Chapter 6: Process Analytics and Monitoring with BIZUIT

Welcome to the chapter on Process Analytics and Monitoring with BIZUIT. Today, we'll explore how we can take full advantage of BIZUIT's analytics tools to monitor and optimize the performance of our business processes together.

Throughout this chapter, we will focus on three key objectives: discover the analytics options offered by BIZUIT, learn how to set up advanced reports to analyze data, and evaluate the performance of our processes using KPIs. These steps will help us gain a deep understanding of the efficiency of each process and make better decisions.

We'll address the fundamental topics to master analytics in BIZUIT. We'll start with an introduction to analytics tools, explaining how they can help us improve our operational efficiency.

Then, we'll delve into the BIZUIT Dashboard analytics modules, where we'll learn how to set up custom reports and key metrics that will make a difference in our results.

With these tools and knowledge, we will be ready to optimize our processes and make decisions based on accurate data. We look forward to seeing you in the next lesson, where we will explore more advanced tools to continue enhancing our learning.

Ideal Audience

This chapter is designed for professionals interested in the development of BPM (Business Process Management) projects, such as process analysts, process designers, BPM developers and project managers. It is ideal for those looking to gain practical knowledge and delve into analytical and process monitoring tools using BIZUIT.

Objectives

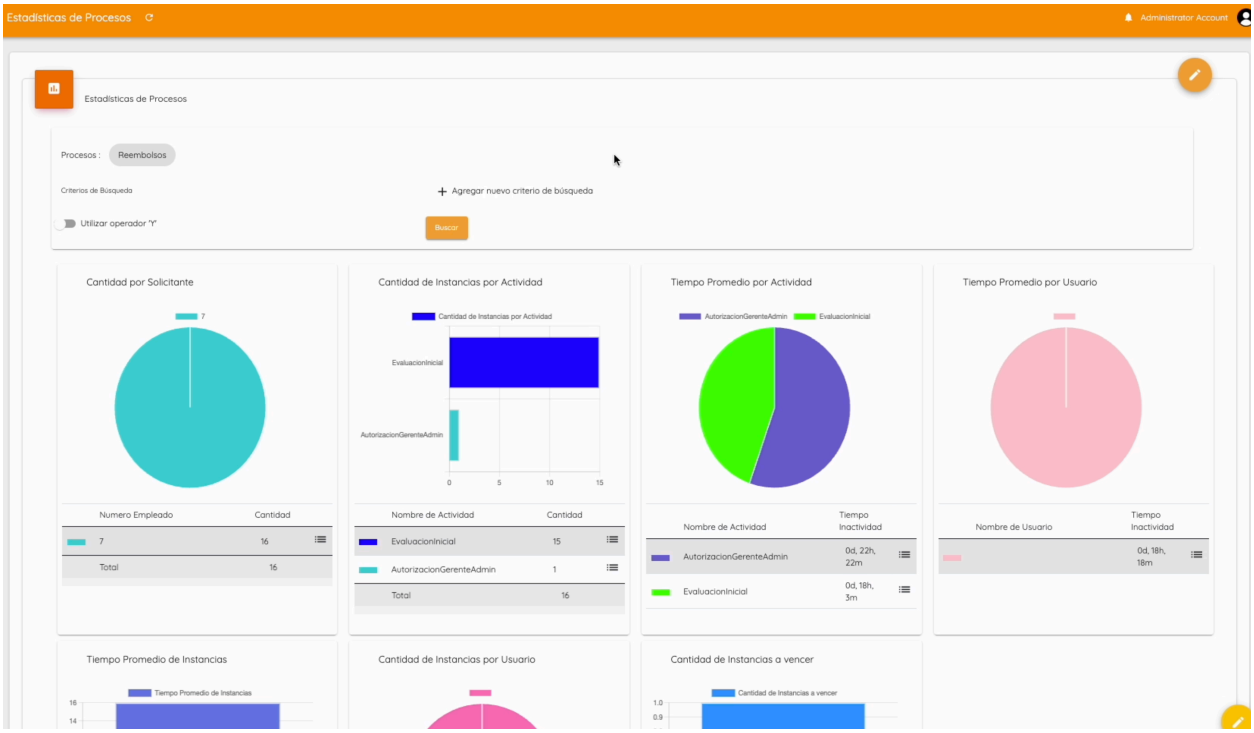
1. Discover BIZUIT analytics options for process monitoring and optimization: Learn how to use BIZUIT analytics tools to improve business process efficiency and control.
2. Set up advanced queries and reports for data analysis: Learn how to create custom queries and detailed reports that provide deep and strategic insights into your data.

3. Evaluate process performance using key indicators (KPIs): Learn how to use KPIs to measure, analyze, and optimize the performance of business processes, maximizing their impact.

Unit 1: Process Statistics Module in BIZUIT

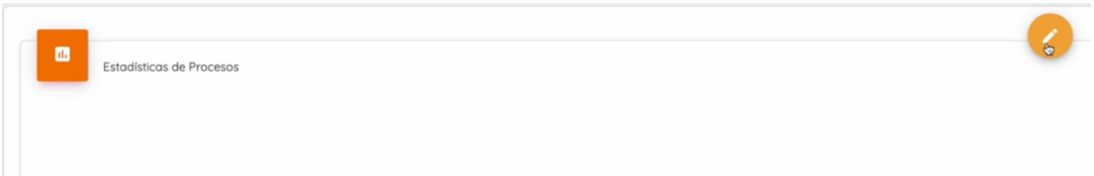
In this unit we are going to dive into the BIZUIT process statistics module. This tool allows us to analyze the performance of our processes in real time. Together, we'll look at how to use charts and reports to understand the health of each process, evaluate overall workflow performance, and perform tasks on instances, such as reassignments or deletions.

Process statistics are essential to detect patterns and optimize the distribution of tasks in our teams. With this, we will be able to reduce execution times, improve efficiency and avoid possible work overloads in specific activities.

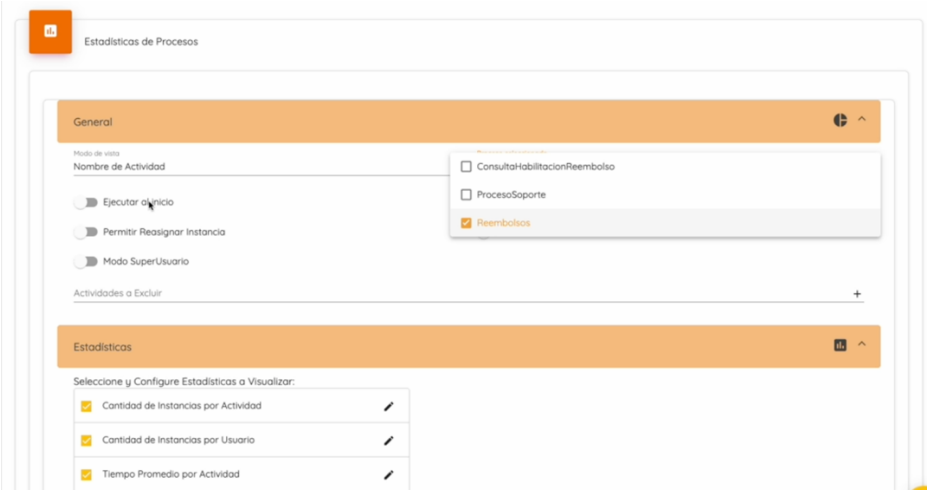


Let's start from the beginning:

We access the BIZUIT Dashboard through an account that has editing permissions and that has the process statistics module enabled. Once inside, we click on the settings button to enter the corresponding screen.



First, we select the process or processes we want to analyze. This selection allows us to define precisely which ones we will monitor. If we select more than one process, we must make sure that they are related and share parameters or variables marked as filterable, so that the statistics are consistent.



Key Module Options

- **Run at Startup**:

With this option, we can configure the module to perform queries automatically when accessing the page, without the need for the user to click on a button to obtain the information.

- **Super User Mode:**

When disabled, statistics are limited to instances of activities that the user has permissions on. By activating it, we remove this restriction and all instances are considered, regardless of security permissions.

- **Allow reassignment of instances:**

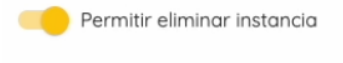
  This option allows you to reassign an instance to another user. It is especially useful in cases such as an employee's absence, whether due to vacation or illness, ensuring that the workflow does not stop.

- **Allow Traces to Be Displayed:**

  This setting gives access to an instance's activity history. We can review input and output data, as well as the parameters selected as filterable. This helps us identify hotspots or bottlenecks and optimize the process.

- **Allow Deleting Instances:**

  With this option, we can remove instances from the process, a useful action for cases where an instance is in an error state or was created by mistake. It is important to use this tool with caution, as removal is final and should be restricted to admin users.



- **Activities to exclude:**

  This functionality allows us to exclude specific activities from statistics. It is ideal for those that do not affect the flow of the process, but that accumulate instances and could distort the results.

With these tools and configurations, we can streamline the analysis and management of our processes, making sure that each workflow is as efficient as possible.

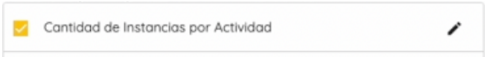
Configuration of Statistics to View

Next, we will explore how to select, configure and reorder the standard statistics offered by BIZUIT, as well as create custom statistics based on the process data, parameters or variables marked as filterable.

1. **Number of Instances per Activity:**

   We start with this metric, which shows us how many instances are active in each specific activity in the process. This statistic is ideal for identifying which stages of the process have the greatest workload. For example, if we observe that an activity has a high

number of active instances, we could be facing a bottleneck or an overload. With this information, we can make decisions to adjust resources or redistribute tasks to optimize workflow.



2. **Number of Instances per User:**

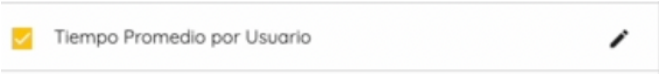
   This metric allows us to visualize how many instances are being managed by each user. It is a key tool for analyzing the individual workload and detecting if any team member is overloaded. With this information, we can balance the distribution of work, making sure everyone has a reasonable and efficient load.

3. **Average Time per Activity:**

Here we analyze the average time that instances remain in each process activity. This statistic measures from when an instance reaches activity until it is completed, representing the current average delay. By identifying that a specific activity has a longer than expected execution time, we can analyze the causes and optimize that stage of the process, thus improving the overall efficiency of the workflow.

4. **Average Time per User:**

   This metric is similar to the previous one, but instead of grouping by activity, it groups by user. Thus, we can identify users who might need additional support or training to improve their performance. If a user has significantly higher than average times, we may provide them with resources or specific training to optimize their performance.



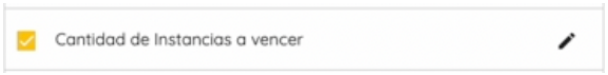
5. **Average Instance Time:**

   This statistic calculates the average delay time or age of instances across all process activities. It is a key metric for evaluating overall workflow efficiency. With this

information, we can set continuous improvement goals. If the average time is longer than desired, it is likely that some activities will need to be revised or redesigned.

6. **Number of Instances to Expire:**

   This statistic shows us the number of instances that are close to their expiration date, considering those activities configured with scheduled actions. It is especially useful for prioritizing critical tasks and avoiding missed deadlines. It allows us to focus our attention on activities that require immediate action.



7. **Number of Expired Instances:**

   Finally, this metric shows us the number of instances that have already passed their expiration date without being completed. It is an indicator of possible problems in the process or lack of resources.

   If we detect a high number of expired instances, we know it's time to review and adjust the process or redistribute tasks to ensure compliance in a timely manner.

Stats Customization

We can customize each statistic, configuring its title, a description that will appear when you hover the mouse pointer, and the type of graph, whether it is bars, radar, lines, among others. If we don't want to display a statistic, we simply deselect it. In addition, we can reorder them easily, dragging them to the desired position.

With these tools, we have full control to analyze and improve the efficiency of our processes.

Custom Statistics Settings

Here, we'll explore how to create and configure custom statistics within the Process Statistics module. This functionality allows us to design specific metrics that adapt to our needs, defining parameters and filters that help us perform detailed and effective analyses.

For example, we could create a statistic to measure the performance of a new process or to take a deeper look at a critical activity. This gives us the flexibility to customize the module according to the particularities of each organization or workflow.

1. Field Configuration

- **Title and Description:**

  We start by entering a title that represents our custom statistic. In the description field, we added additional information about its purpose, which will be displayed when you hover over it.

- **Field by which to Group:**

  Here we select the process data (parameter or variable marked as filterable) that we want to use to group the information in the graph. For example, if we want to analyze data by region, we will select "region". In this case, we will use "employee number".

2. Type of Grouping and Group Average:

We define how we want to combine or interpret the instances within each group. Options include counts, maximum, minimum, or average seniority. This allows us to identify patterns and perform temporal analysis.

If we select a temporary pool, we can also choose the average of the pool, such as the delay from the instance's arrival to activity or the expected expiration date.

3. Chart Type

We choose the visualization that best represents the data, such as bar, line, or pie charts. For example, to compare sales across regions, a bar chart is ideal; while for proportions, such as completed versus to-do tasks, a pie chart works best.

4. Show First Records:

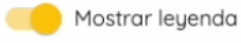
This option allows us to specify how many records we want to display in the graph and report, helping us to focus attention on the most relevant data. For example, we can visualize only the 5 regions with the highest sales.

5. Exclude Activities

We can omit specific activities from the analysis to avoid distortions. For example, if we want to exclude returns or order cancellations in a sales report, we configure these activities here to focus only on actual sales.

6. Show Caption

By enabling this option, we add a legend to the graph, which makes it easier to identify the categories or elements represented, making the reports more understandable.

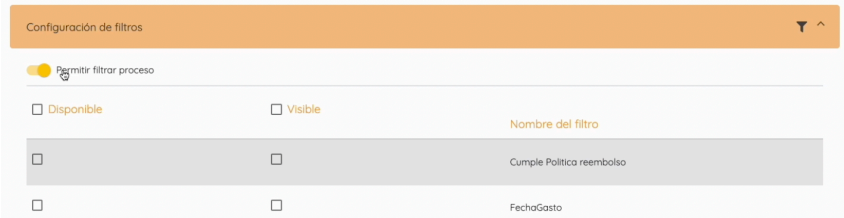


Filter Configuration

The filter function allows us to select and visualize only the data relevant to our analysis.

- **Allow Process Filtering:**

  By enabling this option, we enable a feature that applies filtering criteria to the entire process. This means that we can define which instances or activities will be visible in the module.



- **List of Filters:**

  Here we set up the individual filters. For example, we may add criteria such as "meets refund policy," "date spend," or "amount spent." By selecting "Spend Amount" as the filter, users can easily search for instances that do or do not comply with the set policy.

- **Visible Column:**

  We define whether a field will be visible in the instance details. For example, if we mark "Spend date" as visible, this data will appear in the instance trace grid. If we do not mark "Amount of expense", we can filter by it, but it will not be shown in the data grid.

We save the Settings

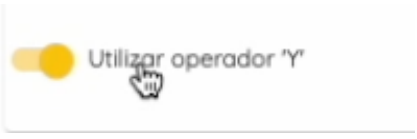
Once the configuration is finished, we click on "Save". Now we'll explore how to use these custom stats in our visualization and analytics options.

Now that we know the configuration and display options of the Process Statistics module, it's time to explore how to use them in detail.

Filters and Settings:

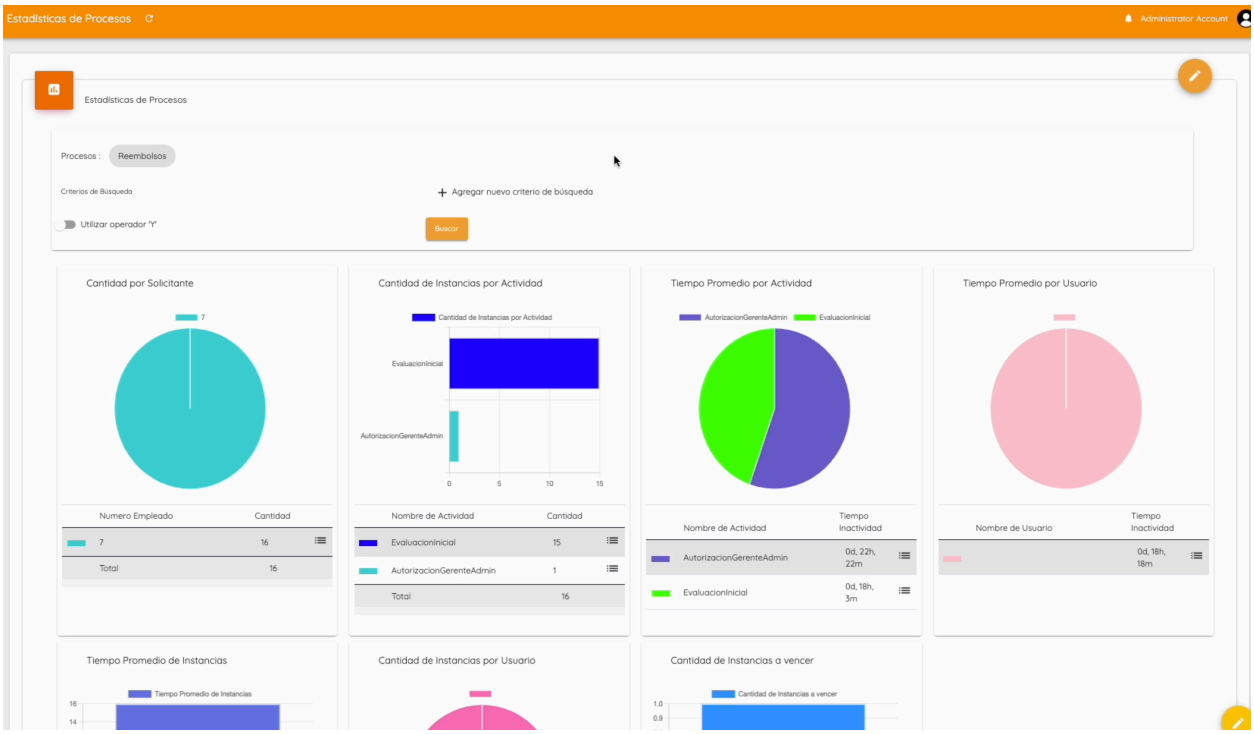
At the top of the screen, we find the option to configure the parameters or variables available as filters. Here we select the filter we want to apply, set the operator we will use (larger, smaller, equal, etc.) and define a specific value.

In addition, we can combine several filters to perform more precise searches. We enabled the option to use the logical operator "Y" for composite filters. If we do not select it, the "O" operator is applied by default.

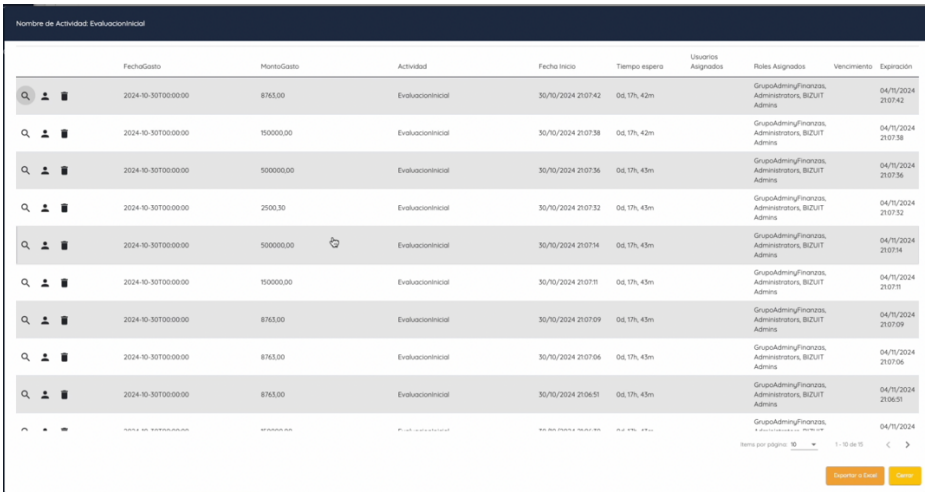


Statistics Visualization:

In the visualization section, we see the configured statistics.



Clicking on an item in any of the tables or graphs opens a new screen that gives us detailed information about that specific statistic.



Detail Display:

In this detailed view, we find all the instances that are part of the selected statistic segment, including the process fields that we set as available. In our case, these are Date of Expenditure and Amount of Expenditure.

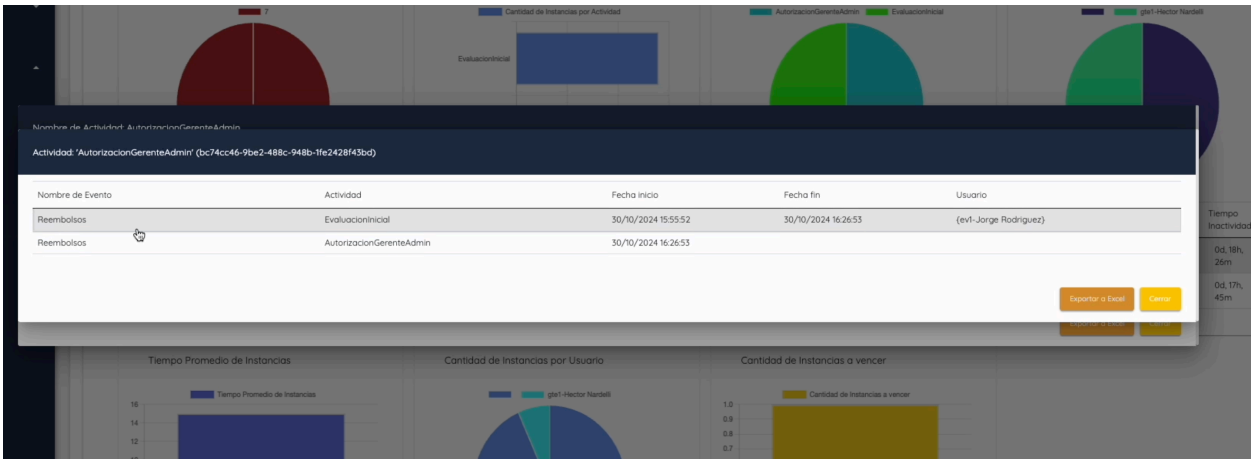
From this screen we can also perform key actions, such as:

- Reassign tasks to another user, ensuring that instances continue to move forward.
- Delete instances if necessary, especially in cases where the instances are no longer relevant to the process.

In addition, we can review the full history of instance activities, also known as the trace. This includes:

- The user interaction activities that the instance has gone through.
- Arrival and departure dates for each activity.
- The user who performed each activity.

This detailed information is crucial to identify exact points where bottlenecks or problems are generated in user interaction activities, helping us to optimize the flow of information.



So we can say that the process statistics module in BIZUIT is a powerful tool to analyze and optimize the performance of our workflows. With its charts, reports, and configuration options, we can make informed decisions to improve operational efficiency.

This module is highly flexible and customizable, allowing us to tailor it to the specific needs of each process. By applying these adjustments, we strengthen our workflow and increase the productivity of our teams.

Thank you for joining us in this exploration of the Process Statistics module.

Summary

In this unit we explore BIZUIT's process statistics module, a key tool for analyzing and optimizing performance in real-time. We learned how to use graphs and reports to assess the status of processes, identify patterns, and perform actions such as instance reassignments or

deletions. Insights allow you to detect bottlenecks, balance workloads, and improve operational efficiency, all while being configured and customized to each organization's specific needs.

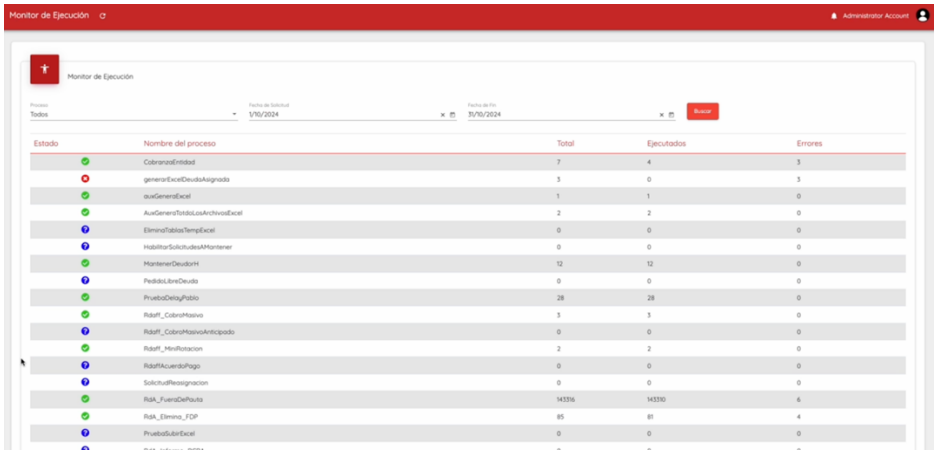
Throughout the sessions, we discover how to set up standard and custom statistics, using filters and groupings for detailed analysis. We also saw how to apply advanced options such as trail display, activity exclusion, and use of compound filters. These functionalities offer us a deep and flexible vision of the processes, allowing us to make informed decisions and strengthen the productivity of the teams. This module is presented as an indispensable tool to continuously improve our workflows.

Unit 2: Execution Monitor Module

In this chapter we will explore together the BIZUIT Execution Monitor, a key tool for real-time tracking of running processes, analyzing their performance, and detecting any issues or errors. During this session, we will look at how to use search filters and analyze the results displayed on the monitor interface.

Access to the Execution Monitor

To get started, we access the BIZUIT Dashboard with an account that has viewing permissions and that has the Execution Monitor module enabled. From this screen we can see all the active processes in the system, including the number of instances created and the status of each one.



Search Filters

At the top, we find the filters that help us adjust the range of processes we want to monitor.

- **Process Filter:** Allows us to select a specific process or visualize all active processes.

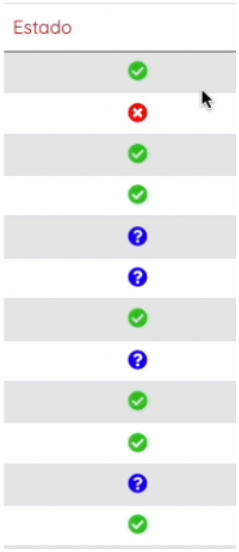
- **Date Filters:** We can define a time range using the request date and end date fields to search for processes executed on specific dates.

Once the filters are applied, we click on Search to update the results.

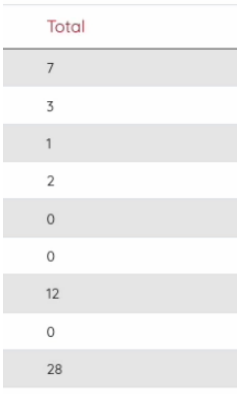
Results in the Table

The results table provides us with a detailed overview of the processes, including:

- **Process Status:** Color-coded icons (green for success, red for errors, and blue for unknown status).



- **Total Instances:** Indicates the total number of instances generated.



- **Executed:** Shows how many instances were successfully completed.

Ejecutados
4
0
1
2
0
0
12
0
28
3
0
2
0

- **Errors:** Details how many instances failed, helping us identify processes that need review.

Errores
3
3
0
0
0
0
0
0
0
0
0
0
0

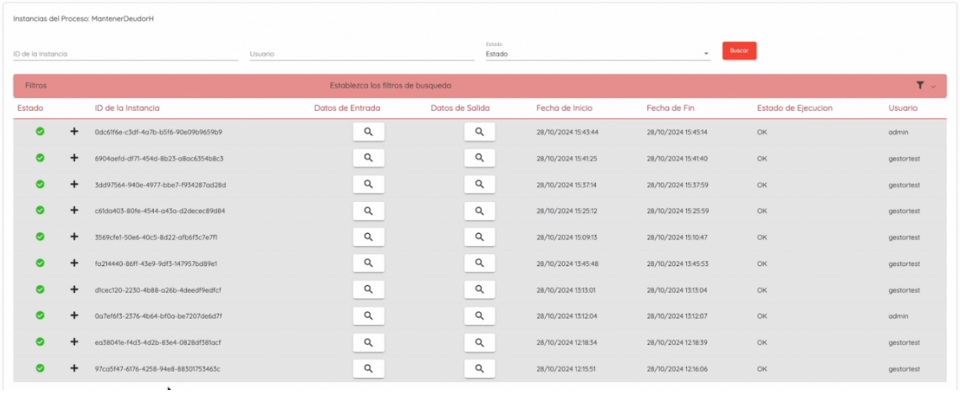
If a process has numerous errors or no successful instances, it is a signal to review its configuration and execution logic.

Instance Details

When you click on a process, we access the detailed information of your instances. Here we can:

- Filter by Instance ID, User, or Status.
- Visualize Input and Output Data: With the magnifying glass icons, we can analyze the specific data used in each instance.

- Review Dates and User: Includes columns for start date, end date, and the user who ran the instance.



Granular View of Activities

Within each instance, we can observe a complete breakdown of the activities executed:

- Activity Status: Colored icons indicate whether each activity was successful, failed, or missing information.

- Activity Name: Lists the tasks that make up the process flow.
- Input and Output Data: Allows you to analyze each set of data used in the activities.
- Start and End Times: Helps identify delays or bottlenecks in the process.

BIZUIT's Execution Monitor gives us full control over the status of processes in real time. With this tool, we can quickly identify issues, analyze instances accurately, and continuously optimize workflow.

Summary

In this unit we explore BIZUIT's Execution Monitor, an essential tool for real-time tracking of running processes, analyzing their performance, and detecting issues or errors. We learned how to use search filters to fine-tune the processes we want to monitor, either by selecting

specific processes or by setting date ranges. The results table gives us detailed information, including the status of each process, the total number of instances, how many were successfully executed and how many presented errors, which makes it easier to identify areas that require review and optimization.

In addition, we discovered how to access the detail of each instance to analyze specific input and output data, review the executed activities, and detect possible bottlenecks in the flow. This granular view allows us to make quick, informed decisions to improve operational efficiency. The Execution Monitor is a powerful tool that gives us full control over the status of our processes, contributing to continuous optimization and workflow strengthening.

Join us in the next unit where we will look at KPI services and modules.

Unit 3: KPIs

In this chapter, we will explore two essential tools within BIZUIT Dashboard to manage performance indicators efficiently: the KPI Evaluation Service and the KPI Viewer module. The KPI evaluation service allows us to define and monitor key management indicators in an automated way, such as daily sales, new customers or inventory levels. Through this service, we set up queries that pull relevant data from our databases and convert them into updated indicators at regular intervals.

In addition to showing us real-time information, this tool can set alerts or even trigger automatic processes when values exceed certain thresholds, helping us to take corrective or preventive actions proactively.

On the other hand, the KPI viewer module is where we visualize these indicators in a clear and graphical way. With color charts and visual formats, we can quickly interpret the status of KPIs and detect values outside the desired ranges.

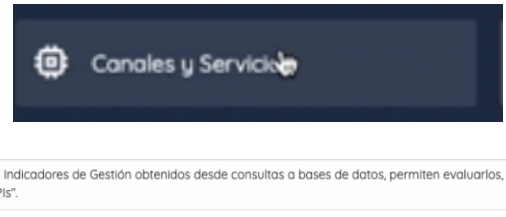
The combination of the evaluation service and the KPI viewer allows us to manage our indicators in an agile and data-driven way, eliminating manual monitoring and delayed reports. These tools help us align our operations with business objectives and respond quickly to any deviations.

KPI Assessment Service

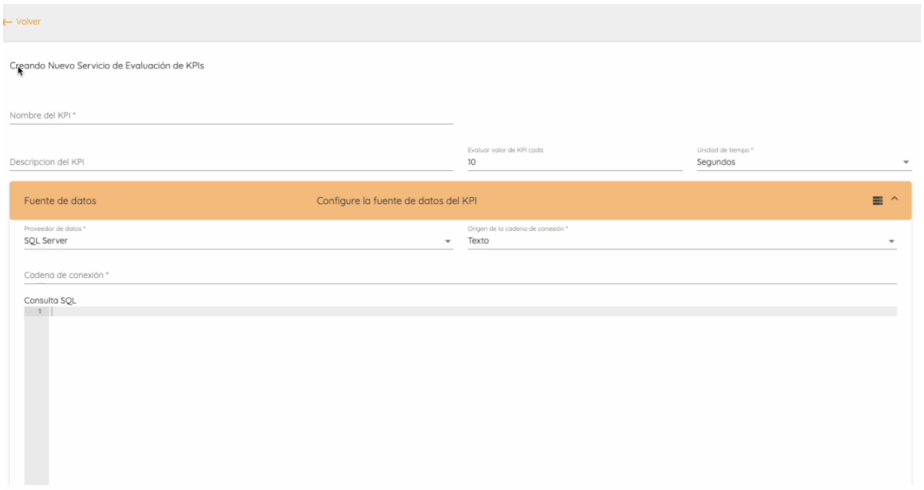
Here we will learn how to set up a KPI evaluation service in BIZUIT, a key tool to manage management indicators in real time and automate specific actions based on their values. This service allows us to define database queries, update indicators at regular intervals and trigger processes when KPIs reach certain ranges.

Configuring the KPI Assessment Service

From the main menu, we access the Channels and Services option and select the KPI evaluation service.

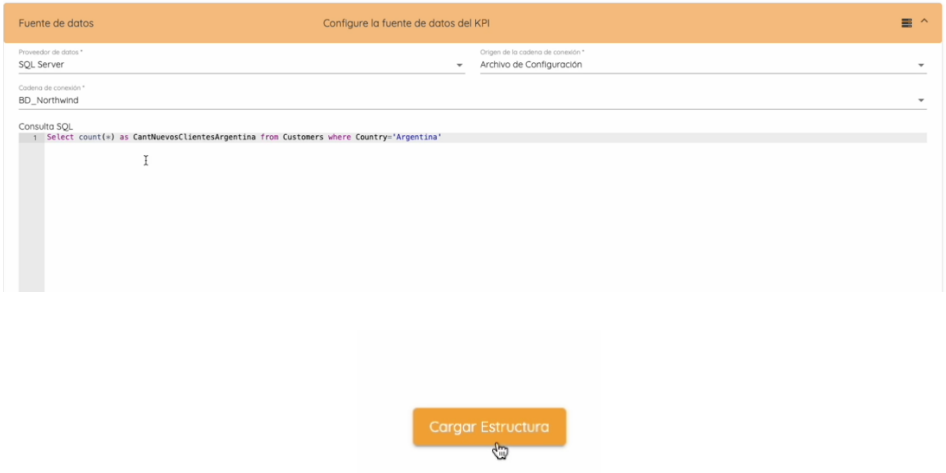


Here, we can view existing services or add a new one by clicking on the More icon.



We start by filling in the general data by assigning a descriptive name, such as Daily New Customer Assessment, and detailing its purpose in the description field. Then, we define the evaluation frequency, for example, every 8 hours, adjusting the interval according to the criticality of the KPI.

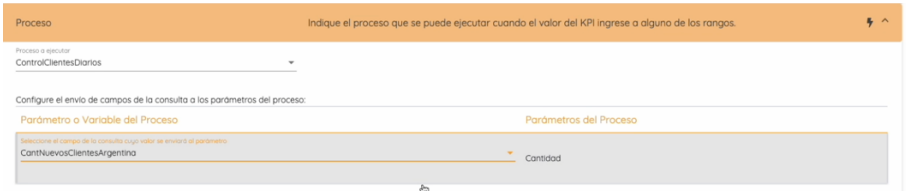
Next, we set up the data source. We select the data provider (SQL Server, WDB, ODBC, BigQuery, etc.) and the connection string, which can be typed manually or selected from the previous configurations in BIZUIT Designer. We enter the SQL query that extracts the data from the KPI, making sure to load the structure to validate the information.



Finally, we identify the column that represents the value of the indicator, useful if the query returns multiple columns.

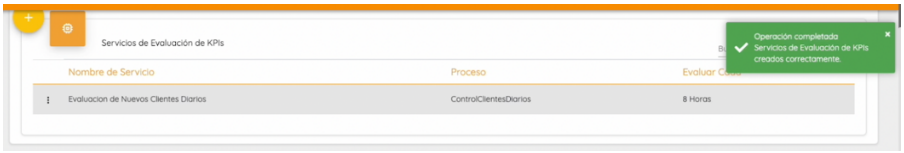
Process Association and Range Configuration

We can link a specific process that will run automatically if the KPI falls within certain ranges. We map the SQL query values to the process parameters. For example, if the KPI measures the number of new customers in Argentina, we use this data to feed a process such as *Daily Customer Control*.



In the range configuration, we define the KPI intervals, assign visual colors (yellow for low values, green for normal, and red for alerts), and enable the execution of automatic processes according to the range of the indicator. This functionality facilitates the visual interpretation of the KPI and allows an immediate reaction to critical values.

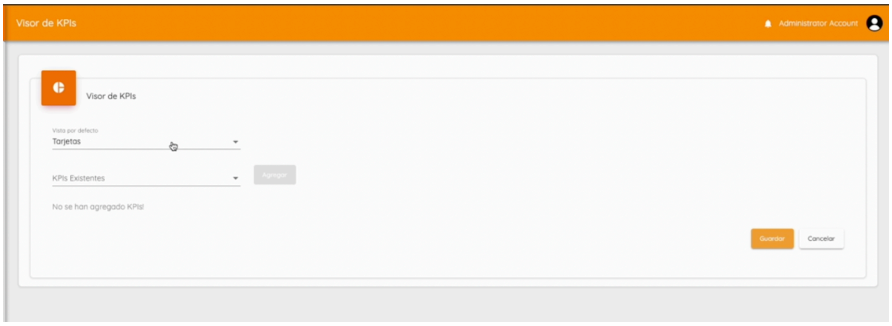
Once the setup is complete, we save the data. With this service, BIZUIT can monitor our KPIs, automate decisions and improve operational efficiency, ensuring that our processes are more agile and proactive.



KPI Viewer Module

In this third part of the KPIs module, we will learn how to configure and visualize management indicators (KPIs) in the KPI viewer module of BIZUIT Dashboard, designed to present the indicators visually and in real time. This module allows us to gain a clear and quick view of organizational performance and make data-driven decisions.

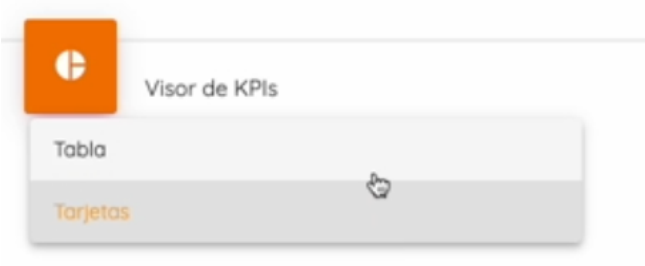
To get started, we access BIZUIT Dashboard with an account that has viewing and editing permissions, and that has the KPI viewer module enabled. Once inside, we click on the settings icon in the top right corner to customize the display of the indicators.



Module Configuration

First, we select the default view, choosing between two options:

- **Table:** Organizes KPIs in a grid, making it easier to compare.
- **Cards:** Present the indicators in a visual and prominent way.

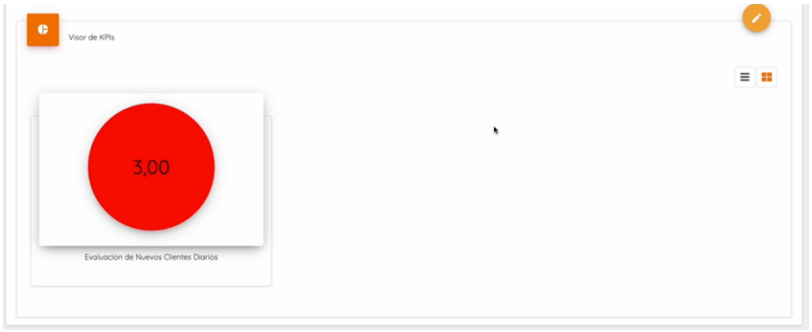


Then, in the existing KPIs section, we select the indicators previously configured in the KPI evaluation service and add them to the module. Each KPI can be customized by adjusting its name and format (currency, percentage, or numeric).

Visualization of KPIs

Depending on the view selected, KPIs are presented as follows:

- **Card Mode:** Each indicator is displayed as a highlighted card with the value updated to the center and a color scheme indicating its status. For example, a value in green indicates that it is within the expected range, while a critical value appears in red.



- **Table Mode:** Indicators are organized in rows, displaying a colored circle representing their status, along with information such as name, description, current value, and the date and time of the last update.

During the demo, we saw how KPIs are updated in real-time when making changes to the data, such as adding new customers. The KPI values reflected these changes immediately, and depending on the configuration, the associated processes ran automatically when entering critical ranges.

The KPI viewer module gives us a visual and practical tool to monitor the performance of our processes and make decisions based on updated data. Combined with the KPI assessment

service, it allows us to keep our processes and teams aligned with the strategic objectives of the organization, making decision-making more accurate and effective. Thank you for joining us on this journey.

Summary

In Unit 3 we explore the use of KPIs in BIZUIT Dashboard, focusing on two fundamental tools: the KPI Assessment Service and the KPI Viewer module. The evaluation service allows us to define and monitor key indicators such as daily sales, new customers or inventory levels, updating them automatically at regular intervals. In addition, this tool not only presents real-time information, but can also trigger automatic processes when values reach certain thresholds, allowing for proactive and efficient management.

For its part, the KPI viewer module offers a clear and real-time visualization of these indicators, with customizable options such as card views or tables that facilitate interpretation and monitoring. We configure and customize each KPI, assigning visual colors according to their status, allowing us to identify critical values quickly. By combining these tools, BIZUIT provides us with a comprehensive solution to align our operations with the organization's strategic objectives, make informed decisions, and improve operational efficiency in an agile and accurate manner.

Chapter Summary

In this chapter, we explore the key tools of BIZUIT Dashboard for business process analysis, monitoring, and optimization. We started with the chapter on Analytics and Process Monitoring, where we learned how to use advanced analytics options, set up custom reports, and evaluate performance through KPIs. These tools allow us to deeply understand process efficiency and make data-driven decisions.

We continue with the Process Statistics module, a fundamental tool for analyzing performance in real time. We learn how to use charts and reports to identify bottlenecks, balance workloads, and improve operational efficiency. We also saw how to set up standard and custom statistics, using filters, groupings and exclusions for a more detailed analysis adapted to our needs.

In the unit on Execution Monitor, we explore how to track running processes in real time, analyze their performance, and detect problems. We learned how to use filters to fine-tune searches, analyze detailed results, and gain granular insights into each instance and activity, streamlining workflow and strengthening productivity.

Finally, in the KPIs module, we delve into the assessment service and the KPI viewer. These tools allow us to define key indicators, extract relevant data from our databases, and visualize organizational performance in real-time using graphs and tables. We set up automatic alerts and processes based on KPI values, aligning operations with the organization's strategic objectives. Through these tools, we improve decision-making and ensure proactive and agile management of business processes.