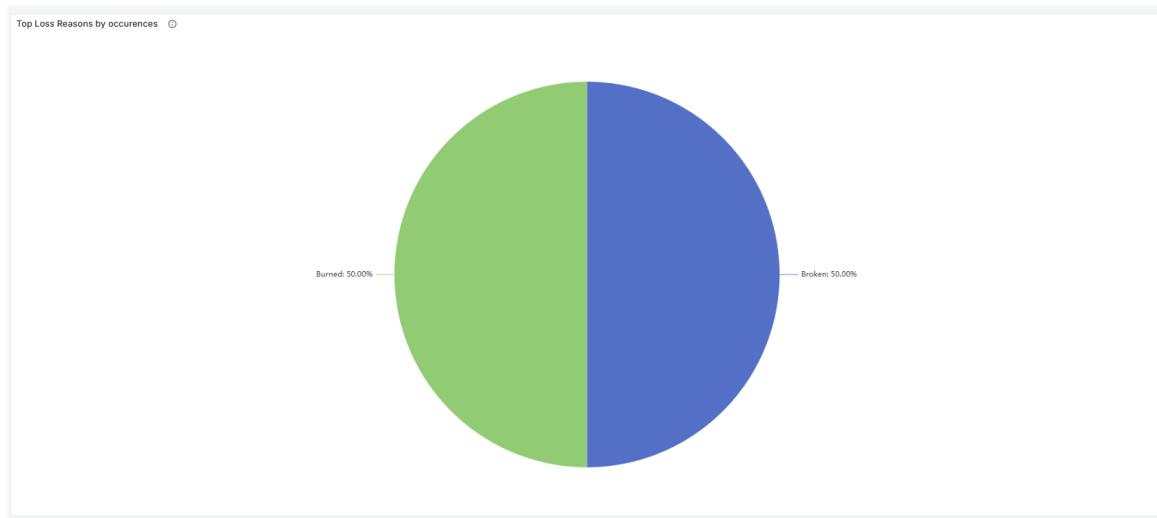
Facility	Area	Step	Product	Material Type	Material Form	Loss Qty	Units	Yield Loss	Shift	Date
Cookie Factory	Cookie Manufacturing	Mixing	Belgas	Production	Lot	8.00	Kg	80.00%	Shift 2	10/28/2025
Cookie Factory	Cookie Manufacturing	Mixing	Belgas	Production	Lot	0.00	Kg	0.00%	Shift 2	10/27/2025

Page Properties

Each panel in the dashboard includes a set of options that allow you to view, share, and analyze the data behind it. To access these options, select the button in the top-right corner. This opens a menu with several useful actions for exploring and managing your dashboard.



Opens the panel in a zoomed-in view for easier interaction.



Share

Opens the sharing options, you can choose to **Share Link**, **Share Embed**, or **Share Snapshot**. According to your choice, a corresponding window will appear:

Link settings



Create a personalized, direct link to share your panel within your organization, with the following customization settings:

Lock time range

Change the current relative time range to an absolute time range

Shorten link

Theme

Current **Dark** **Light**

 [Copy link](#)

 **Image renderer plugin not installed**

To render a panel image, you must install the [Grafana image renderer plugin](#). Please contact your Grafana administrator to install the plugin.

Panel preview

Image settings 

Width *

1000

Height *

px 500

Scale factor *

px 1

 [Generate image](#)

 [Download image](#)

[Explore](#)

Opens an interactive view showing the selected **Data source** and the **Query** used in the panel. You can modify and run the query, view results in real time, and use the **Query Inspector** to examine request and response details.

The screenshot shows the 'Query Inspector' interface. At the top, there are tabs for 'Outline', 'DataManager-OData-DWH', 'Queries', and 'Table'. The 'DataManager-OData-DWH' tab is selected, showing a query configuration with 'Use POST Method' and 'OData Query' options. The query text is: 'MaterialLossBonus?\$select=Change_Reason,Change_PrimaryQty&\$filter=Change_Type eq 'Loss' and Enterprise_Name eq 'NoEnterprise' and Site_Name eq 'NoSite' and Facility_Name in ('Cookie Factory') and Area_Name in ('Cookie Manufacturing') and Step_Name in ('Baking','Mixing') and Product_Name in ('Belgas') and Material_Type in ('Production') and Material_Form in ('Lot') and Material_PrimaryUnits eq 'Kg' and Calendar_ShiftName in ('Shift 2') and Calendar_CD ge'. Below this, there are buttons for '+ Add query' and 'Query inspector'. The 'Table' tab is selected, showing a table with two rows: 'Change_Reason' (Broken, Burned) and 'Change_PrimaryQty' (5, 3).

Inspect

Opens a view where you can choose to **Inspect Data** — to view the raw data returned by the query and check if it contains results — or **Panel JSON**, which shows the JSON definition of the panel, useful for debugging or exporting configurations.

Inspect: Top Loss Reasons by occurrences

The screenshot shows the 'Inspect' view for the 'Top Loss Reasons by occurrences' panel. At the top, there are tabs for 'Data', 'Stats', 'Query', and 'JSON', with 'JSON' being the active tab. Below this, there is a 'Select source' dropdown set to 'Panel JSON'. The main area displays the JSON configuration of the panel, which includes details about the panel's title, description, grid position, field configuration, and various transformations like 'organize' and 'groupBy'.

```

1  {
2    "id": 31,
3    "type": "volkovlabs-echarts-panel",
4    "title": "Top Loss Reasons by occurrences",
5    "description": "The top loss reasons ranked by their total number of occurrences, consisting of 10 reasons. The chart is a treemap where each reason is a node with multiple sub-nodes representing different categories of losses. The colors represent different categories, and the size of each node corresponds to its count. The chart is highly detailed and shows many sub-categories for each main reason, such as 'Baking', 'Mixing', 'Production', 'Lot', 'Shift 2', and 'Kg'. The main reasons are 'Change_Reason' (Broken, Burned) and 'Change_PrimaryQty' (5, 3). The chart is styled with a light blue background and a white grid. The legend is located on the right side of the chart area, showing color-coded boxes for different categories. The overall layout is clean and professional, with a clear focus on the data visualization.
6    "gridPos": {
7      "x": 17,
8      "y": 1,
9      "h": 11,
10     "w": 7
11   },
12   "fieldConfig": {
13     "defaults": {},
14     "overrides": []
15   },
16   "transformations": [
17     {
18       "id": "organize",
19       "options": {
20         "excludeByName": {},
21         "includeByName": {},
22         "indexByName": {},
23         "renameByName": {
24           "Change_PrimaryQty": "Quantity",
25           "Change_PrimaryQty (count)": "Count",
26           "Change_Reason": "Reason"
27         }
28       }
29     },
30     {
31       "id": "groupBy",
32       "options": {
33         "fields": {
34           "Quantity": {
35             "aggregations": [
36               "count"
37             ],
38             "operation": "aggregate"
39           }
40         }
41       }
42     }
43   ]
44 }

```

More

Opens a menu where you can perform additional actions on the panel, such as **Copy**, **Create a New Alert Rule**, or **Get Help**.

Editing the Dashboard

The **Edit Analytics View** wizard can be accessed from the Dashboard page within **Business Intelligence**.

1. In this wizard, you can modify all non-system properties, including Description, Data Group, and Keywords. The Name of the dashboard cannot be changed.
2. Select **Save** to apply your changes.

Edit Analytics View

General Data

Name: Yield Loss Information

Description:

Data Group:

Properties

* Folder: Performance

* Type: Grafana®

URL: <https://dev-112-mes.apps.rhos.cm-mes.dev:443/Grafana/d/fth-ZY4tz/yield-loss-information?orgId=1>

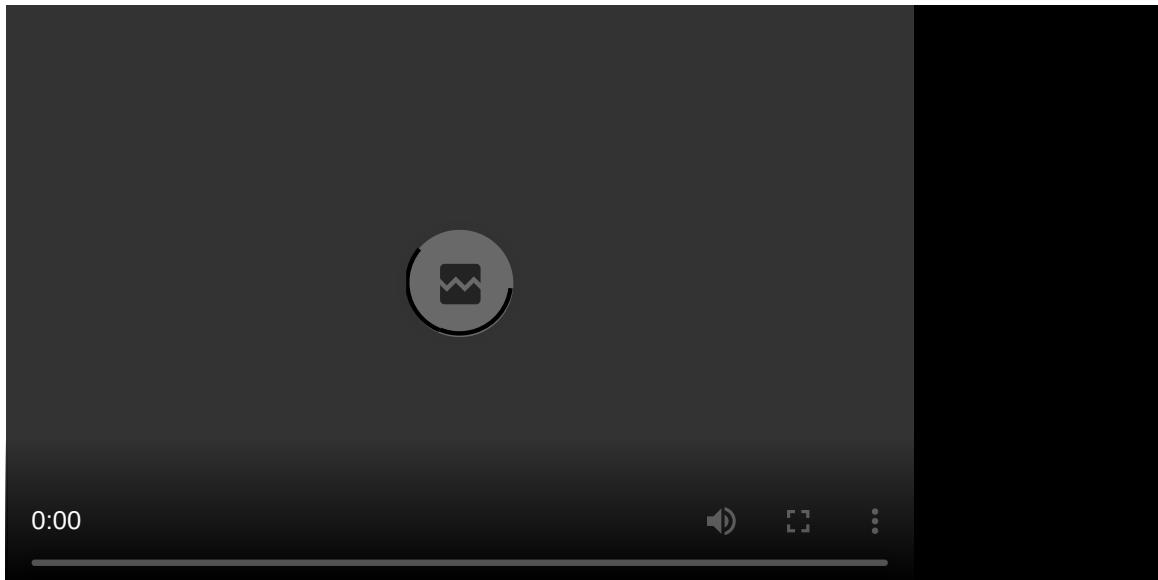
Keywords:

Comments:

Demonstration: From Production to Dashboard

This section illustrates how data updates in real time during production. Consider the example of a **Material** moving through the production process — first being tracked in, then tracked out, with a **Loss Reason** recorded.

After these operations, the dashboard automatically updates to reflect the changes, and you can see how the new data appears instantly.



This example highlights how real production data feeds the dashboard, allowing you to monitor performance, identify issues, and make informed decisions to optimize the production process.

Expected Outcome

With this dashboard, you can now monitor **Material** efficiency in real time and track Yield Loss patterns throughout the production process. It also allows you to identify the main causes of losses, analyze performance deviations, and take data-driven actions to improve overall **Material** Yield.

This example illustrates a sample use case, and serves as a starting point for your own dashboards, customized to your specific data and business needs.



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