Documentación del Producto

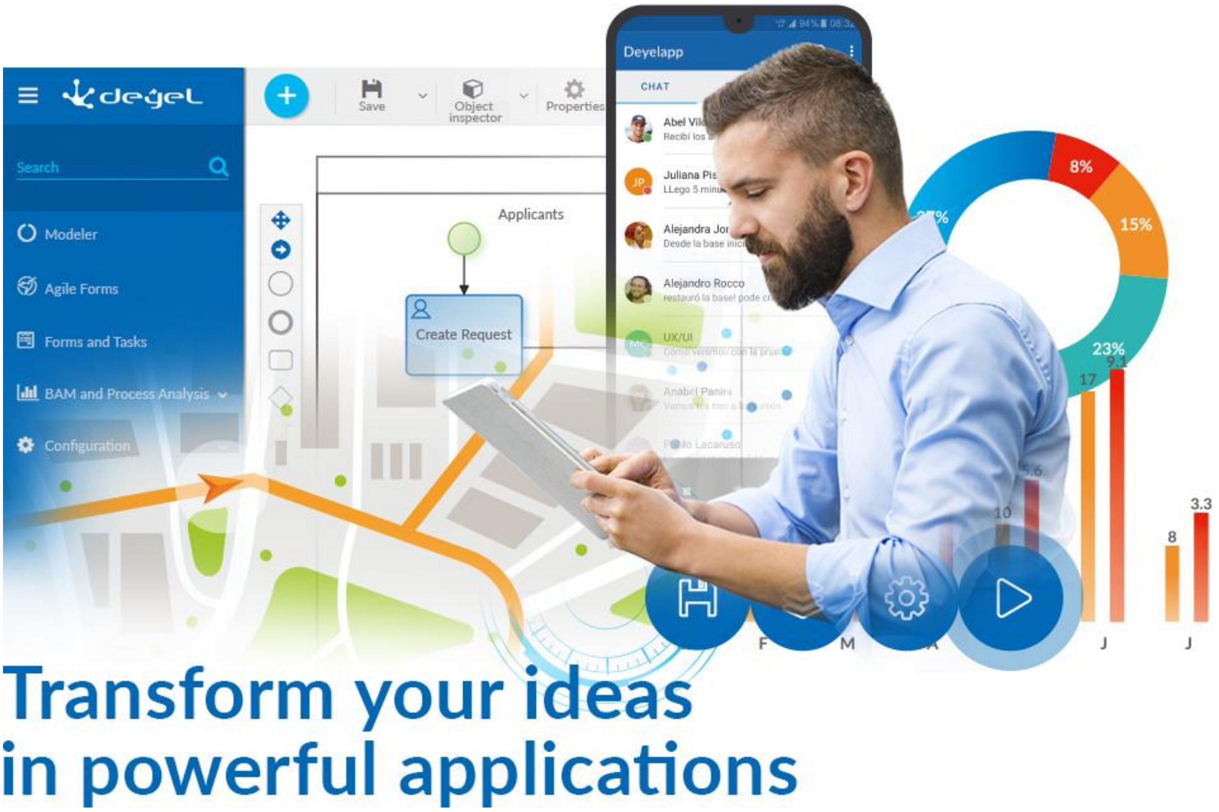
Manual del Usuario

Deyel 7.9

CONTENIDOS

1. Welcome to Deyel

[Fase 1: Introducción]

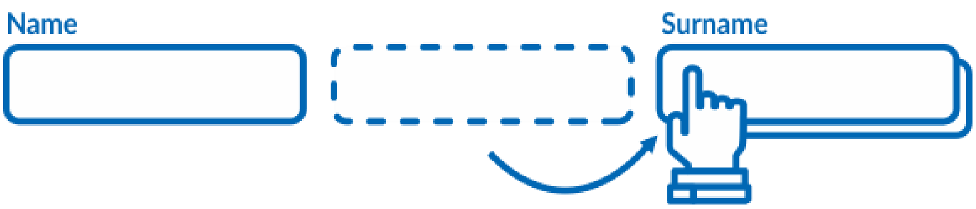


2. About Deyel

[Fase 1: Introducción a Deyel > Low-Code vs No-Code]

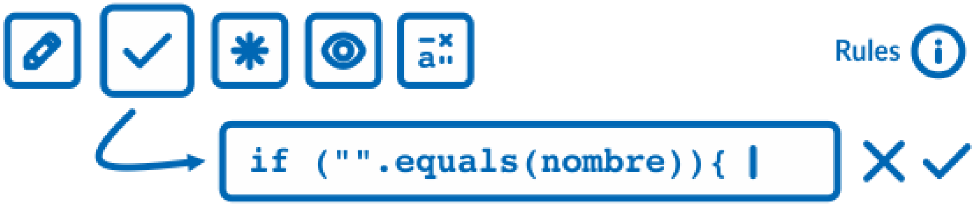
Deyel is a platform for creating applications. It natively gathers the required components and functionalities required to automate integral processes that impact on the entire company, adapting perfectly to the business journey, reducing the return on investment time and allowing a greater commitment and better experiences.

Do you have a good idea? Dare to make it come true



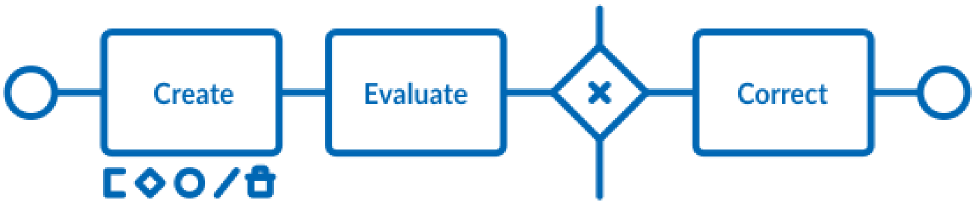
Start creating freely from the form modeler. Model all the forms you use only by selecting, dragging, drop and display. It`s really very simple. A good user experience starts with receptive interfaces that can be used in all type of devices.

Secure the integrity and reliability of your information



We can all write rules and define the behavior of our forms. With the rules wizard of **Deyel**, you can create simple rules for your forms field, validations, obligatory, editability and visibility, even when you don`t have coding skills. If more complexity is needed you count with tools to define advanced rules.

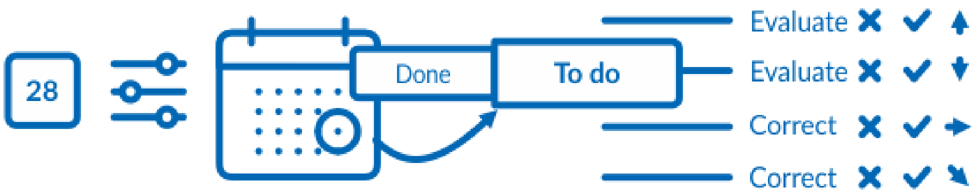
Draw your processes instead of coding them



You bring the experience… the process modeler the tools. No one knows the commercial processes better than who use them and be able to design them freely, automate to the maximum, and integrate them to the rest of the business as well as its protagonists, is the key to digital innovation and for the success of the business itself.

Process modeler is an agile tool for everyone who uses it, not just for IT connoisseurs. Generating an environment of collaborative work among business users, process experts and computer technicians.

The key… teamwork



Take advantage of new technology, simplify your tasks and keep up to day by gaining productivity. Our activities are simplified from **Deyel** portal, where everybody receives their tasks sorted by various criteria and can be seen in list form, calendar or both, facilitating its fulfillment and return.

The calendar view grants the user the simplicity and tranquility to see the whole picture and not just the short term. This is accomplished by the strong integration among business processes, their activities and the interactions between their participants with the personal calendar.

From where you are and with your favorite device

Take decisions faster and in the right time. All the applications developed in **Deyel** can be available on smartphones, tablets, notebooks and other devices as one more app. Downloads from the app store for free and you can use them where you need them with the device you have at the time.

We love to integrate with your applications ... don't worry about this

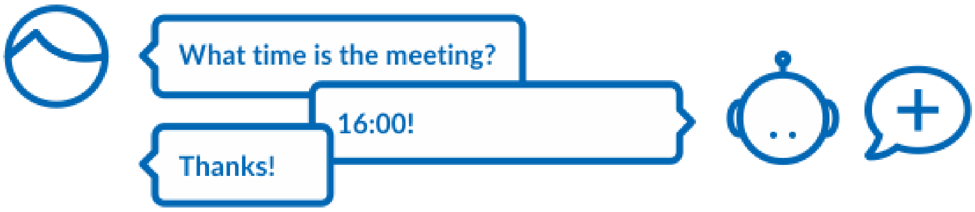
Deyel makes it easy for you for your application to play in the big leagues. Integration rules, together with the adapters already defined or the ones you can create, make the applications developed in Deyel able to interact directly with your corporate systems, web services, robots, artificial intelligence, the internet of things and your favorite apps.

For authentication, **Deyel** has an embedded security system that can be integrated with LDAP, allowing users to be managed in an integrated way.

Visualize and control each detail of your business

Deyel dashboards are the best way to show what is important in one single place. **Deyel** portal provides you with all the information and tools necessary to define dashboards containing business indicators based on multiple types of graphs, without the need for coding. Forget about business intelligence tools.

Improve communication and share information with your whole team

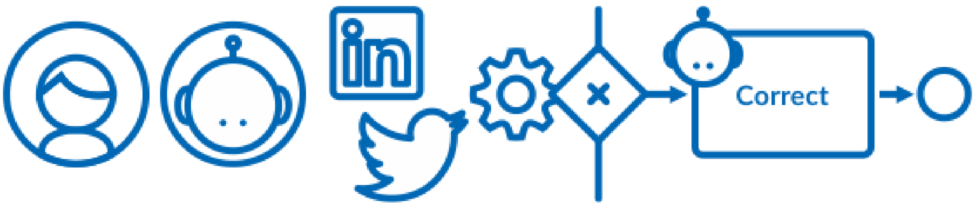


Collaboration is key to improve productivity. **Deyel** has collaboration tools where users interact through messages, share information, state, comments and documentation related to your business applications and each case in particular.

Deyel's corporate social messaging, carried out through private or group chats, allows, unlike others, that all communication between sender and receiver is associated with the case as part of its execution and resolution, becoming such a fundamental piece as the process information itself.

The management indicators, based on the analysis of the execution of the applications, are defined in a very easy way through the **Deyel** widget modeler and with them, you can design your dashboards in the dashboards modeler, with high visual impact, favoring the interpretation of the evolution of your business.

Define who you interact with



Who, when and how they access your application data. Participants in a process are much more than a simple user; they are the ones who give life to the business, and its success depends in part on their performance.

Deyel participants don`t necessarily have to be human. Many tasks are automated through IoT technology and others are executed transparently and efficiently by bots, driving new digital experiences in a wide range of use cases.

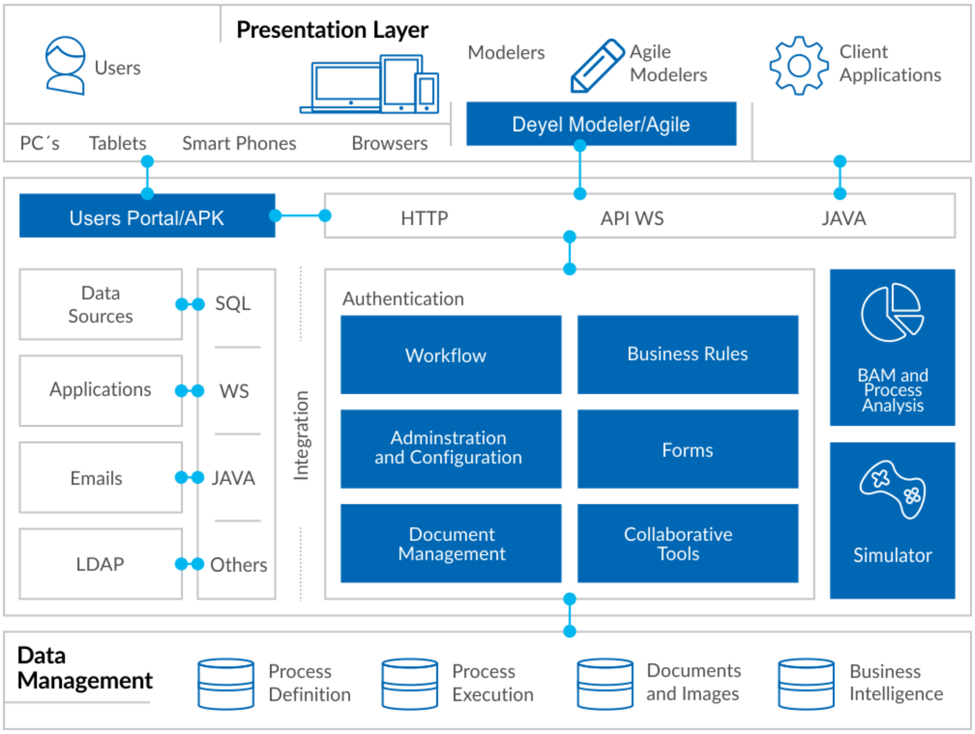
Deyel allows you to observe, through each participant, what tasks are being carried out, which ones have to be carried out and also how they are carried out, including their characteristics, behavior, performance and level of participation in company tasks.

3. User Manual

3.1. Architecture

Deyel is a product based on Java technology, developed with modern object-oriented patterns. It supports several industry standards such as HTML5, CSS3, RWD, web services, multiple database and application servers.

The following chart describes the main components of its architecture.



Graphic Modeler

Using the [graphic modeler,] business users can graphically design their processes using **BPMN 2.0** (Business Process Model and Notation) symbols in an intuitive and easy-to-use environment. Each process with its activities, interconnections, events, times, alerts, etc. can be defined and also documented. In this same workspace, aspects of processes implementation can be included, such as user interfaces of the activities, integration with other applications, variables and business rules, among others.

User Portal

Through the [portal] of **Deyel**, users can interact with their list of activities and execute their tasks, start cases of their processes, consult them, access collaborative tools, monitoring reports, etc. The administration and configuration functionality can also be used through the portal. The portal is based on standards such as RWD, HTML5 and CSS3. They can be used on mobile devices or desktop PCs through web browsers. Its appearance is configurable according to the characteristics of each organization.

Workflow Engine

The workflow engine of **Deyel** interprets and executes the definition of business processes that are modeled in the graphic modeler. The modeler stores the graphically modeled processes within the process repository, so that the workflow engine can interpret these definitions and execute them. The execution state remains in the case execution repository.

Forms Administrator

Through this **Deyel** tool, forms that represent the user interface of human activities are generated in the modeled processes. Forms contain the process variables that are used by business rules and other related objects.

Forms have an interface rich in components (jQuery and Bootstrap), support RWD (Responsive Web Design) concept and are based on standards such as HTML5 and CSS3.

Business Rules

The behavior of processes is defined by [business rules]. Rules can be used in validations, specific business logic, process flow control, integration with other applications, etc.

Deyel offers wizards the business user that allow them to intuitively define the behavior of the rule. These wizards present the user with control structures, access to available parameters and variables, previously defined business rules, executing components, logical operators, etc. Rules persist in the object catalog of **Deyel.**

Collaborative Tools

With the messenger service of **Deyel**, users can communicate easily. Messages can be used among users in private, or they can be public when they are associated with cases or processes definitions. Associating them with cases provides a collaborative tool among the participants of the case, making these messages part of the case. On the other hand, messages related to the definition of processes enable a direct communication channel to improve processes among the participants of the case and process owners. Also, subscriptions enable an option to choose to receive messages about cases or processes of interest.

Integration

Deyel provides tools and services that allow any application to interact in a bi-directional way with the defined processes. Making use of adapters based on Web Services, Java, JDBC and others, allows to integrate existing applications or data sources.

Deyel also has Java APIs and web services that allow any application to interact with processes through them.

BAM and Process Analysis

Deyel offers powerful capabilities for analysis and browsing of multidimensional structures that allow to analyze the operation of processes and their tasks, both historically (Process Analysis) and in real time (BAM - Business Activity Monitoring).

Through predefined reports, it is possible to observe and understand the operation of processes and detect possible improvements. They analyze in brief the behavior of processes and their tasks, being able to identify what was done on time, with delay, deviations against maximum and expected durations, trends, participant performance, bottlenecks, etc.

The behavioral information is displayed as a grid and through charts, always having the reference of the expected trend curves to contrast against reality. In this way, behavior can be graphically monitored. In all cases, it is possible to drill down into the information, reaching the process level, task, executor, date range, case, etc. Multiple views of the information can be generated by navigating it through multiple dimensions, such as time, priorities, participants, initiators, states of cases and tasks, among others.

Administration and Configuration

The administration and configuration of **Deyel** allows to define the security and authentication of process participants with their different profiles and roles, their relation with LDAP repositories, workgroups, their districts, calendars, time zones, user portal appearance and also technical aspects of the solution.

3.1.1. Disaster Recovery Plan (DRP)

It is essential for a company to guarantee business continuity. To do so, it needs a robust disaster recovery plan that allows it to remain operational in the face of natural disaster or malicious attacks.

The Deyel Cloud infrastructure on AWS mainly bases its DRP strategy on the advantages offered by the AWS services on which it is mounted.

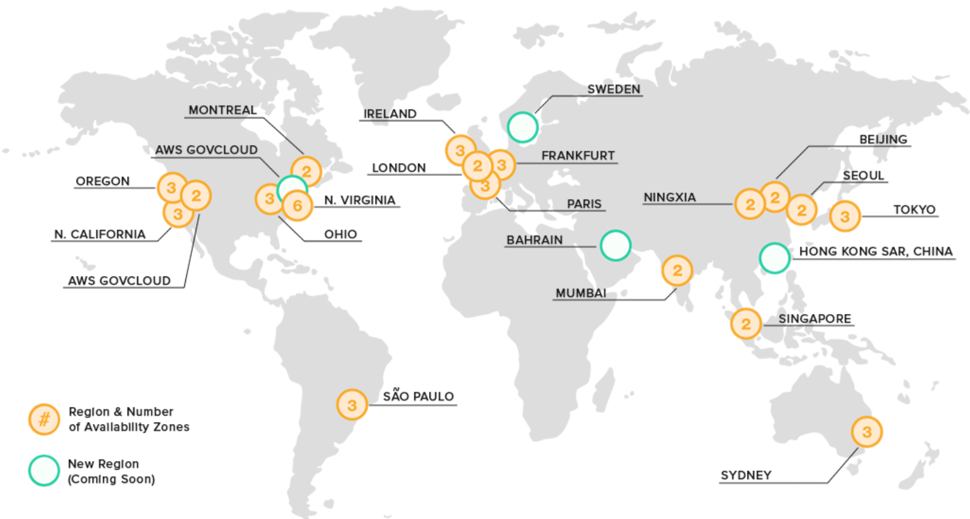
The two main axes of these advantages are the use of regions, availability zones and data centers distributed around the world, and the configuration of the services used to make use of this global infrastructure..

Use of AWS Regions, Availability Zones, and Data Centers

The Deyel Cloud infrastructure is based on AWS regions and availability zones.

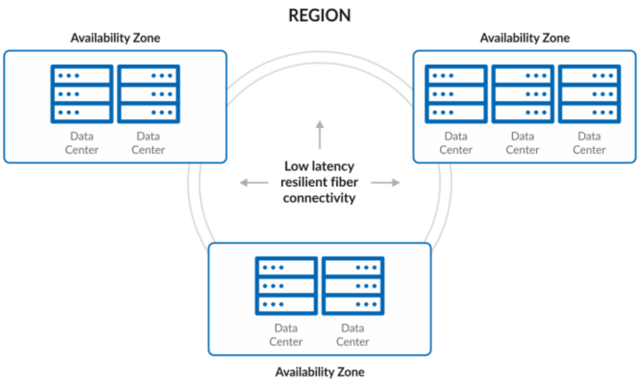
An AWS Region is a physical location in the world, which has multiple Availability Zones. These zones have one or more data centers, each with redundant power, networks and connectivity, housed in separate facilities.

These availability zones provide the ability to operate highly available, fault-tolerant, and scalable database and production applications. AWS has more than 60 availability zones and more than 20 geographic regions around the world.



https://www.infrastructure.aws/

Each AWS region is designed to be completely isolated from the other regions. This allows for greater fault tolerance and stability. Each availability zone is isolated, even though they are connected through low-latency links.



Each availability zone is designed as a separate fault zone, meaning that availability zones are physically separated within a typical metropolitan region and located on low-risk flood plains.

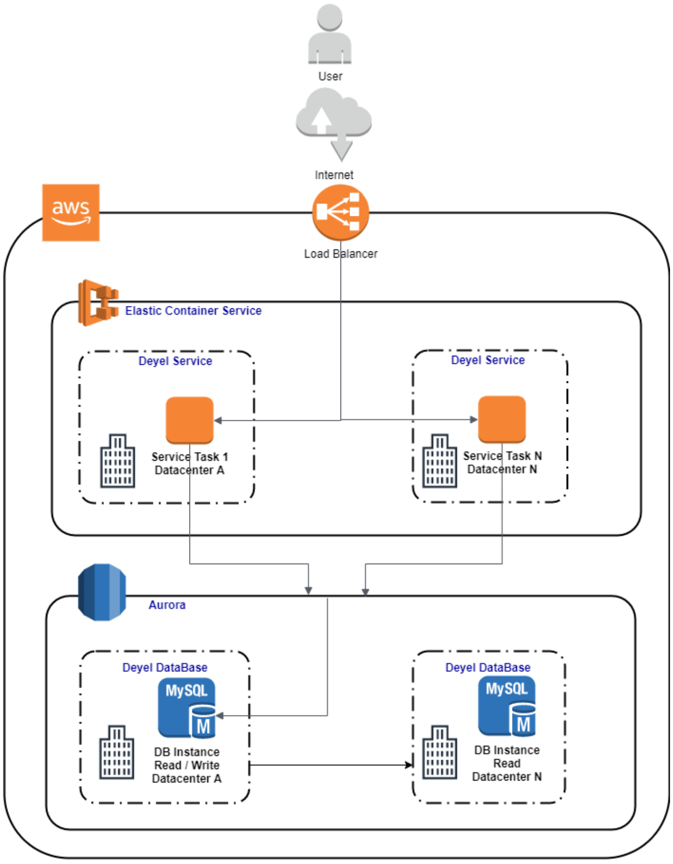
They also have uninterruptible power supplies (UPS) and onsite backups. Availability zones are connected with high-speed links (tier-1).

Configuration of AWS Services Used by Deyel Cloud to Use the Global Infrastructure

AWS services used in Deyel Cloud infrastructure are configured to use regions and availability zones.

Main Components of Deyel Cloud Infrastructure

The main components of Deyel Cloud infrastructure and how the AWS services that support them are configured are detailed below.



- Application data
  Application data is stored in Amazon Relational Database (RDS) service Aurora clusters. These clusters are configured with read/write and read instances in different availability zones, which can be immediately swapped in the event of a failover.
  To create backups, use the multiAZ option.

- Execution of applications

Applications are executed on AWS Elastic Container Service (ECS) clusters with EC2 instances distributed across availability zones, with autoscaling. Applications are executed on ECS services and can be multitask distributed across EC2 instances in different availability zones.

Clusters used by the Deyel Cloud infrastructure can be created in any AWS region globally in a matter of seconds.

- Critical infrastructure files replicated among regions.
  All the files necessary for assembly and creation infrastructure and for a disaster recovery are stored with AWS S3 and Amazon ECR service, using replication among regions.

- Infrastructure as code (IaC)
  The infrastructure and resources necessary for the execution of **Deyel** on AWS are created using the AWS CloudFormation service. Using this service complies with the good practices of standardizing infrastructure components and allows fast troubleshooting.
  It provides applications resources in a safe and repeatable way, allowing you to create and recreate infrastructure and applications, without having to perform manual actions or write custom scripts.
  Through this service, the Deyel Cloud infrastructure and its applications can be implemented in any AWS region globally.

RPO, RTO and failure events for Standard and Enterprise Editions

Tasks and database with their replica are in different availability zones (in one or more data centers) within a region.

Failure Event	Action	RPO	RTO
The server executing the application goes out of service. Example: hardware failure, motherboard, fonts, disks, etc.	If there are multiple application tasks, the load is shifted to the rest of the tasks. In all cases, an identical task is automatically started on another server in the same data center.	0	In the Enterprise edition the RTO is 0. In the Standard edition the RTO is less than 90 seconds.
The data center that contains the servers executing the application goes out of service service. Example: catastrophe in the data center city.	If there are multiple application tasks, the load is shifted to the rest of the tasks. In all cases, an identical task is automatically started on another server in the same data center.	0	In the Enterprise edition the RTO is 0. In the Standard edition the RTO is less than 90 seconds.
The server executing the database goes out of service. Example: hardware failure, motherboard, fonts, disks, etc.	The read-only instance is automatically converted to R/W.	0	In both editions the RTO is less than 90 seconds.
The R/W database goes	The read-only instance is	0	In both editions the RTO is less than 90 seconds.

Failure Event	Action	RPO	RTO
out of service (structure breaks, engine problems).	automatically converted to R/W.		

Read Replica Instance in a Region Different from the Main One

The read replica instance in a region different from the main one is another option for higher availability and fault tolerance.

When considering catastrophes of global magnitude where an entire region may stop operating, clusters are generated through the AWS CloudFormation service in another region while maintaining use of the interregional database, achieving an active synchronization and a higher fault tolerance based on a better geographic dispersion.

The minimum essential RTO is 3 hours, although customer verification tasks are recommended before enabling the use of the platform again, which can raise the overall RTO.

As an example, to do lists for these cases are detailed.

Tasks	RTO < 8 hours
Assessing the situation, verification of the non-operating regions where the platform was operating.	2hs
Generating the platform infrastructure in the third region.	Less than 30 minutes
Configuring the new infrastructure with the operational database in this region.	Less than 30 minutes
Customer verification of the platform.	Recommended. 3hs

3.2. General Concepts

To develop an application with **Deyel**, a set of concepts is used to allow easy and intuitive modeling of each of its objects.

Application

A **Deyel** application is a set of processes, business entities based on forms, value lists, advanced rules, adapters, roles, permissions, dashboards, widgets and reports, related to each other with the objective of solving a specific request. These objects can be defined within the same application or shared from other applications.

From an application, platform entities such as users, the organizational structure, cases and processes, among others, may also be used.

Solutions developed with **Deyel** are applications that require use licenses issued by the solution manufacturer.

Entity

An entity is an object composed of attributes that represent business and environment data. Entities can be related to other entities, processes, rules, widgets, reports and applications.

Scope

Entities can be used in the application in which they were defined or in other applications as well.

Types

- Platform Entity
  Composed of attributes where environment and execution information persists. They are predefined in **Deyel** and some can be extended by the modeler user.
  Examples: User, Organizational Unit, Case.

- Parameterization Entity
  Composed of attributes with persistence of values that after being loaded may be selected through drop-down lists. They are implemented through the value list object.
  Examples: City, Gender, Type of Client.

- Business Entity
  Composed of attributes where business information persists. They are graphically modeled using the form modeler.
  Examples: Employee, Contract, Invoice.

Attribute

An attribute is the information unit within an entity.

Process

A process is a sequence of human or automatic tasks (services), the performance of which allows meeting a business objective. The sequence has a start, an end, and may contain connectors. It is represented as a process diagram based on the **BPMN 2.0** standard (Business Process Model and Notation).

Scope

Processes can be used in the application in which they were defined or in other applications as well.

Form

A form is the user interface of business entities. It can be used in user activities of processes or in the data administration of the entity itself.

Business entities of applications can be modeled graphically by citizen developers without the need for technical knowledge. Through the form modeler, business entities of applications can be modeled as they are perceived in the real world, by dragging and dropping controls that define their appearance. Controls have properties set to default values so that citizen developers do not need to set technical properties but allows IT developers to adjust their behavior in detail. Relations among different entities can be established, whether they are business entities of the application, parameterization entities such as value lists or with other objects through integration rules.

Both the forms modeler and the engine of **Deyel** are in charge of resolving the data model persistence generated by applications business entities.

Scope

Forms can be used in the application in which they were defined or in other applications as well.

Examples

- The "Vacation Request" form is used in the "Vacation" process.
- The "Employee" form is used to update data stored in its fields during its life cycle. In addition, such form fields can be used from different processes related to it that contain user activities.

Control

A control allows to define the appearance of a form field in the user interface. In addition, the control may add default behavior and persistence characteristics to the form field, which can be modeled later.

Through a set of controls, a pattern-based interface design guide can be defined in order to solve common situations and achieve a homogeneous interface.

Forms are created from a gallery of controls, each of them allows defining:

- The appearance of a form field in the user interface.
- The layout of fields and graphic elements within the form.

- Actions to do from the user interface.

Examples

- Text Box
- Number
- Container

Rule

Business rules allow to define the behavior of application objects. Rules can be used in validations, specific business logic, process flow control, integration with other applications, field display control in forms, scheduled tasks, calendars, widgets and agents, among other functionalities.

There are rules that can be modeled without programming and others are based on Java code.

Types

- Embedded Rules
  Embedded rules are used to define the behavior, validations, and calculations of form fields, as well as form validations. Embedded rules allow to define logical conditions and arithmetic expressions, which are evaluated using forms and their related processes. A wizard integrated in the corresponding modelers is used for definition. This wizard can be found in the property definition panels of fields and containers of forms and flows of processes.

  Scope

  Embedded rules belong only to the object that contains them.

  Examples

  - Define conditions in flows within a process.
  - Execute automatic actions in activities of a process.
  - Define requirement, visibility, edition, calculations and validations in form fields.

- Advanced Rules
  Advanced rules are based on Java and are used to include complex logic or integrations with other applications. They are developed using the **Deyel** SDK for Java, either from the advanced rules modeler included in **Deyel** or in any Java IDE of your choice.

  Scope

  Advanced rules are global for all applications.

  Examples

  - Execute automatic actions in activities of a process.
  - Execute scheduled tasks.
  - Execute business logic within the source of a widget.

Function

Software unit that performs a specific task that is executed when invoked from a programming code or from the modeling wizards. It can receive input parameters and return a result.

Value List

A value list is a set of predetermined data used to report and unify criteria when using a field. There are options that the user can drop down and select when completing the form.

Scope

Value lists can be used by the application forms in which they were defined or in other forms as well.

Examples

- Customer Type
- Industry
- State

Widget

Widgets allow to know the business evolution through the use of a graphic representation, based on the analysis of applications execution. The information represented in the form of charts is obtained from application forms or by using advanced rules.

Widgets can be represented, for example, as metrics, as pie charts, column charts, horizontal bar charts, area charts or line charts, among others.

Scope

Widgets can be used in the application in which they were defined or in other applications as well.

Dashboard

A dashboard is a collection of widgets that present relevant information for the business user, with high visual impact.

Scope

Dashboards can be used in the application in which they were defined or in other applications as well.

Types

- Application Dashboard
  They are modeled through the dashboard modeler by IT modeler users and are defined in the applications.

- User Dashboard
  They are modeled by business users and can only be used by those who defined them since they are not part of the applications.

Adapter

An adapter allows integration with different applications and platforms by using advanced business rules. Its purpose is to exchange data and share behaviors.

An adapter encapsulates the complexity of communicating with an external component. It allows different advanced rules to use it to invoke the operations that such component exposes.

Scope

Adapters are global for all applications.

Types

- Default
  They are adapters defined in **Deyel**, available in all environments from the modeler's grid. There can only be one of each type in each environment.

  Examples

  - Twitter
  - Mercado Libre
  - Deyel SDK
  - Docusign
  - GoogleDrive

- Standard
  These adapters allow access to web services from external providers, in their different communication architectures, such as Rest API and SOAP.

- Database
  Adapters that allow to define access to relational databases through the Java JDBC protocol. **Deyel** provides custom adapters for the most popular database engines on the market, facilitating configuration and optimizing interaction with such engines.

Report

A report contains entity information that is presented with a certain layout. The report can be modeled in very simple way by selecting its information and quickly designing its presentation. When modeling it, choose the fields of the entities that are part of the report and of those related entities. The order of these fields can be modeled and by using filters, the information contained in the report can be selected.

Scope

Reports can be used in the application in which they were defined or in other applications as well.

Types

- Application Report
  They are modeled through the report modeler by IT modeler users and are defined in the applications.

- User Report
  They are modeled by business users and can only be used by those who defined them since they are not part of the applications.

Use of Concepts

Some considerations regarding the use of concepts described in this topic are described below.

Property

They describe in general terms applications, entities, processes, forms, attributes, rules, and functions, among other objects.

Control

The term control is used only in the modeling of the graphic interface of forms.

Field

Forms store their data in a set of fields. In the form modeler, a form field can be defined from an attribute of another entity, in this case it is called a related attribute and it can have persistence.

Attribute

It is the smallest unit of information of an entity, it corresponds to the data model.

Variable

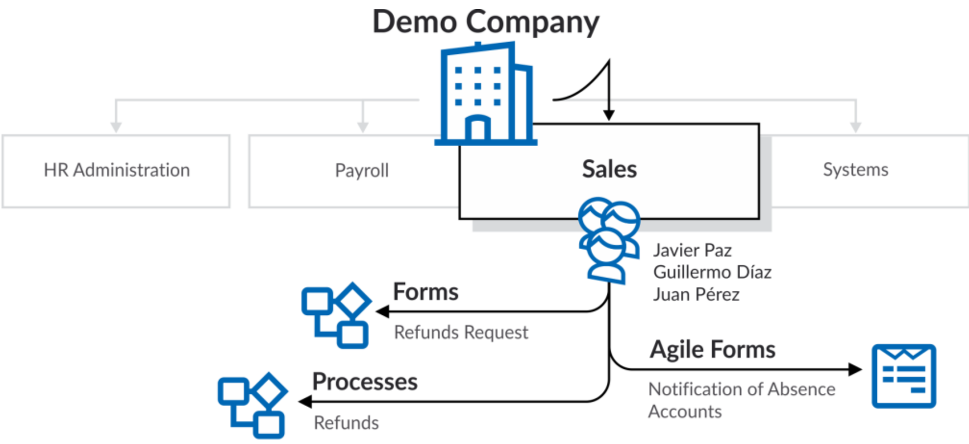
A variable corresponds to the attribute of a platform or business entity and is used by business processes to define its state and behavior. It can contain data of the temporary conditions of the instances of the processes (cases), of the business objects or references to the latter.

Scope

- Local: It can only be accessed and modified during the execution of the process case that uses it. Variables of completed cases can be accessed but not modified.
- Global: It can be accessed and modified by the operations of the corresponding form, by the processes that use it or by business rules.

3.3. Examples of Use

In **Deyel** , examples are included to quickly become familiar with the tool, in order to experience how applications can be quickly and easily modeled to promote productivity in the company. For this, a demonstration company is defined with examples of agile forms, organizational units and users.



> *The demonstration company can be deleted, along with all related information that may have been generated during testing. These samples can also be re-imported at any time.*

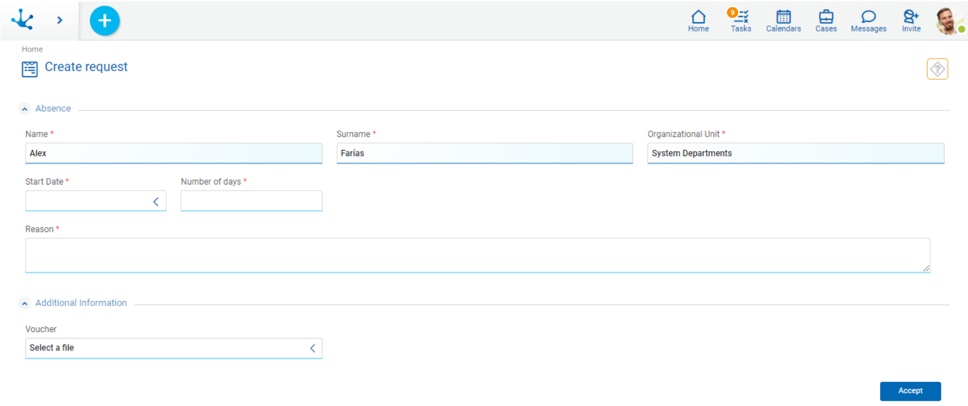
Agile Forms

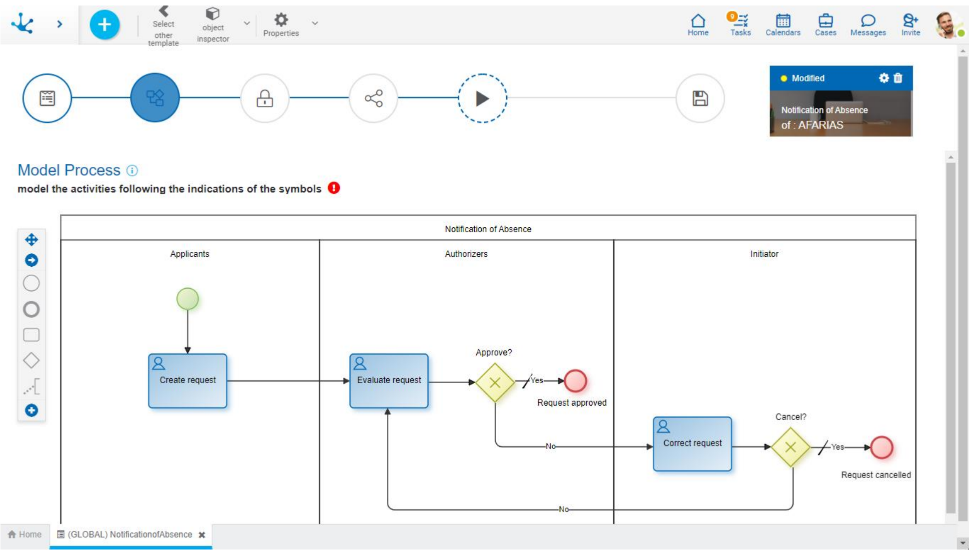
A set of agile forms modeled after existing templates, are included in the tool. Each of the forms contains a group of suggested fields, which can be extended with new fields defined by the business user according to the needs of their company.

The processes associated with these forms correspond to standard models for common use in all organizations.

Notification of Absence

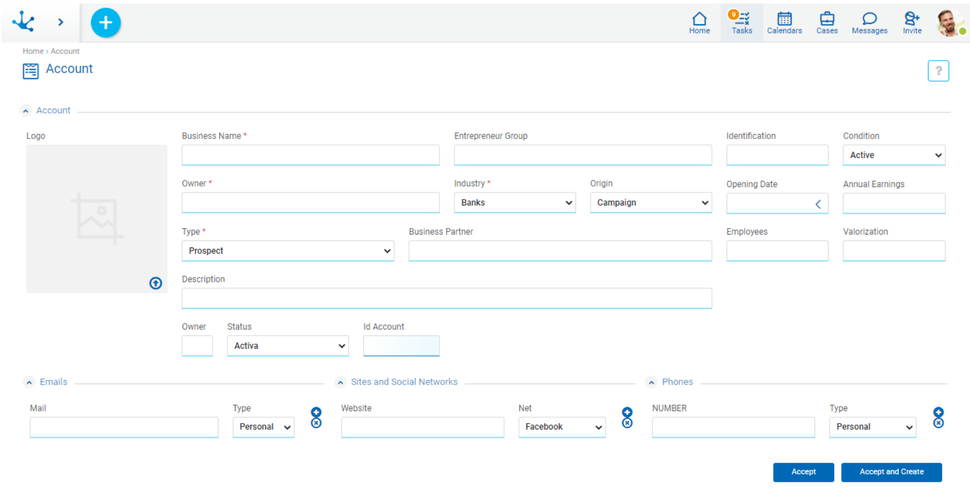
Agile form with an associated process to report absences, through which company employees can report absences from work, along with the reasons for them and request authorization from a superior. The applicant should connect to the portal and start a process to communicate to their colleagues at the same organizational unit, that they will be absent. To do this, they must complete a form to record the absence period with relevant justification and send the request to the corresponding authorizer with supporting documentation. When the absence is duly justified, with medical certification or other type of documentation, the head of the sector authorizes and ends the communication. If it is not approved, it is sent for revision to the applicant, who can resend the order or cancel it.





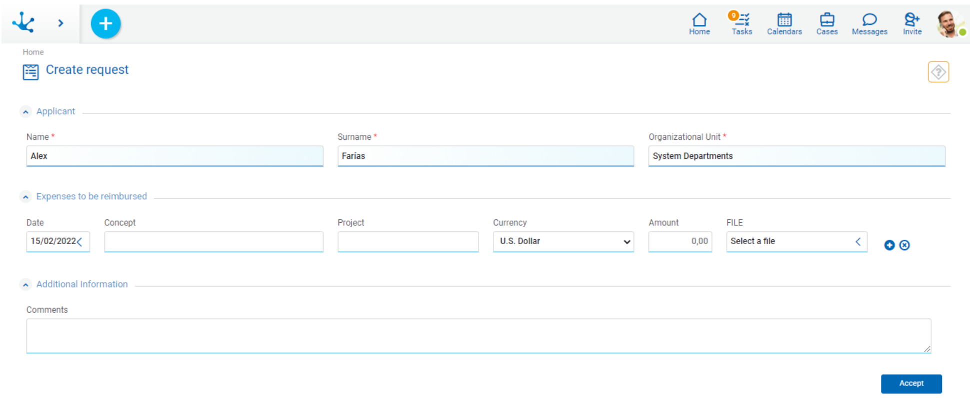
Customers

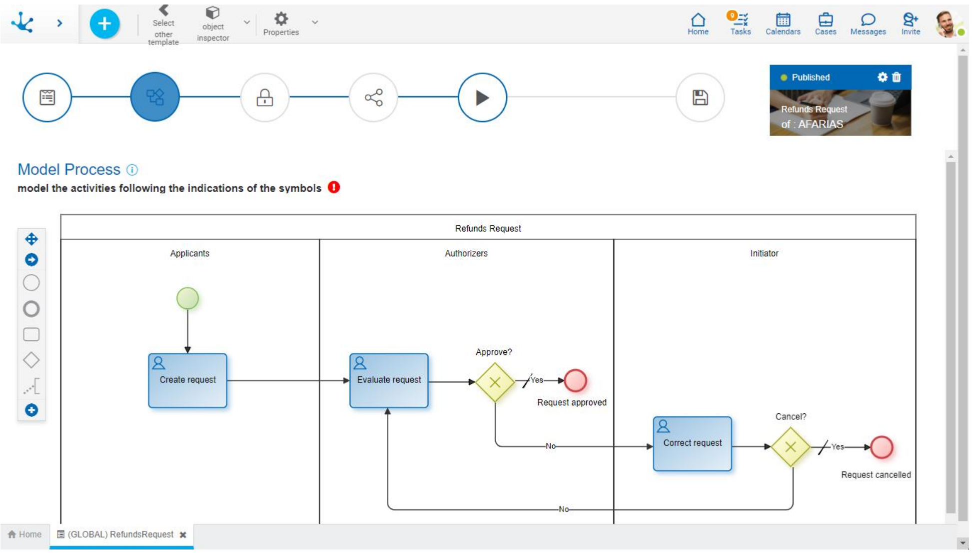
Agile form without an associated process, on which business users can perform create, show, update and delete operations, according to the permissions they have defined.



Refunds Request

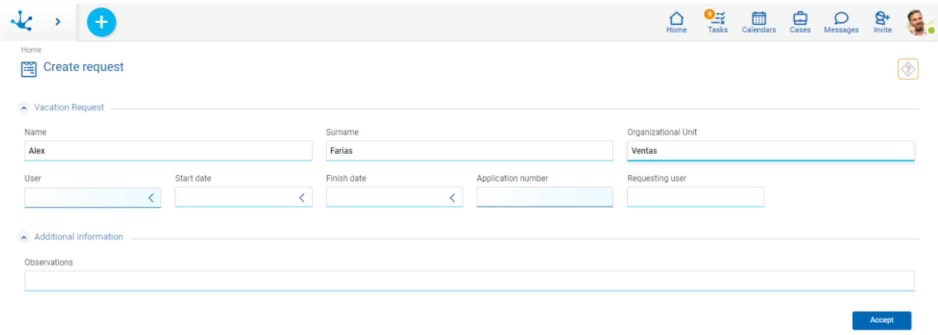
Agile form with an associated process to request expense refunds, through which company employees can complete a request form itemizing expenses with their corresponding amounts and attach their receipts. The request is sent to the corresponding authorizer to approve it or return it to the applicant for revision, who can resend the order or cancel it.

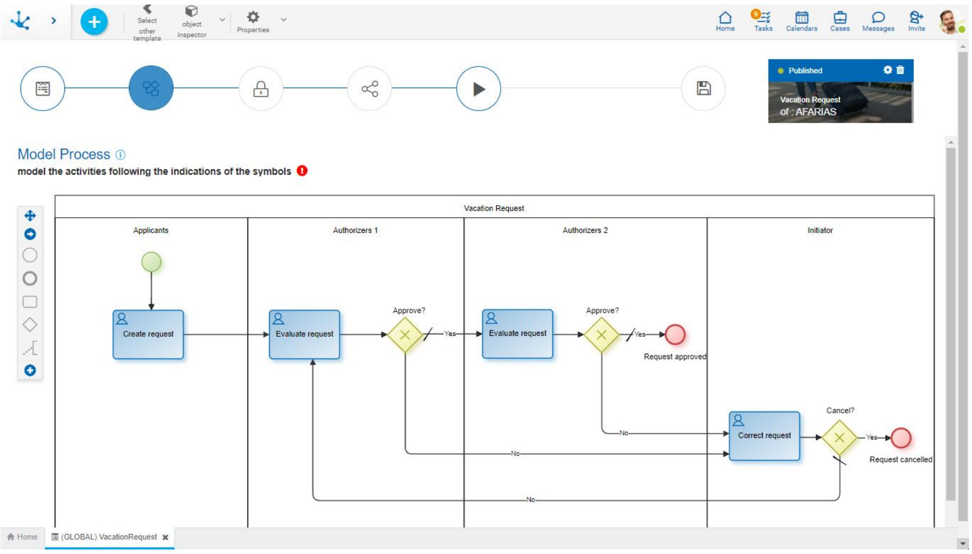




Vacation Request

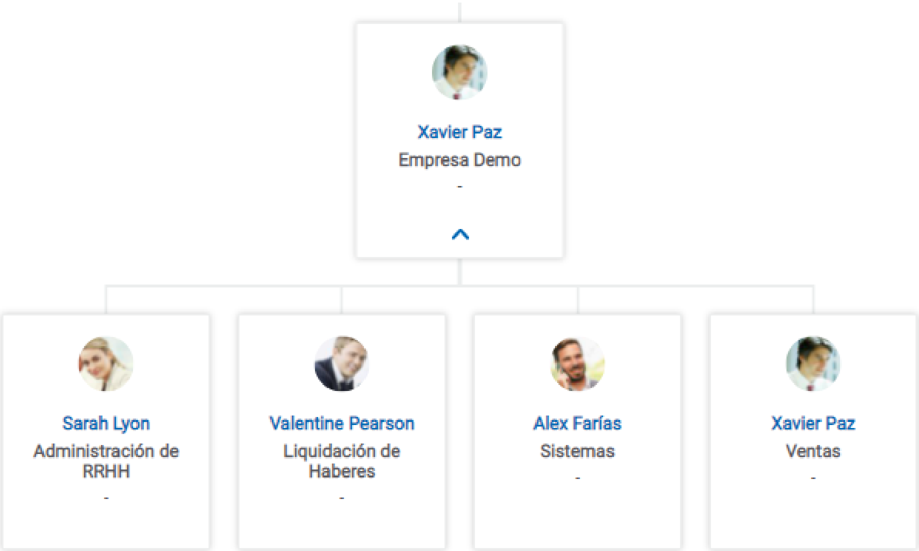
Agile form with an associated process, through which company employees can manage their vacations. To do this, they have to complete a form with the start date and the end date and send it to the authorizer. Next, the personnel administration and payroll sector performs the corresponding controls and procedures. As sectors authorize requests, they progress to their full approval. If any request is not approved, it is sent to the applicant for revision, to be corrected and resent for authorization or to be canceled.





Organizational Structure

The demonstration company defined with data and form examples with their associated processes is called "Demo Company". In the organizational structure there are [organizational units] defined that correspond to company offices, which group business users.



> *The Demo Company can be deleted by a user with administrator permissions.*
> *Confirming this operation deletes the following data:*
> *- The Demo Company organizational unit and all its subordinate units.*
> *- Users Javier Paz, Juan Perez, Sandra Lopez, Valentin Pereira, Guillermo Diaz and Alejando Farias, who belong to the organizational unit.*
> *- Vacation Request, Refund Request and Notification of Absence agile forms.*

Users

The users defined in the demonstration company belong to different organizational units and are assigned permissions according to their position. All users use “deyel123” password to log in.

User	Organizational Unit	Permission
SLOPEZ - Sandra López	HR Administration	DEYEL- End User
VPEREIRA - Valentin Pereira	Payroll	DEYEL- End User
AFARIAS - Alejandro Farías	Systems	DEYEL - Administrator DEYEL - Security Administrator DEYEL - Deyel Modeler
GDIAZ - Guillermo Diaz	Sales	CRM - Salesperson
JPAZ - Javier Paz	Sales	DEYEL - Agile Modeler CRM - Sales Manager
JPEREZ - Juan Perez	Sales	DEYEL- End User CRM - Salesperson

3.4. Users Portal

Phase 3: Portal

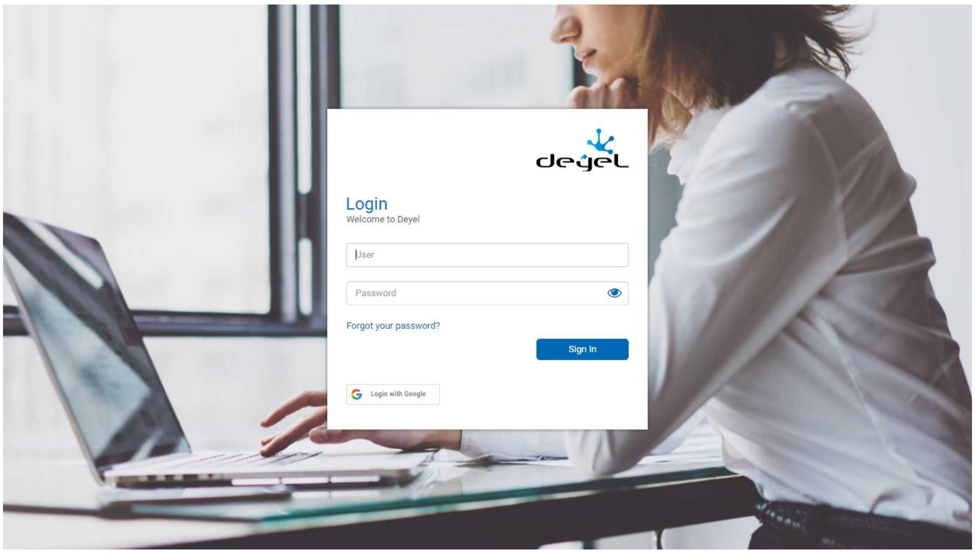
Using the portal of **Deyel**, the users can show their activities list and execute their tasks, initiate cases of their processes and show them, access collaborative tools, use their forms and set the environment, among other functionalities.

The user interface is based on the concept “model once, execute everywhere” allowing the applications implemented in **Deyel** can be executed indistinctly from any type of device, including PC workstations, notebooks, tablets and smartphones. Is has been designed based on “responsive web design”, dynamically adapting to the device used to access the portal. Being able to use forms and execute business processes using mobile technologies, enables a new generation of applications, where users can connect at any time and from anywhere, executing and consulting their tasks, with the same familiarity available in the tools of habitual use.

Using standards such as HTML5 and style sheets, a modern interface is obtained and rich in functionality, which adapts and greatly increases the function of use in the different types of devices, taking advantage of the advantages of each one, such as cameras, gps, etc.

3.4.1. Portal Access

In order to access the portal, you must enter the username and password, you can use both the username and the email address, if the email address is defined as an alias.



It can be accessed from mobile devices, desktop PCs or notebooks, adapting the login window to each of them.

Deyel ensures the correct identification of the user and controls that they have authorization to use the selected product.

In case of not remembering the password, the user can select the option Forgot your Password? to establish a new one.

Through the icon to the right of the password field, it can be displayed.
Allows to display the password.
Allows to hide the password.

When a user is correctly authenticated and enters the portal from a certain device, their profile image is remembered in the access window. In this way, the next time the user enters the portal from the same device, their image will be visible and by selecting it, the user is completed, only having to enter the password.

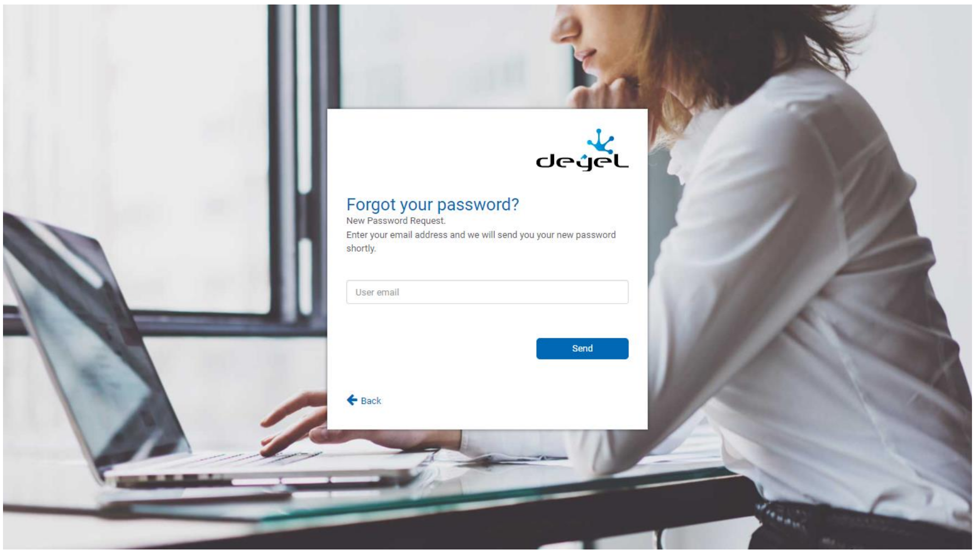
If the user comes from **Deyel** without closing session, it is protected. Therefore, the next time you enter the portal, you will do so directly with the same user without the need to re-authenticate.

Session Closed Due to Inactivity

If a period of inactivity is exceeded during the work session, such session closes automatically. If an operation is attempted on a session that was closed, the user is sent to the login.

Forgot your Password?

When selecting the "Forgot your Password?" option in the portal access, a user can request a new key and is asked to enter the email address registered in their profile. Once the user is identified, a new password is sent by email to the informed account.

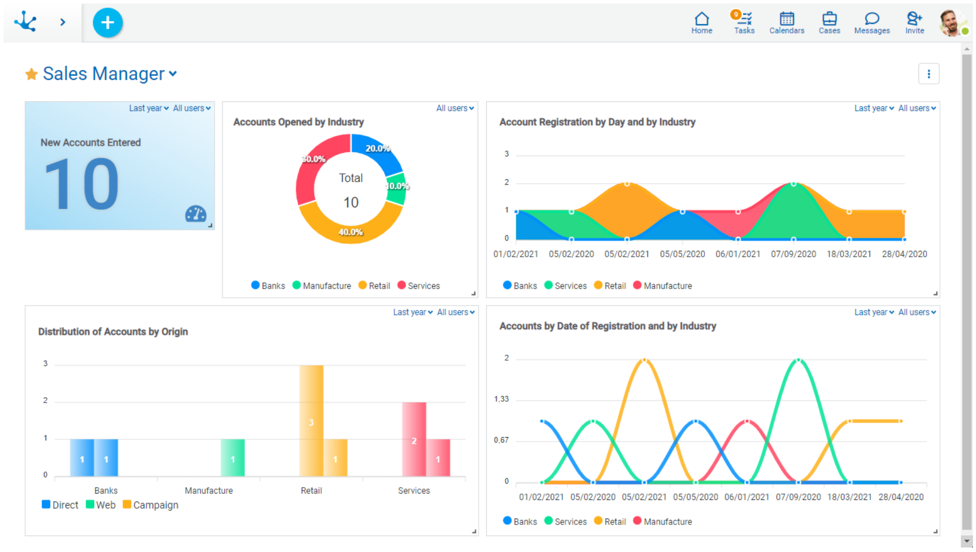


> *It is only available when using the native authentication, where **Deyel** manages access passwords.*

3.4.2. Menu

Phase 3: Portal > Menus

The menu can be displayed from the top left corner and is represented by the icon , when selecting it, the options that the user has enabled are displayed.



The theme used by the user portal can be defined in the [environment configuration](#).

Principal Characteristics

Searcher

Allows you to search among all the options available in the menu, forms and functionalities enabled for the user. When entering a search criteria, such as a word or part of it, a filter is applied with the search pattern used. Once the search results have been obtained, the desired option can be selected. The search criteria can be deleted by pressing the "X" that is to the left of it and it returns to the complete menu.

Solutions

The menu includes options for those solutions that the user has access to.

BAM (Business Activity Monitoring) and Analysis

This menu option allows access to the set of reports of [BAM and Analysis](#) to analyze the functioning of the processes and their tasks.

- In real time (BAM)
- Historical (Analysis)

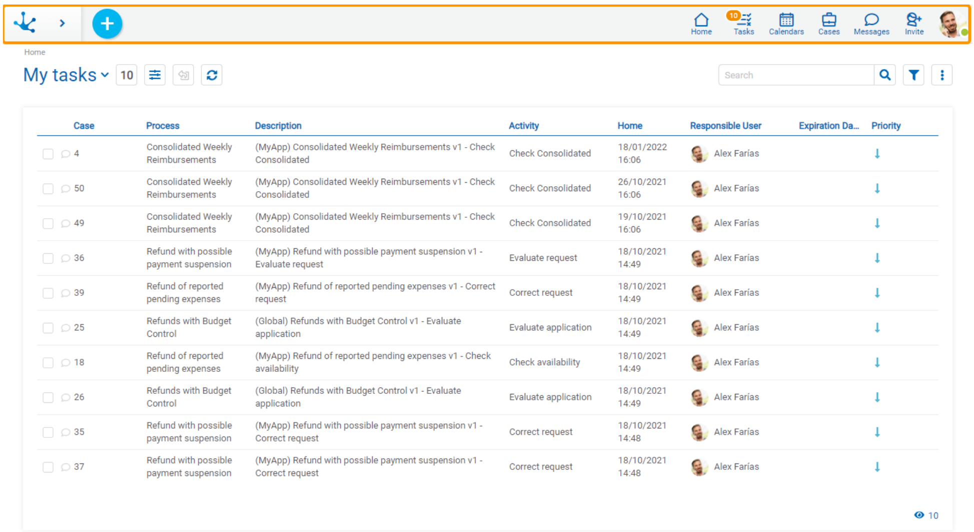
Configuration

Under this menu option you can select the [configuration](#) of users permissions, organizational units and of the environment, among other functionalities.

3.4.3. Top Toolbar

 [Phase 3: Portal > Top bar](#)

Contains the icons corresponding to the principal functionalities of **Deyel**. Allows quick access to them by clicking on the icons.



Bar Elements

Home

Positions the user in the initial panel of the solution in which he was authenticated, closing the menu option currently open.

Context Menu

It allows to create a new instance of the forms or starting a new case of the processes, to which the user has access. By clicking on the icon or hovering over it, it is displayed a [context menu](#).

Logo

Deyel allows to personalize the solution incorporating the company logo. For a better display, it is recommended an image up to 40 pixels high. To add, modify or delete the logo, you must click on the pencil icon and a menu with the available options is displayed.

Logo Entry or Modification

- Selecting the "Upload" option opens a window with the user's local files.
- You must select the file that contains the desired image to incorporate into the bar.

Logo Deletion

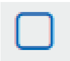
The "Delete" option must be selected.

Tasks

Show the total number of tasks that the user has pending execution. Clicking on this icon displays the list of the last three tasks assigned to the user and the corresponding action buttons available for each of them. At the end of the list it is displayed a link of all my tasks to access the tasks grid of the user.

Calendars

It is used to show and manage the Calendars available for the user.



Cases

It is used to access the cases initiated by the user themselves. If the user is a coordinator, they also display the cases initiated by the members of their team.

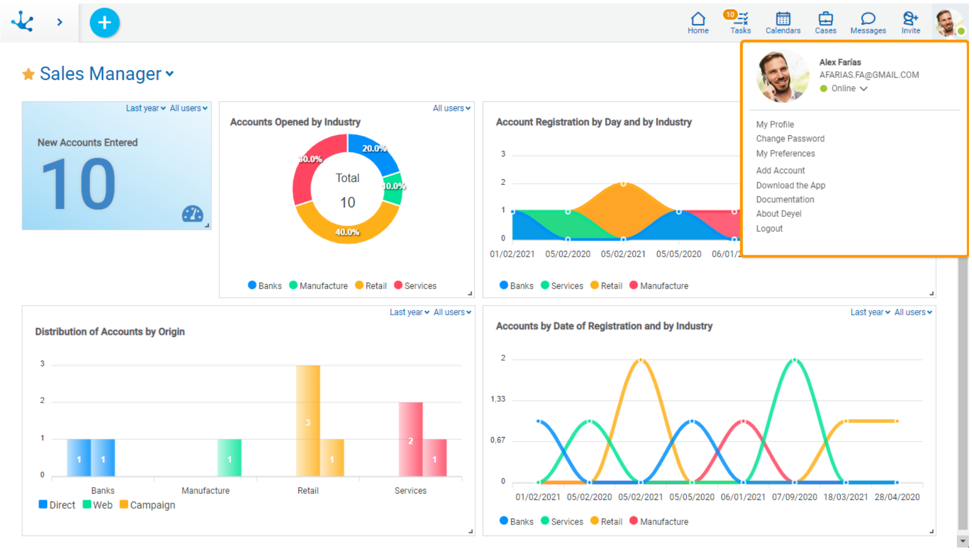
Messages

It is used to exchange messages and participate in conversations related to tasks, accessing the resources and benefits provided by the Tedis business social networking.

Profile

It is used to quickly display a summary of the user data:

- Name
- Email
- State for the messenger service



The following options are also enabled:

My Profile

This option allows to [manage the user profile data](#).

Change Password

Allows the user to [change their password](#). This option is only available when the authentication method of the users include the [Native Authentication](#), where the key words are verified by **Deyel**.

My Preferences

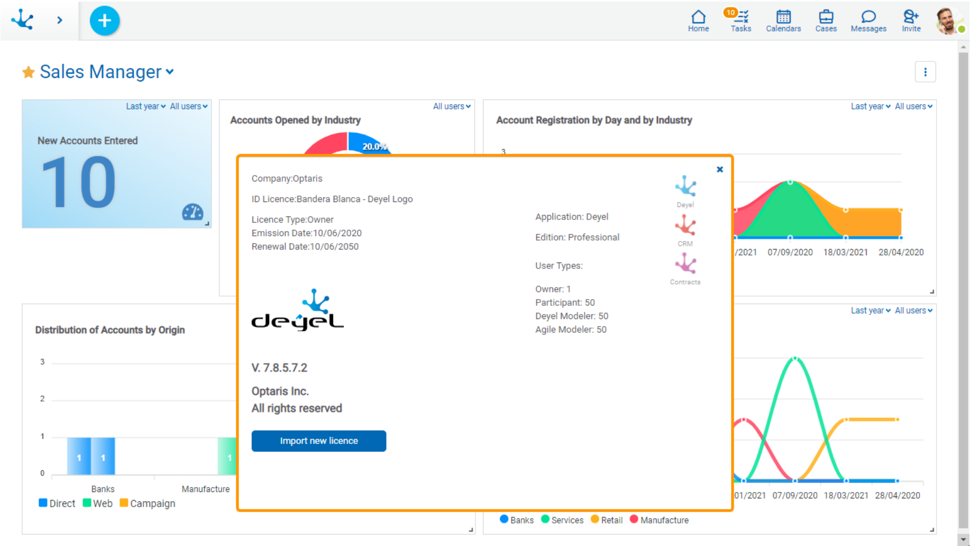
Allows the user to easily define the values of a set of properties. Each of these properties can also be modified in the [environment configuration](#).

Help

It has the reference to the user manual of **Deyel**.

About Deyel

Information related to the environment and the licensing of the solutions in use is displayed.



Logout
Logs the user out and returns to the login window of portal access, for a new login.

3.4.3.1. Context Menu

The context menu is a dynamic menu, where the options depend on the functionality in use and the permissions of the logged in user. It allows to rapidly open available menu options, in pop-up form or with icons.

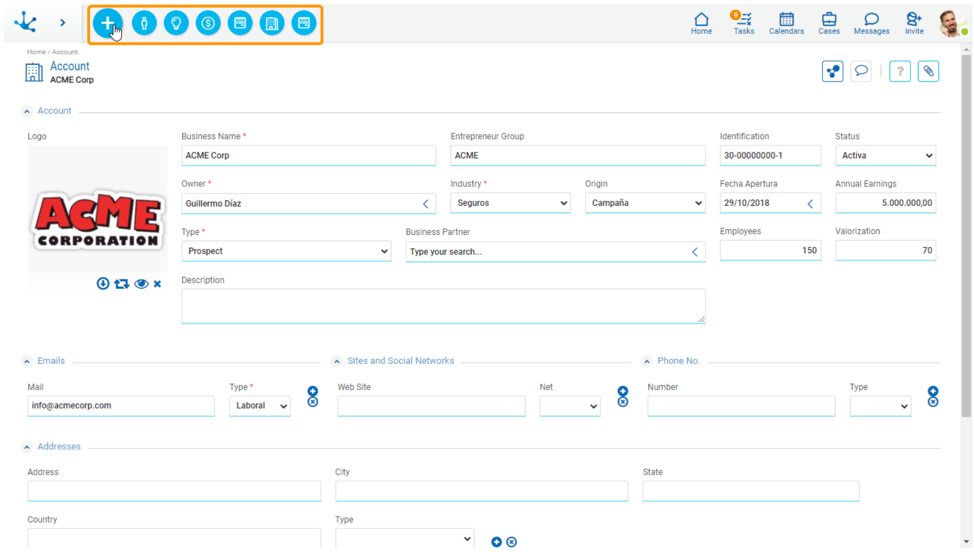
Icons Menu

This menu is enabled when hovering over the icon  and the icons that represent forms and processes corresponding to the functionality in use are enabled over the toolbar.

Pressing on any of the displayed icons you access the option to add a corresponding form instance or initiate a process case.

Example

On the next example the forms and processes available are displayed to the user, of the solution **Deyel CRM**. From the show of a selected instance of the Account form, the context menu of the icons allows to initiate the different forms and processes associated to the Account: Contact, Opportunity, Budget and Action.



Expanded Menu

This menu is enabled by pressing the icon , expanding a panel with the sections:

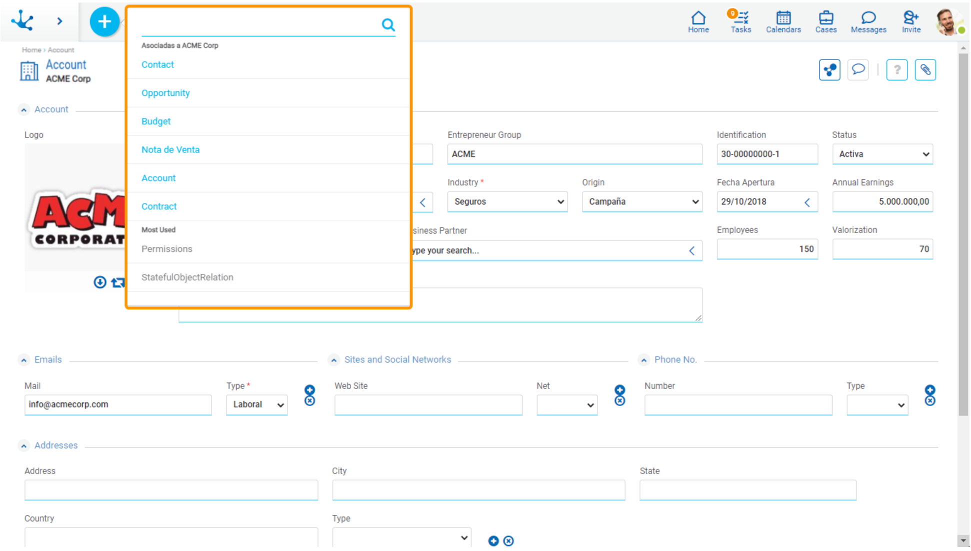
- Forms and processes related to the functionality in use, in light blue color.
- Forms and processes more used by the user, in grey color.

In both cases, pressing an option, it enables the functionality to add information to the form or the process selected.

The icon allows to make the search action on the available options.

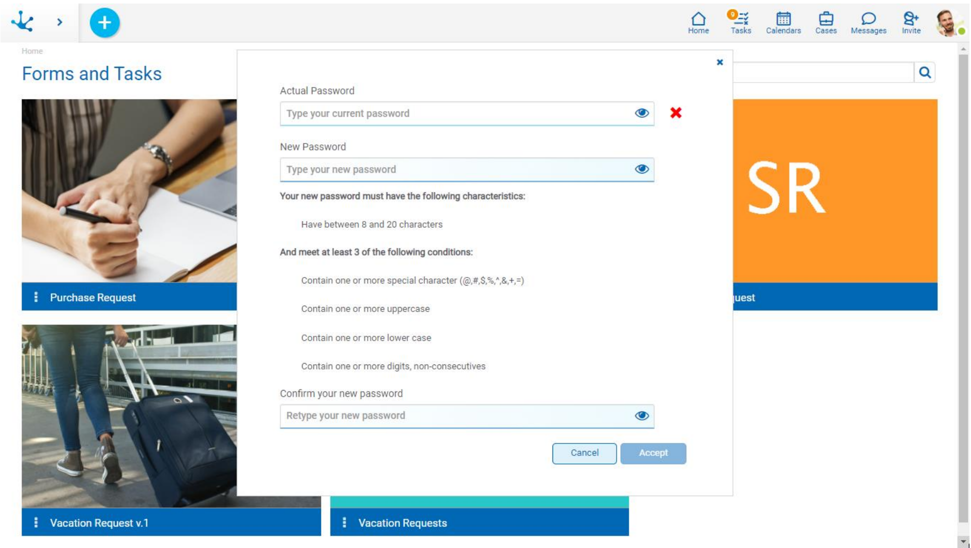
Example

On the next example the forms and processes available are displayed to the user, of the solution **Deyel CRM**. From the show of a selected instance of the Account form, the context menu expanded allows to initiate the different forms and processes associated to the Account: Contact, Opportunity, Budget and Action, or any of the objects that has been used more often.

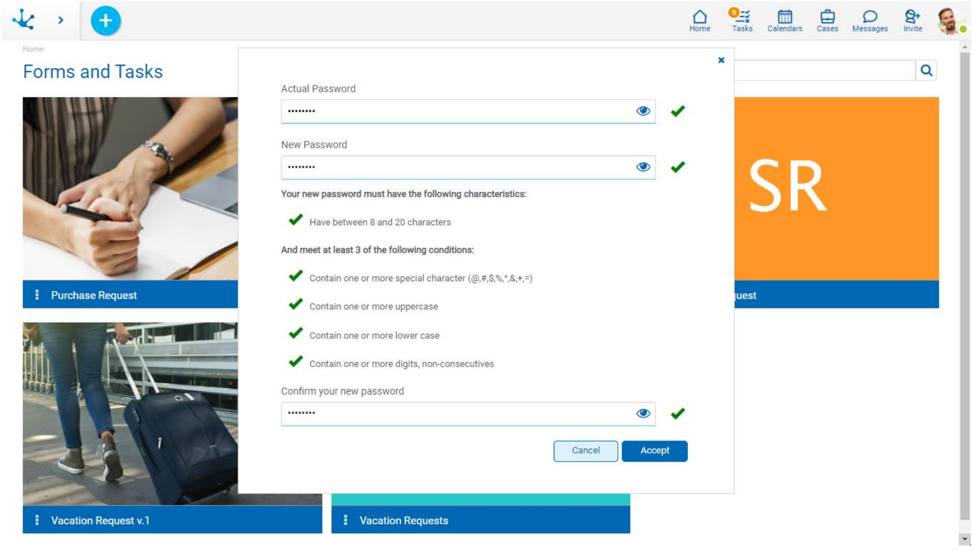


3.4.3.2. Change Password

By selecting the option to change the password from the user profile icon, a panel is enabled to enter the new password with the characteristics and conditions requested.

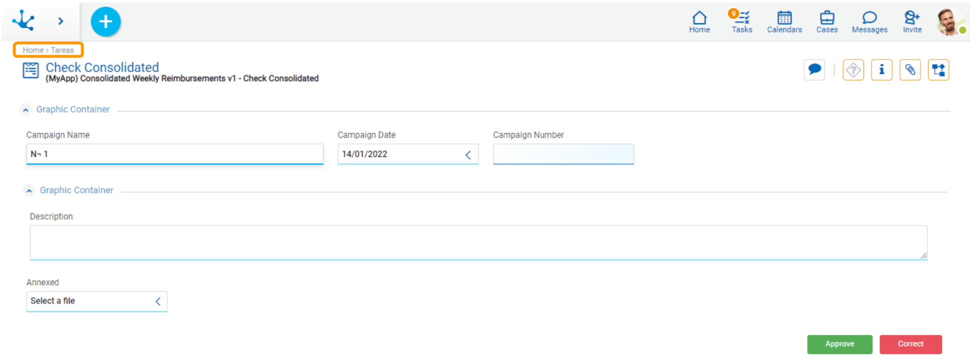


As the characteristics and conditions of the new password are fulfilled, the icon ✔ is displayed on each line.



3.4.4. Breadcrumb

This facility improves the user experience by indicating in summary form the steps previously executed, granting at the same time speed and intuition in the use of **Deyel**. It is immediately located below the top toolbar and indicates the route of the navigation made, allowing you to go back to any of the functionalities executed.



The image shows that you can navigate from "Forms and Tasks", until you reach the case of the "Ab-sence Communication" process for the selected user and date.

3.4.5. Dashboard

Phase 3: Portal > Dashboards and Widgets

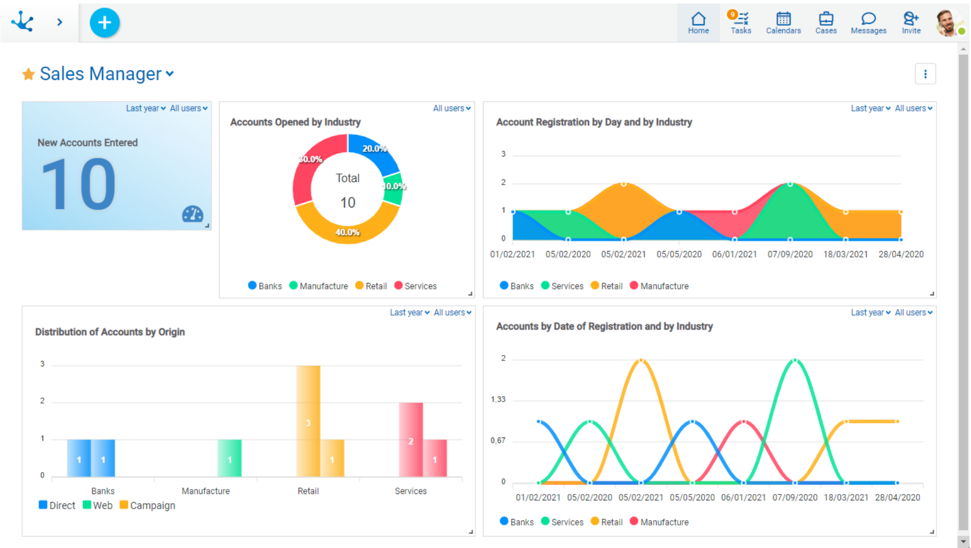
A dashboard is a collection of graphically ordered widgets that present relevant information for the user, with high visual impact.

Widgets are also known as KPIs, that correspond to the initials of Key Performance Indicator. They allow to know the evolution of the business, based on the analysis of the execution of the applications.

Dashboards can be:

- Of Applications
  They are modeled through the dashboard modeler, by IT modeler users.
- Of users
  All users can model their own dashboards.

When logging in or selecting the home icon in the top toolbar, the user views the dashboard indicated as a favorite. Each user can select their favorite dashboard among those applications and **Deyel** solutions, on which you have permissions.



> *If the user does not have permissions to use any dashboards, the starting point is the gallery of forms and tasks.*

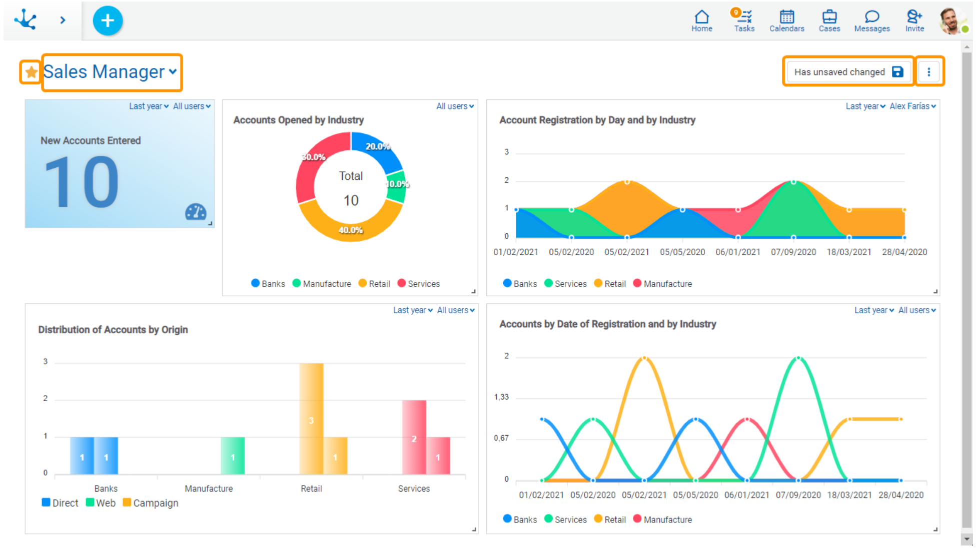
The user can create their dashboards from the context menu , positioned on the home panel.

- From the icon displayed when hovering over the context menu.
- From the drop down menu, using "Dashboard" option.

The user can perform operations on the dashboards that are available to them through different use facilities .

3.4.5.1. Use Facilities

A user dashboard presents visual and chart resources that facilitate its maintenance.



Sections

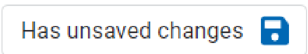
Favorite Widget

Indicates the dashboard has been selected as favorite for the user.
Pressing the icon to the left of the dashboard name, the user can indicate that the dashboard is their favorite.

Dashboard Menu

To the right of the current dashboard name, a list can be displayed with all the boards that the user has available, they can be application dashboards or defined by the user.

Information Area

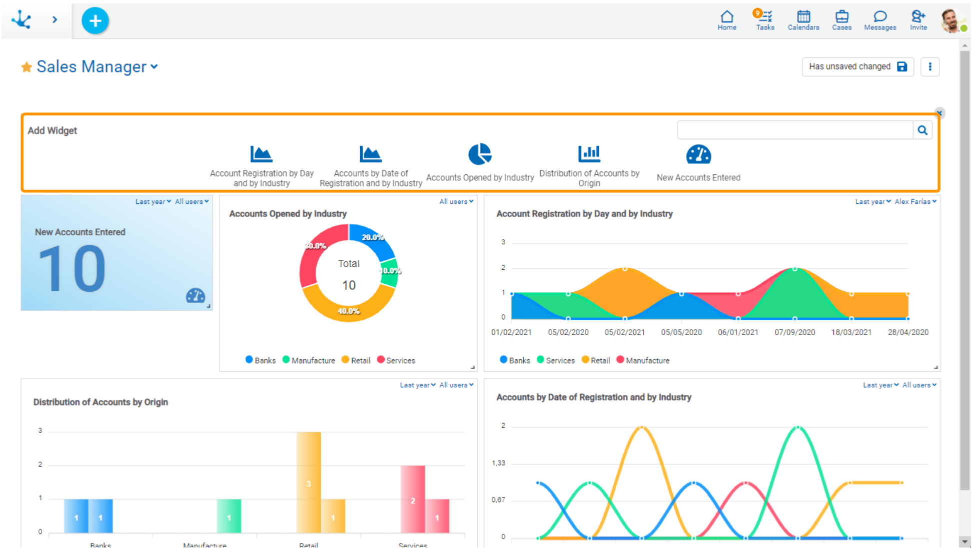


When the dashboard has a modification pending to save, this button is enabled to save the changes.

Operations Submenu

Allows to make different operations

- Add Widget
  Allows to add new widgets to the dashboard, from a palette with the widgets that the user has available. To add a widget, you must drag the widget you want to add until it is in the desired position.



- Save as
  Save dashboard with other name. This new dashboard is user type.

- Delete Dashboard
  This operation is only allowed for a user dashboard.

Dashboard Body

In this section the previously published widgets that the dashboard contains are located. On these widgets, the user can make different operations.

- Modify size
  It is made by positioning the cursor on the lower right corner of the widget and dragging it to expand or decrease the area of the widget, up to the minimum allowed.

- Modify location
  Through the facility "Drag and Drop" the widget is located in a new position within the dashboard panel.

- Modify user and date filters
  If the user is assigned the modification permission for the dashboard, they can modify the filters that were defined as editable and visible when modeling. Changes must be saved to retain the modification.

- Delete
  A widget can be deleted by pressing the icon displayed in the top right corner, when you slide the cursor over the widget.

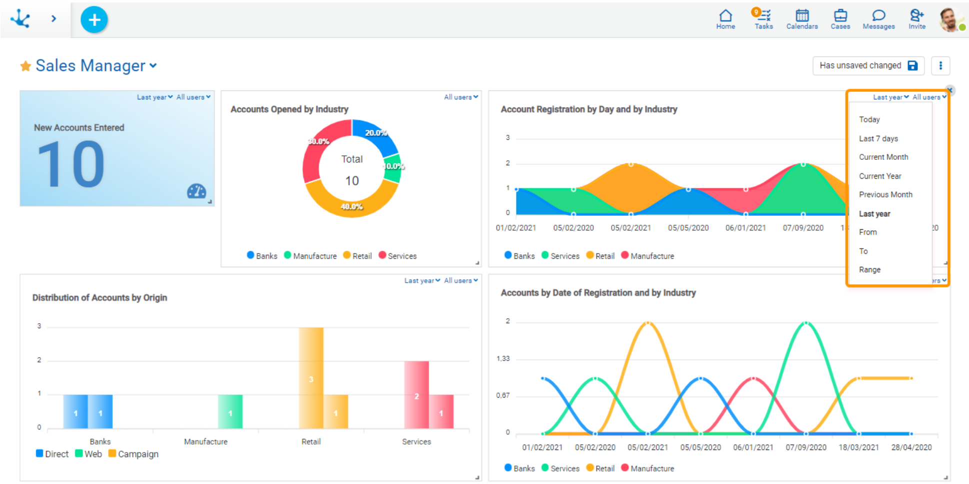
After making the modifications, when saving the dashboard the result may be different depending on the type of dashboard being modified.

- If it is a user, the changes made to the dashboard are saved.

- If it is application, the user cannot save the changes made to the dashboard and a panel opens for the user to report the name of a new dashboard. This dashboard is saved as user type.

Widget Filters

On each widget is dynamically applied the date filters and user filters that it has modeled.



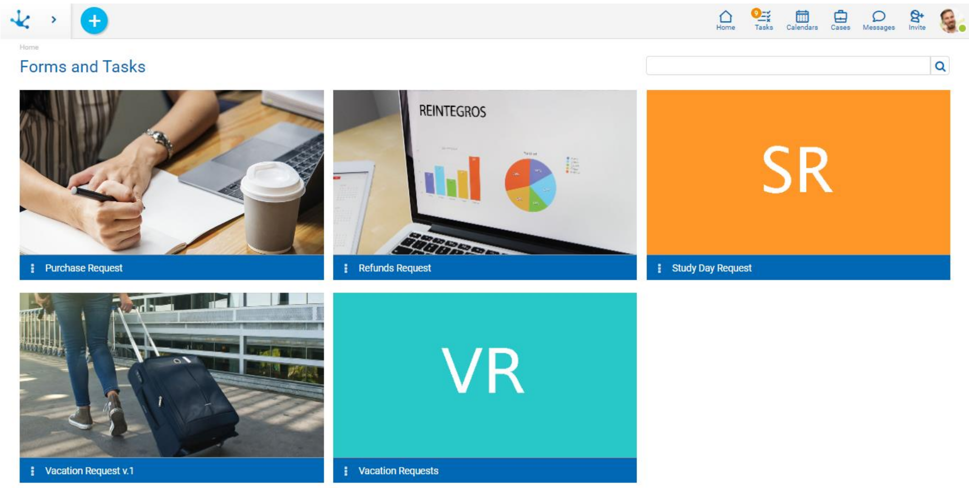
Drill Down

By clicking on each value in the charts you can show the grid of the form that the widget represents, filtered by such value.

3.4.6. Forms and Tasks

It the user does not have a predetermined dashboard defined, when logging in the user displays the gallery of forms and tasks. Each element represents a form or an agile form and allows to make operations through buttons.

- On the form instances, with a quick overview of their latest updates.
- On the processes case related to a form, with a quick overview of their last tasks.



Elements Content

Each element of the gallery is identified with the name of the form or agile form previously modeled. The content of each element and the actions that can be made depend on whether the form or agile form has a related process.

Last Updates

It has the last three instances created or modified of the form. By hovering the cursor over each one of them, the buttons corresponding to the show, modify and delete operations are enabled, provided that the user has the corresponding permissions.

At the bottom of the list, the "All forms" option allows to open the results and search grid of the form.

It is displayed to:

- A form without a related process, or with one or more related processes and none of them is a main form. For the latter, you should not have modeled the property Principal in the form for any of the processes related.

- An agile form without a process related.

Each update line contains:

- The text defined in the property Description of the form.

- The creation date and the date of the last instance modification.

Last Tasks

It contains the last tasks that the logged in user has pending to execute, in any of the processes in which the form is related and is defined as the main form. By hovering the cursor over each one of them, the execution buttons and the access icon to the chat of the case are enabled.

At the end of the list, the "All my tasks" option allows direct access to the "My Tasks" option from the actions menu of the same item.

It is displayed to:

- A form with one or more processes related, if it is the main form in any of them, that is, if it has the property modeled Principal in the form.
- An agile form with a process related.

Each task line contains:

- The name of the task, preceded by the name and version of the process in which it is found.
- Date of admission and due date of the task.

Actions Menu

It is enabled when hovering over the icon and depending on the permissions the user has, they have the following options enabled:

New
If the element contains the latest updates, it allows creating a form instance, whereas if the element contains the latest tasks, it allows starting a new case. If the form is related to more than one process as the main form, the list of processes is displayed so that the user can select the one to start

My Tasks
Opens the tasks that are under the responsibility of the logged in user and that correspond to the process or processes in which the related form is defined as the main one.

Search
Opens the results and search grid of the form.

Form Icon
It is the image associated to the form of the property Icon of the form.

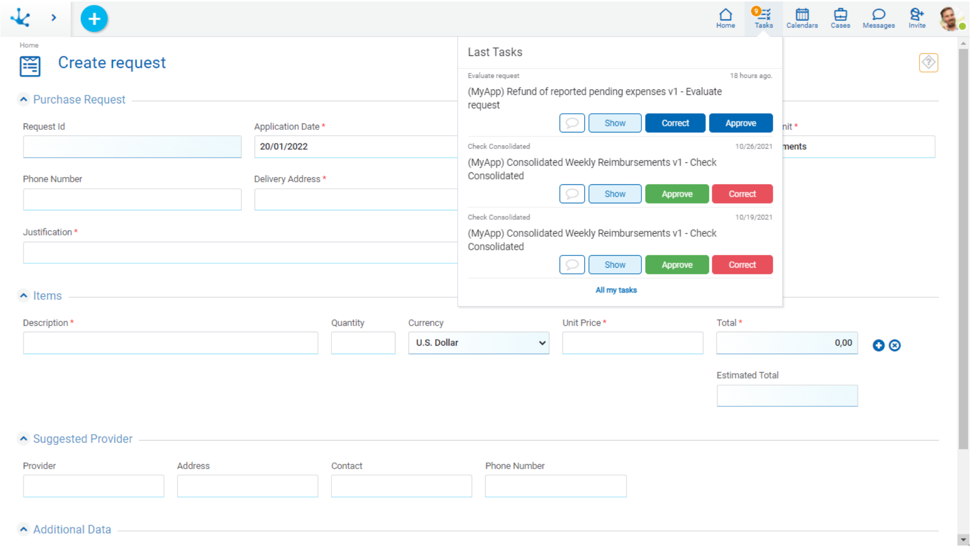
Search Filters

The number of items in the gallery can be reduced by using a search filter applied to the name of the form. As the user enters characters in the search field, the number of items in the grid is reduced to those forms whose names contain the entered characters.

3.4.7. Tasks

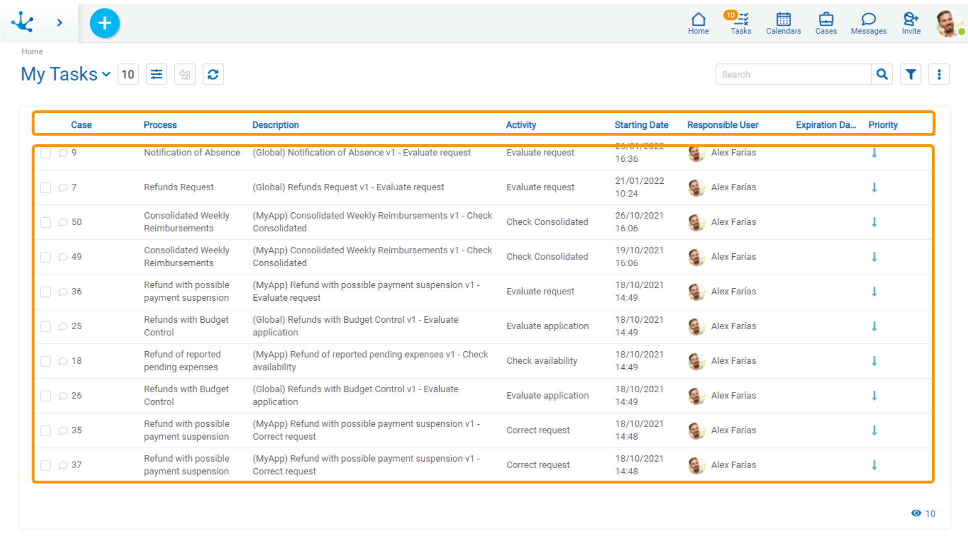
It allows to visualize in grid form all the tasks that are pending execution and are assigned to the user or their team. The latter, if the user is responsible for an organizational unit or role.

By pressing the icon corresponding to tasks in the [top toolbar]() a panel opens where the last three tasks pending execution are displayed and the link "All my tasks" can be selected. This way they are visualized in grid form all the tasks that are pending execution and are assigned to the user or their team.



Sections

- [Top Toolbar]()
- [Grid]()



3.4.7.1. Top Toolbar

From the top toolbar you can select different options related to the content and presentation of the task grid.

My Tasks or my Team Tasks

Allows to select the tasks according to its execution responsibility.

- My Tasks: To-do list for user execution.
- My Team Tasks: This option can be used by those responsible for organizational units or roles to display the tasks that the users under their charge have pending execution.

Number of Tasks

Indicates the number of tasks pending execution by the user or their team.

Totals by Responsibility or Totals by Process

If the "My Tasks" option was previously selected, by pressing this icon you can access the control panel of totals by responsibility or of totals by process, according to the option selected in the first line of the totals panel.

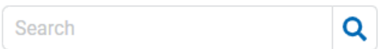
If instead the option "My Team Tasks" was selected, you will only access the panel of totals by responsibility.

If this icon is pressed with the totals panel open, it closes and the task grid is reloaded.

The totals panel can be expanded or hidden using the corresponding icons or .

Grid Version

Allows to change the previous version or go back to the new one.



Fast Search

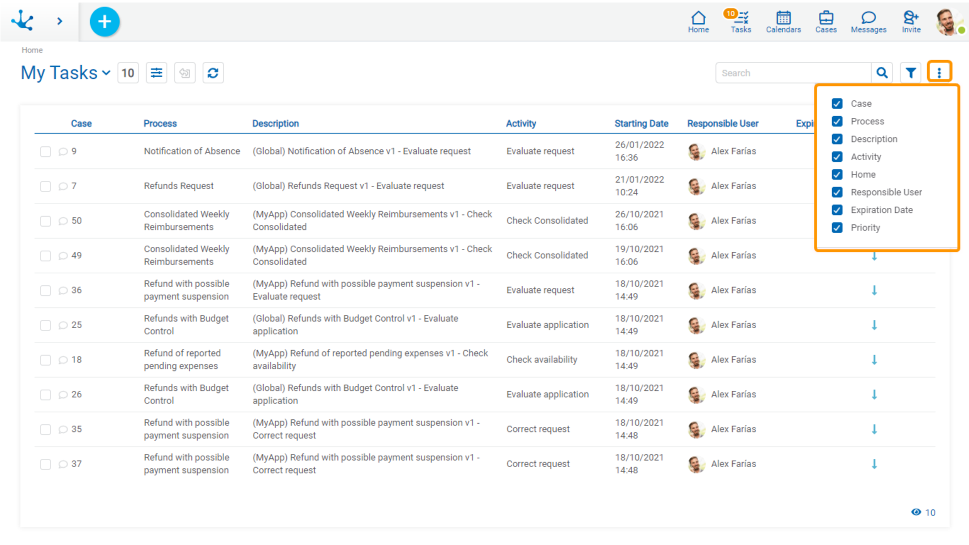
Allows you to filter tasks by the “Case” and “Description” columns based on the characters entered in the search field.

Advanced Search

Advanced search enables a line where you can select the [search filters](#).

Columns Display

It displays a panel with the names of the columns of the grid. By means of a check mark, the user can activate or deactivate the display of each column. The set of selected columns is valid until the same user modifies it again.



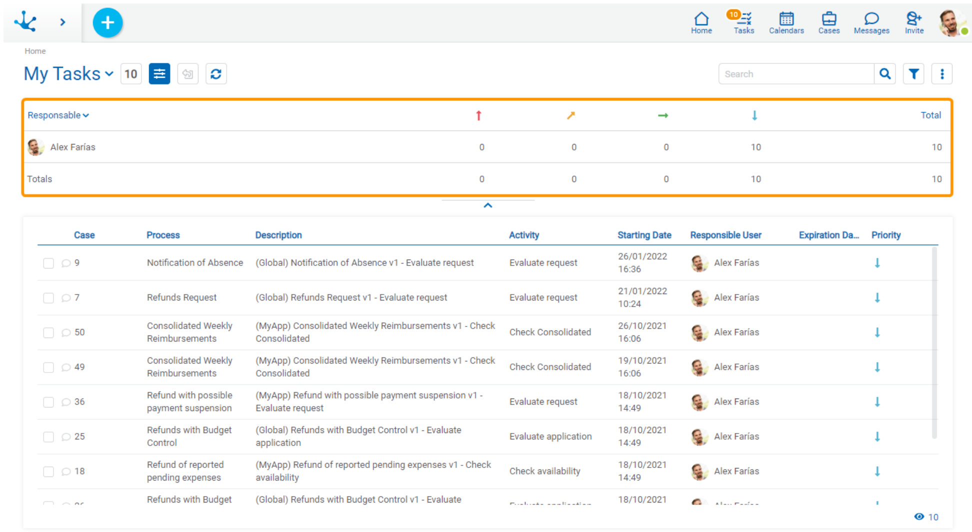
3.4.7.1.1. Totals

The totals section of the tasks can be expanded on the tasks grid.

Totals by Responsibility

Shows the totals of the tasks pending execution for the user or the members of their team, depending on whether the user is responsible for an organizational unit or a role. Tasks are displayed grouped by responsibility and by the priority of each of them.

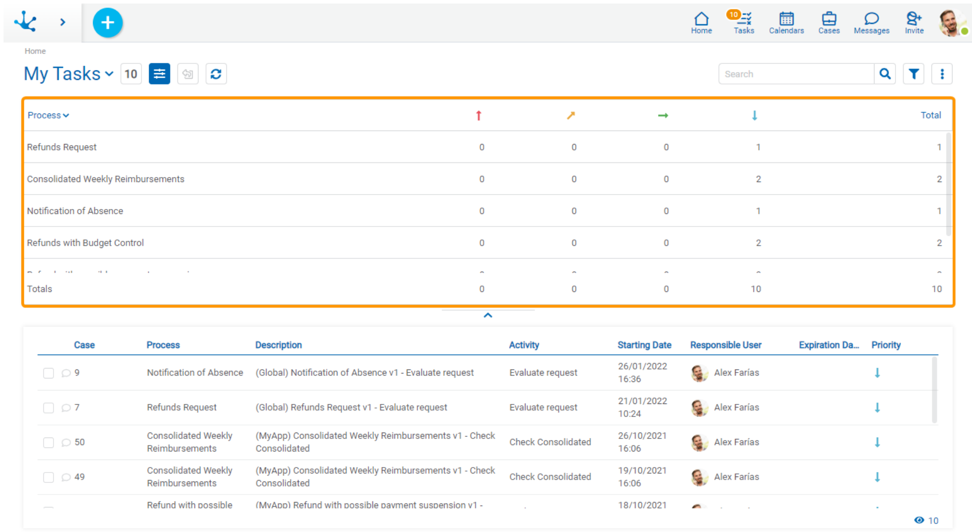
Pressing on the number of tasks indicated for each responsibility and priority, the tasks grid filtered by these criteria can be displayed.



Totals by Process

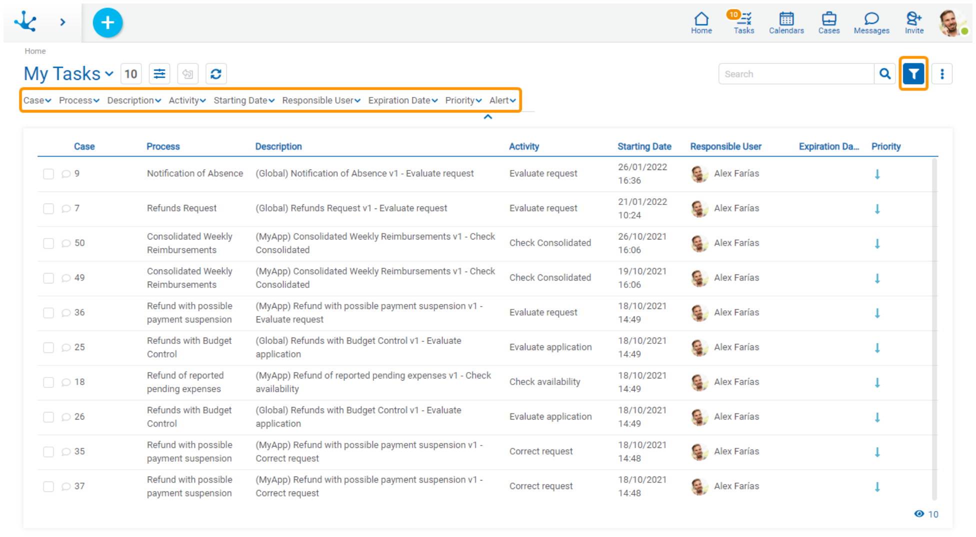
Shows the totals of the tasks pending execution for the user, grouped by process and priority of cases.

Pressing on the number of tasks indicated for each process and priority, the tasks grid filtered by these criteria can be displayed.



3.4.7.1.2. Search Filters

By selecting the advanced search icon, a line is enabled where you can select the different criteria to filter the tasks. The search criteria can be combined.



For each search criteria you can enter a value or select it from a list, to use it as a filter.

You can add all the filters that are necessary, each time one is added a new search is automatically executed that updates the task grid.

The filters applied in the search are highlighted where they were entered, each followed by an "x" icon. By pressing such icon the corresponding filter is deleted and a new search that updated the task grid is automatically executed.

Displays the options bar, without modifying the tasks in the grid.

It hides the options bar, keeping the filters in the case that it had them.

To remove all search filters, the advanced search icon must be pressed again. This way the complete list of tasks is loaded again in the grid.

Filters

Case

The value entered must be numeric.
Search criteria: “Greater than”, “Less equal to”.

Process, Description, Activity and Responsible User

You enter a text by which you want to search.
Search criteria: “Contains”.

Start Date, Expiration Date

You can search for the activities that started their execution, or that expired in a certain period of time.
Options:

- Today
- Last 7 days
- Current Month
- Current Year

- Last Month
- Last Year
- Range (Requires selection of a start date and an end date)
- From (Requires selection of a start date)
- To (Requires selection of an end date)
- Equal (Requires selection of a date)

Priority
Allows to filter selecting the icons corresponding to the priority type.
Search criteria: “Equal to”.
Options:
- Urgent
- High Priority
- Medium
- Low Priority

Alert
Allows to filter selecting the icons corresponding to the alert type. The alert type depends on what has been modeled on the property Activity Duration for each task. The color of this icon matches with the color of the value in the column Expiration Date of this grid.
Search criteria: “Equal to”.
Options:
- Expired
- To expire in the short term
- To expire in the long term
- Not defined

3.4.7.2. Grid

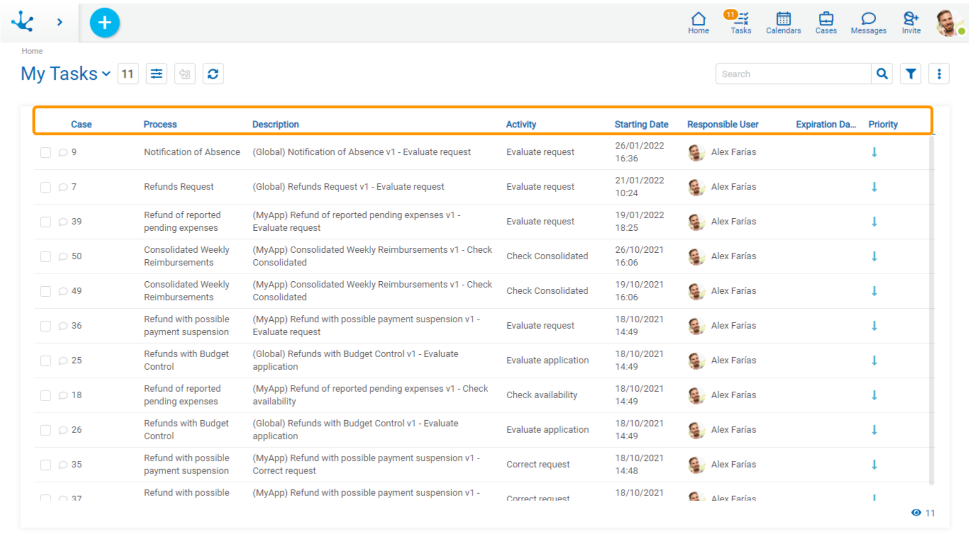
The tasks grid allows to display the totality of the tasks pending execution or those that are the result of having applied search filters. It is made up of columns and lines.

Columns

The tasks grid allows to display different columns and hovering over the name of each of them their behavior can be indicated.

The columns seen in the grid and the number of lines are configured through environment parameters.

The screen resolution determines the display of the columns. At lower resolutions some columns are hidden in order to maintain an easy-to-read and easy-to-use task grid.



Chat

An icon is displayed depending on whether or not the case has an associated chat. Clicking on the icon opens the conversation associated to the case.

The case does not have a chat associated.

The case has at least one chat associated.

Case

The number of the case that the task belongs to.

Process

Name of the process the task belongs to.

Description

Brief description of the case, modeled in the property Case Description of the process. If such description is not modeled, the process code, its version and the name of the current activity are displayed.

Activity

It is the name of the modeled activity in the process.

Start Date

It indicates the date and time the activity started.

Responsible User

The responsibility of a task may be assigned to a user, a role or an organizational unit.

- When the task is the direct responsibility of the user, the image of the user and his full name are displayed.
- When the task is the responsibility of the organizational unit to which the user belongs, the icon of the organizational unit and its name are displayed.
- When the task is the responsibility of a role assigned to the user, the icon of the role and its description are displayed.
- When the task is the responsibility of another user but it has been delegated to the person who is consulting, the image of the user and full name of the delegating user are displayed. This allows to easily recognize who has delegated the task.

Expiration Date

It indicates the date and time the task expires. Through the property [Activity Duration] the due date is modeled, defining the duration of the task or by a variable in the form associated with the process. The values of this column are shown in different colors, managing to identify overdue tasks, those that expire in the short term or those that expire in a longer term. This column may not have information since the definition of the duration is optional in the processes modeling.

Priority

It visually indicates the task priority.

Urgent

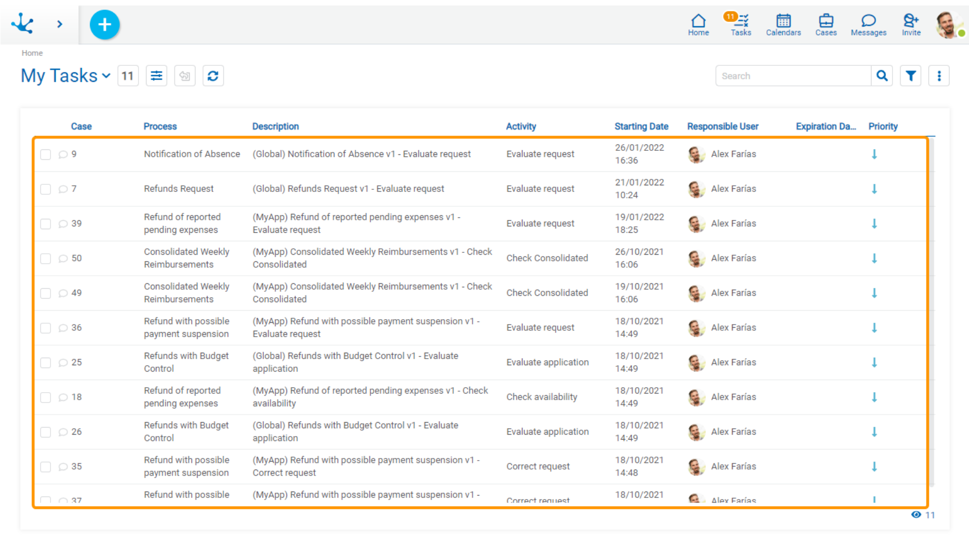
High

Medium

Low

Lines

Each task of the grid can be shown by clicking on the corresponding line. The operations available for each task are displayed through buttons, by hovering on the line.



Buttons Over Rows Display

The user can decide if they wish to see the buttons with the operations of the task on the line.

Display the buttons available for each task.

Hide the buttons available for each task.

Scroll Bar

The lines in the grid are completed as you move vertically, allowing scrolling up or down through the use of a scroll bar.

In the lower right corner you can see the total number of tasks loaded in the grid.

3.4.7.2.1. Columns Behavior

If hovering over each column a set of icons that represent their behavior is displayed.

Behavior Icons

When selecting one of these icons, it displays the one chosen to the right of the column title on which the behavior has been defined. To undo the select you must click on this icon.

The ordering of the lines can be made only by a column, so if more than one ordering criterion is selected, only the last one is taken, deleting the previous one.

Anchorage

It allows leaving the column fixed when the grid is scrolled through the horizontal scroll bar. It is available for the first column of the grid.

Ascending Ordering

It allows to make the ordering of the column in an ascending way. Icon present in all columns.

Descending Ordering

It allows to make the ordering of the column in a descending way. Icon present in all columns.

Delete the Column

It allows to hide the column.

3.4.7.3. Tasks Execution

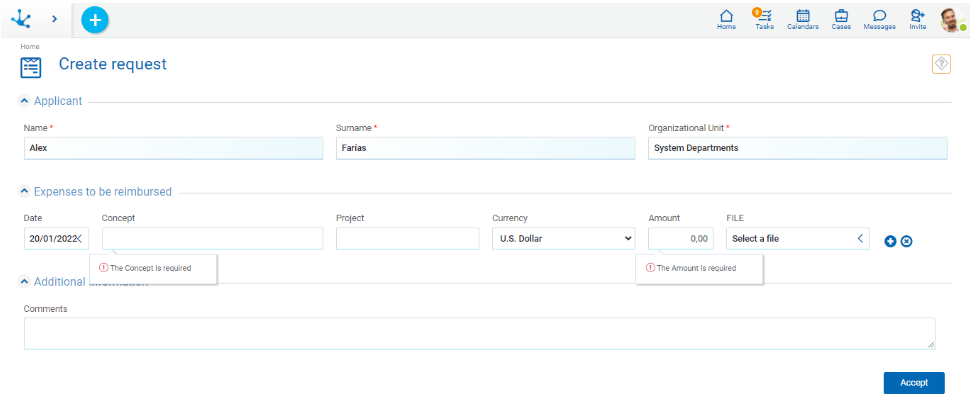
This functionality aims to execute the current activity and then evaluate the conditions to finish it. If they meet such conditions, it allows the move on to the next activity, as modeled in the process.

A task can be executed.

- From the "Tasks" icon on the portal top toolbar.
- From the tasks grid.

- From the case show.
- From the “Cases” icon on the portal top toolbar, with the “New Case” option, it is possible to request the execution of the first activity of a process.

On the next example, it executes the “Create request” activity, that creates a refund request according to the process modeled from a one-level approval template. When executing the activity it displays a form related to the first activity case.

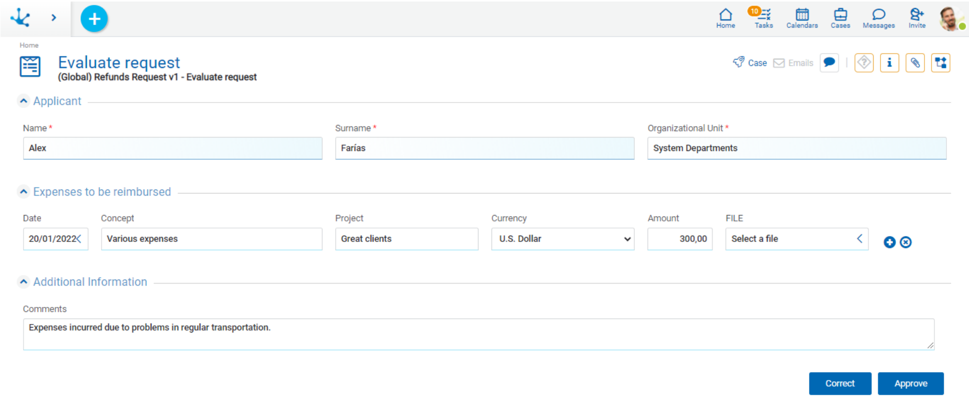


When the first activity in a case is executed, as in this example, the name of that activity is displayed in the execution header.

The fields indicated with an asterisk in red are required to be able to carry out the activity, as the behavior was defined when modeling the form and the process. If a value is not entered in a required field, the user receives a message indicating that the field must be informed.

Once the requested data has been entered, by pressing the "Accept" button, the next activity will be carried out depending on how the process has been modeled.

In the following process activities, the icons that allow access to the specific information of the case are also displayed.



Case Information

Comments Associated to the Case
Allows to open the conversation associated to the case that is being executed. The conversation title is the description of the case and the participants are the subscribed users.

Help
Allows to open a window with the description of the activity. The process modeler can include a detailed description of each activity. This information can be shown when executing the activity, so that the user knows how to carry out the task. If the activity does not have a description, the icon is disabled.

Case Information
Allows to display a panel with case information. To close this panel you must press the icon again.
To display the case information in a new window, you must click the icon on the lower left corner of the panel.

Attached Files
Allows to see the detail of the associated information: file name, user, date it was associated and the origin of the attachment (from the form, chat or case). New attached files can also be added.

Graphic Show
Allows to display the case in graphic way, with animations that show how it went through the different activities that make up the process the belong to and the duration times of each task.

Finish Current Activity

When the user finishes logging in and confirming the data, **Deyel** verifies the current activity meets the conditions to finish it and then it moves on to the next activity. Otherwise, a message indicates the condition that does not allow the activity to be finished.

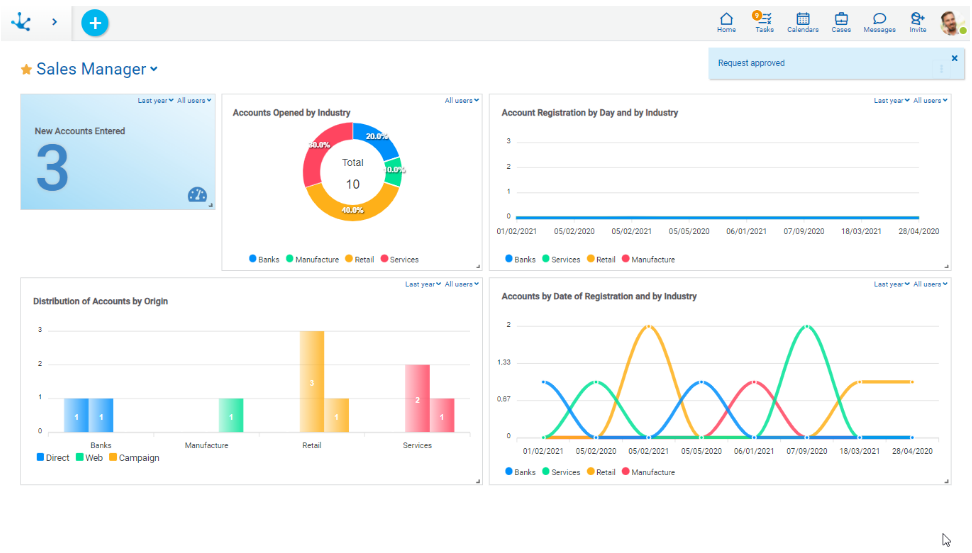
Move on to the Next Activity

When the conditions for ending the current activity are met, the procedure for proceeding to the next activity starts. This procedure depends on the widget [Continuous Execution]() that is defined when modeling the activity in the process.

If this widget is activated and the pass to the next activity has been successful, **Deyel** analyzes its definition and if it corresponds to the user to execute it, then such execution starts automatically This mechanism allows the user to continuously execute the case activities for which they have responsibility. In this way, when it finishes executing an activity, it goes to the next activity, without having to return to the to-do list.

In the case that the continuous execution widget is deactivated or that the next activity does not correspond to be executed by the same user, then only the activity execution message is displayed.

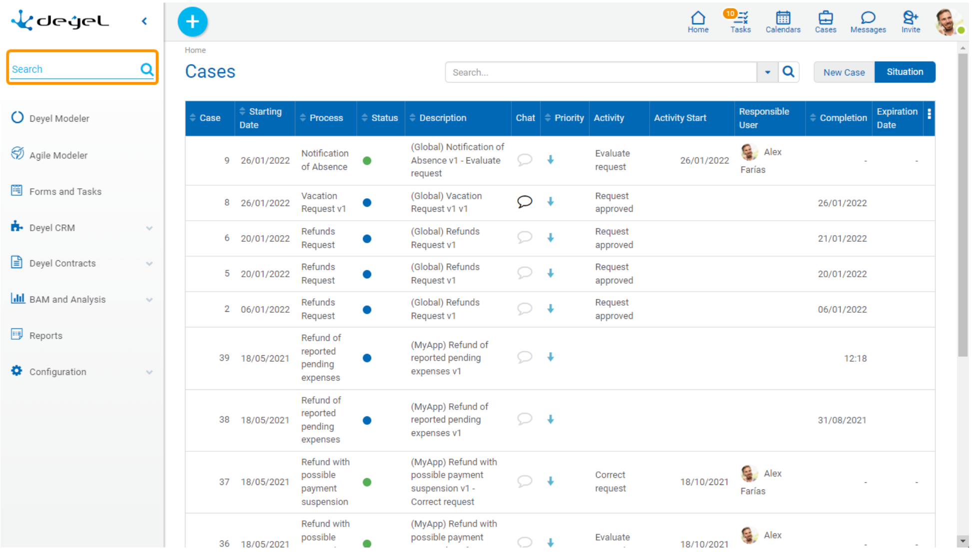
The following image shows as an example a message of the execution of an activity, which was modeled in the process.



3.4.8. Cases

A case is a specific execution of a process. For example, for a process of refund request, a case corresponds to a request in specific, for example from the sales area.

A user can show their cases or [initiate new ones]() from the "Cases" option from the [top toolbar](), or entering the "Cases" text in the menu searcher and accessing such option.

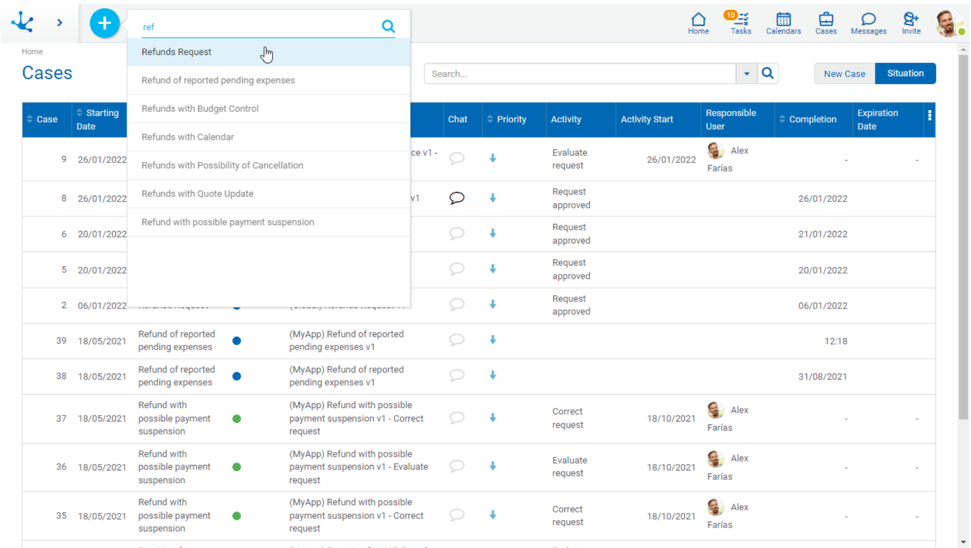


3.4.8.1. Initiate Cases

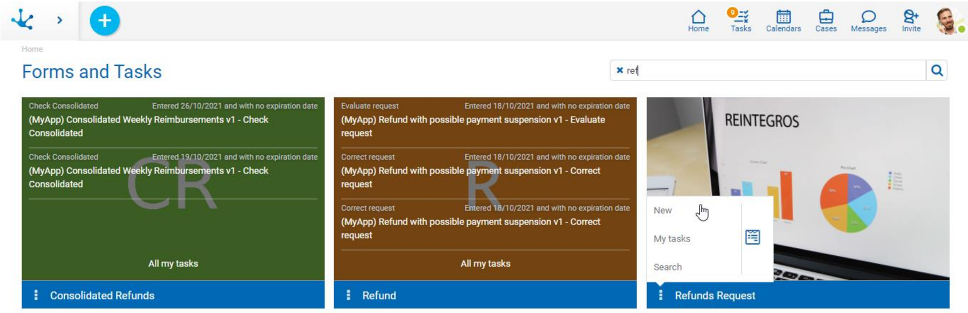
Initiating a case allows the user to make the first task of it.

A new case can be created from the:

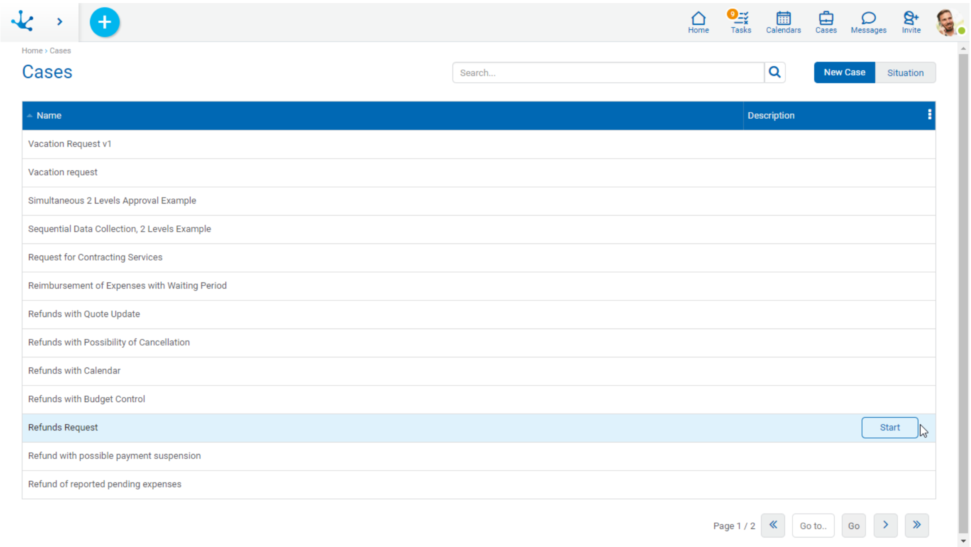
- The icon corresponding to the [context menu](), selecting the process from the displayed menu.



- The gallery of [Forms and Tasks](), selecting the “New” operation in the form associated to the process.



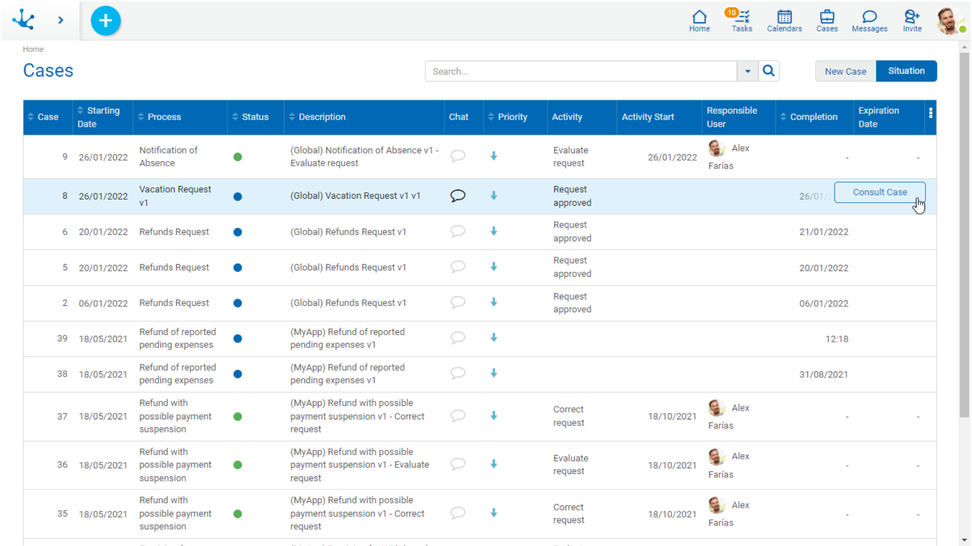
- The grid of [Cases](), selecting the "Start Case" tab and the process name.



Quick search allows to filter all processes whose names contain one or more words entered in the search section. To return to the original list, click on the icon of the search bar.

3.4.8.2. Situation

In the “Situation” tab the grid of cases initiated by the user or his team is displayed. This last, if the user is responsible for an organizational unit or role. If the case has more than one activity in progress a row is displayed for each running task.



Columns

Case

Number that identifies the case.

Start Date

Case start date. If the case has a start date on the same day, then only the start time (includes hours and minutes) is displayed. Otherwise the start date and time is displayed.

Process

Name of the process the case belongs to.

State

State of the case and color that identifies its state.

- Active
- Ended
- Cancelled
- Suspended

Description

Case description. It can be modified from the process modeler. By default, the description consists of the process code, its version and the name of the activity to be executed.

Chat

Allows to display or add comments in the conversation associated to the case. If the icon is high-lighted, there are comments for such case. If the icon is not highlighted, no comment has been added yet.

Activity

Name of the activity or activities in progress of the case.

Activity Start

For each case activity in progress its start date is displayed. If the activity has a start date on the same day, then only the start time (includes hours and minutes) is displayed. Otherwise, the start date is displayed and clicking on it displays a visual aid, also indicating the time.

Responsible User

For each activity in progress of the case, the participant responsible for the execution is displayed. It is not reported responsible if the case is finalized. It can be a user, a role or an organizational unit and it is represented in different ways.

- The task is the direct responsibility of the user, the image of the user and his full name are displayed.
- The task is the responsibility of the organizational unit to which the user belongs, the icon of the organizational unit and its name are displayed.
- The task is the responsibility of a role assigned to the user, the icon of the role and its description are displayed on the list.
- The task is the responsibility of another user but it has been delegated to the person who is consulting, the image and the full name of the user who is consulting is displayed.

End Date

End date of the last case activity, its behavior is like that of the property Start Activity .

Expiration Date

For each case activity in progress its expiration date is displayed. The dates are visible with a traffic light, indicating the expired, at risk or on time. If the activity modeling does not indicate that it has a duration or expiration date, the activity does not show such date.

Calculation of the Expiration Date and Traffic Light

By clicking on a date you can check how long the task has been overdue. Such time is displayed using different criteria.

- More than 30 days expired: When the period is greater than 30 days.
- DD HH: Days and hours when the period is greater than a day.
- HH MM: Hours and minutes when the period is less than a day and greater than or equal to an hour.
- MM SS: Minutes and seconds when the period is less than an hour and greater than or equal to a minute.
- SS: Only seconds when the period is less than one minute.

Priority

Indicates the priority the task has using icons of different colors.

 Urgent

 High

 Medium

 Low

Operations

When hovering over the case lines the "Show Case" button is enabled, which allows you to go to the case panel. If the user can execute the current activity, the "Show Task" button is also enabled which allows to execute the task.

3.4.8.2.1. Case Search

Two search types can be made.

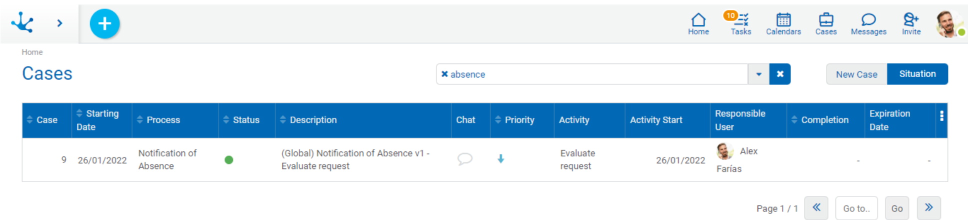
- Fast
- Advanced

Fast Search

Allows to recover all the cases which have descriptions with one or more chosen words.

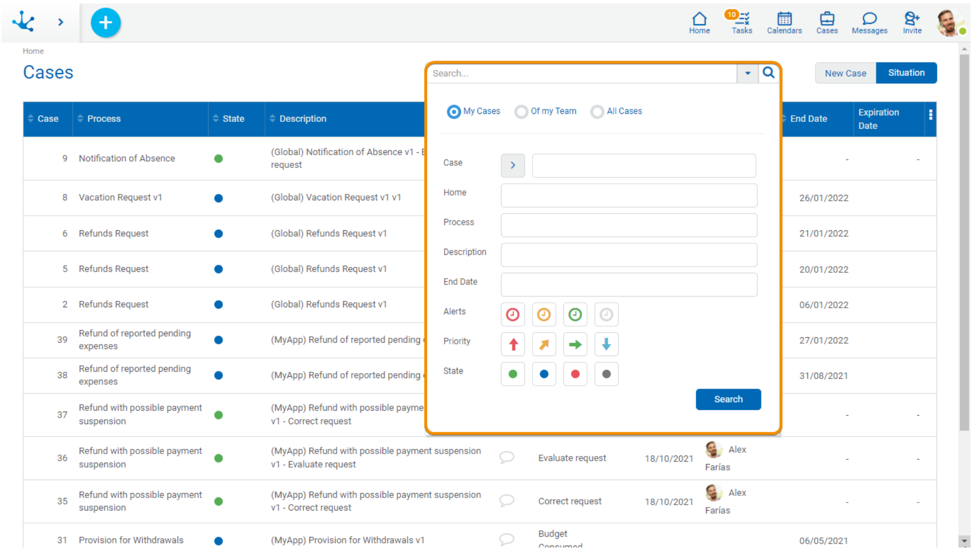
You must locate the cursor in the search section, enter the text to search and press the "Enter" key or click on the magnifying glass. In this way, all cases in whose description the entered text exists are filtered.

To delete the filter, click on any of the "X" icons, to the left of the text entered or to the right of the search field.



Advanced Search

To access the advanced search you must click on the icon on the right of the search field. A window is opened which allows to indicate the different criteria.



Filters by Responsible

My Cases

The grid contains the cases initiated by the connected user.

Of my Team

The grid contains the cases initiated by the user himself or by the users who are members of a role or organizational unit where the user is the participant responsible.

All Cases

The grid contains all the existing cases. This option is visible if the user has the corresponding security function among their permissions.

Filters by Properties

Case

You can search by greater or less than a certain number.

Process and Description

You can search for the text you want.

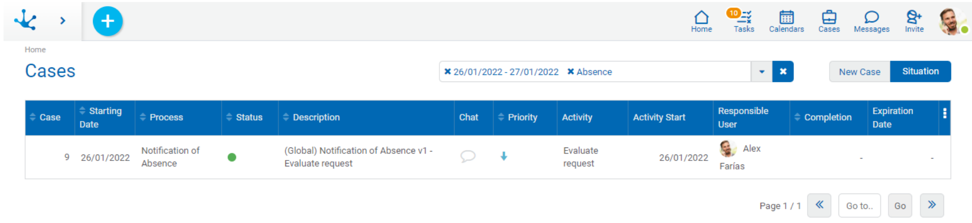
Start Date and End Date

You can search by a range of dates in which the case started or ended.

Alerts, Priority and State

Allows to filter selecting the corresponding icons.

The filters applied in the search are visible in the search section, each one preceded by the icon ✖. By pressing such icon the corresponding filter is deleted and a new search is automatically executed that updates the grid of cases displayed.



3.4.8.2.2. Ordering and Visibility

The tasks grid allows to display different columns and an ordering can be indicated for each of them, though the icon . Pressing this icon changes the sense of the ordering.

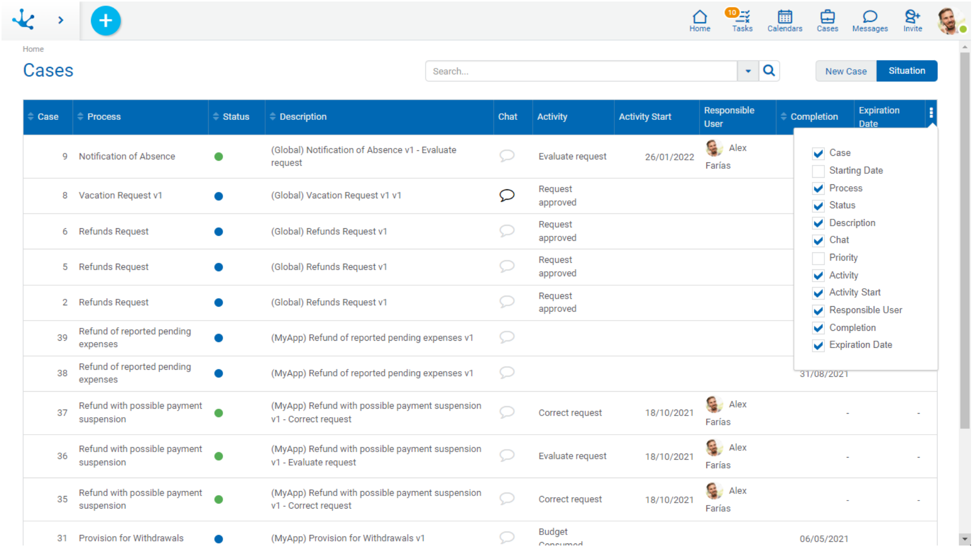
The ordering of the lines can be made only by a column, so if more than one ordering criterion is selected, only the last one is taken, deleting the previous one.

The icon to the right of each column title allows to hide the column.

User Preference

The columns seen in the grid and the number of lines are configured through [environment parameters](#).

Pressing the icon it displays a panel with the names of the columns of the grid. By a check mark, the user can activate or deactivate the display of each column. The set of selected columns is valid until the same user modifies it again.

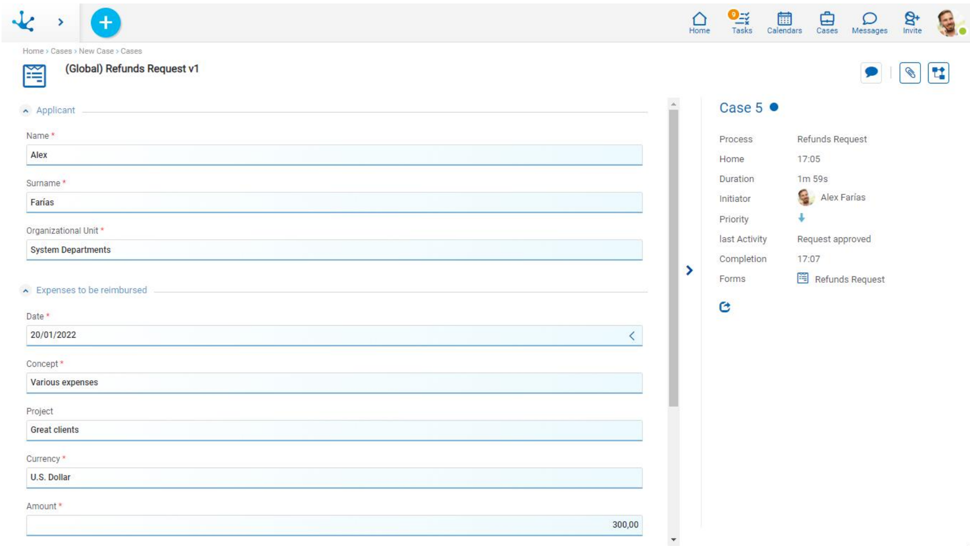


Page

If the number of lines exceeds the maximum number to display on a page, the buttons at the bottom right of the grid can be used to move to the previous and next page, or select a specific page.

3.4.8.3. Cases Show

In the panel of the show case, the icon of the process and the description of the case are displayed in the top left part, while in the top right part the icons corresponding to its chat, its attachments and its chart show are displayed.



Case Information

Comments Associated to the Case
Allows to show the conversation associated to the case. The conversation title is the description of the case and the participants are the subscribed users.

Attached Files
Allows to display the detail of the information that has been attached to the case, that is, the name of the file, the user, the date, the time and the origin of the attachment.

Graphic Show
Allows to display the case in graphic way, with animations that show how it went through the different activities that make up the process and the duration times of each task.

Left Panel

The left panel displays the show for the main form of the case.

Right Panel

In the right panel the information of the case is displayed, indicating the number that identifies it and its properties.

State
State of the case identified by a color.

- Active
- Ended
- Cancelled
- Suspended

Process
Name of the process the case belongs to.

Start Date
Case start date. If the case has a start date on the same day, then only the start time (includes hours and minutes) is displayed. Otherwise the start date and time is displayed.

Duration
It is informed in days, hours, minutes and seconds.

Initiator
User that initiated the case.

Priority
Indicates the priority the task has using icons of different colors.

Urgent

High

Medium

Low

Forms

Forms created during the execution of the case.

Activities in Progress

They are the case activities that are in execution at the time of the show. They are only visible if the case is unfinished.

Start Date

Start date of the activity. If the activity has a start date on the same day, then only the start time is displayed. Otherwise, the start date and time.

Responsible User

Responsible for the execution of the activity. It is not informed responsible if the case is finalized. It can be a user, a role or an organizational unit and it is represented in different ways.

- The task is the direct responsibility of the user, the image of the user and his full name are displayed.
- The task is the responsibility of the organizational unit to which the user belongs, the icon of the organizational unit and its name are displayed.
- The task is the responsibility of a role assigned to the user, the icon of the role and its description are displayed.
- The task is the responsibility of another user but it has been delegated to the person who is consulting, the image and the full name of the user who is consulting is displayed.

Expiration Date

It indicates the expiration date of the task in progress, or the due time when it expires on the current day.
Through the property Activity Duration the origin of the expiration date is modeled. It is calculated according to the duration of the task, or it is taken from a field belonging to a form associated with the process.
The date is shown in different colors for those due, those that expire in the short term or those that expire in a longer term. The date may not be reported as it is optional in processes modeling

"Show" button

It is visible when the activity can be executed by the user who wants to show. Allows to access to the task execution.

"Cancel" button

It is visible only if the case is unfinished and allows to cancel it.
It is verified a user can cancel:

- Their own cases.
- The cases of their team if they are coordinators of it.
- The cases of the participants of a role, if they are coordinator of it.

Ended Cases

If the case is finalized only some properties are shown.

Last Activity
Activity which the case finalized with.

End Date
End date of the last case activity. It is displayed in the same way as the start date of the activity.

Closing of the Right Panel

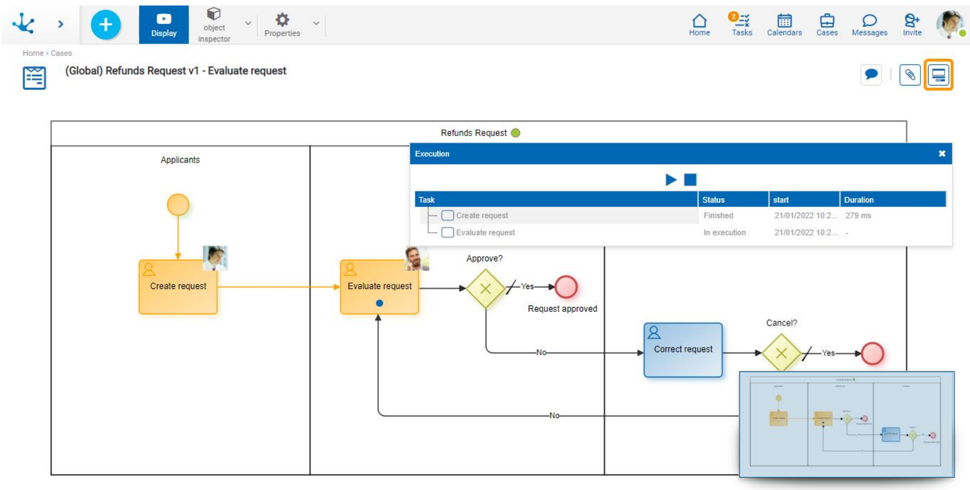
It closes the right panel of the case information.

New Window

To display the case information in a new browser window, you must click the icon found in the lower right corner of the side panel.

3.4.8.4. Graphic Show

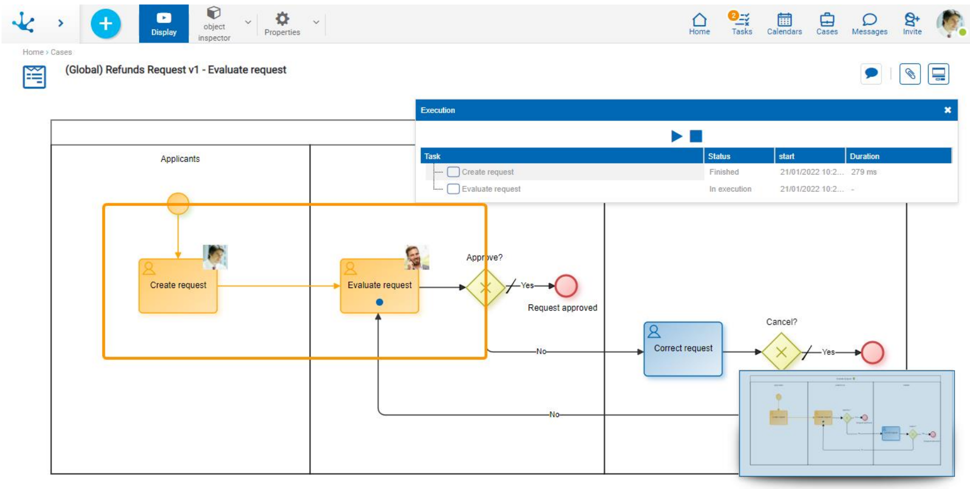
The process viewer allows to show the process diagram and the execution made so far. It also provides a set of tools to make the show. To return to the show of the case, you must press the icon .



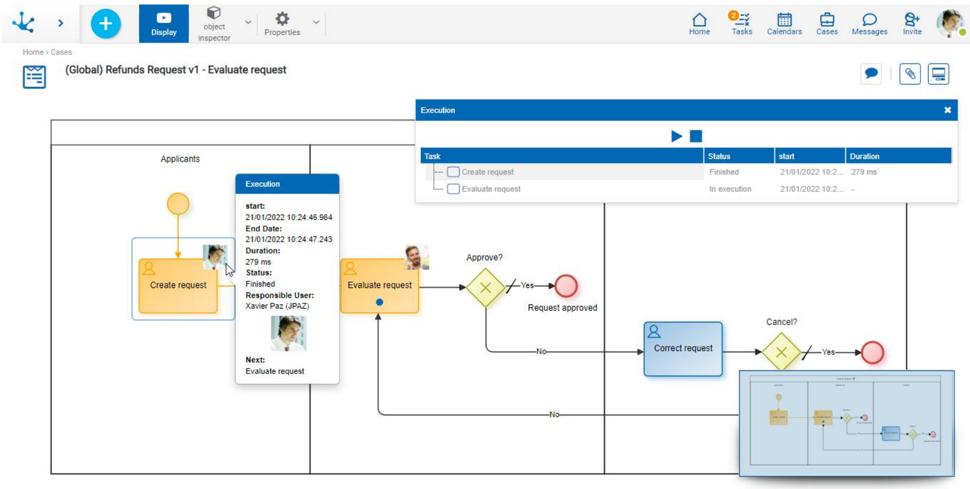
Activities Execution

The activities already executed in the case are identified highlighted in orange and in the top right part of each activity you can see the image of the person responsible for the execution.

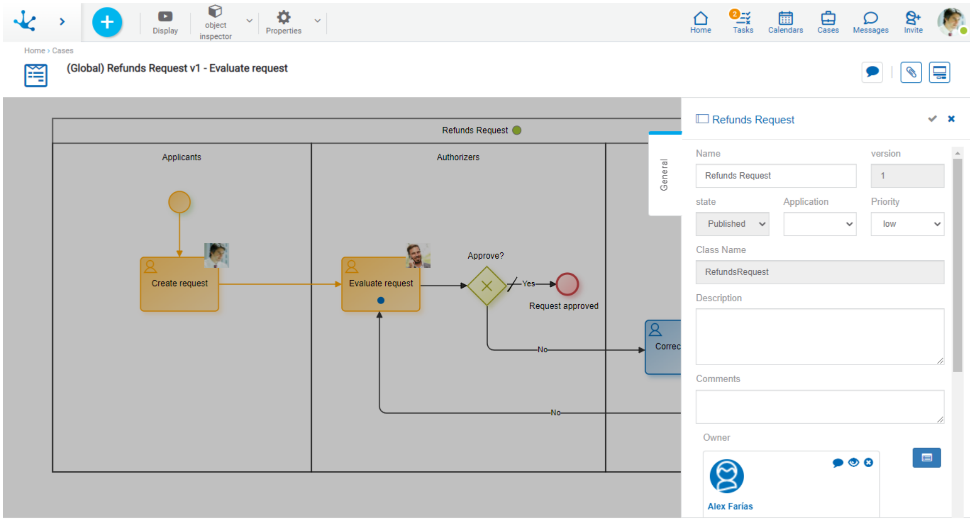
The currently executed activity has a blue dot on it shape.



When hovering over an executed activity, a panel opens with information on the execution of the activity, on the automatic activities and on the events. The next activity or event to be executed is also displayed.

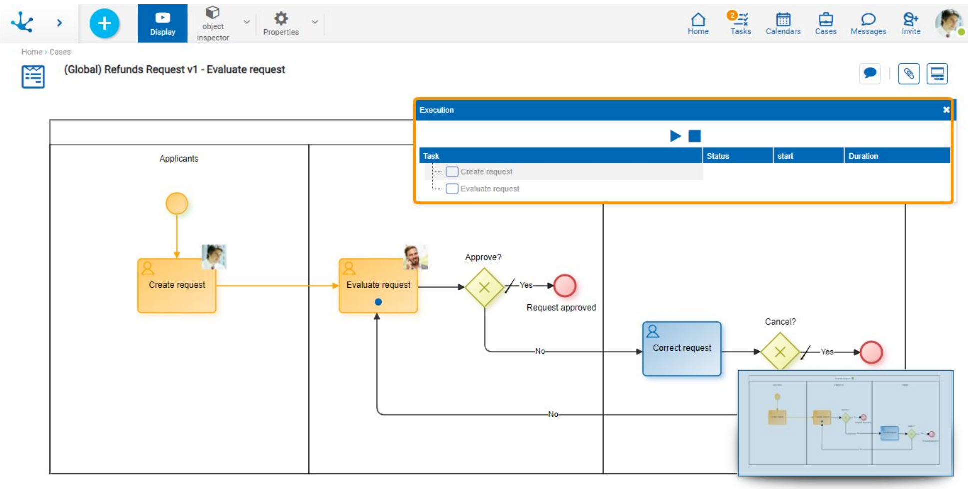


The properties of all elements of the process diagram can be shown, but cannot be modified.



Display

If the "Display" option is selected in the top toolbar, the execution panel opens with the detail of the executed activities and their summarized information.



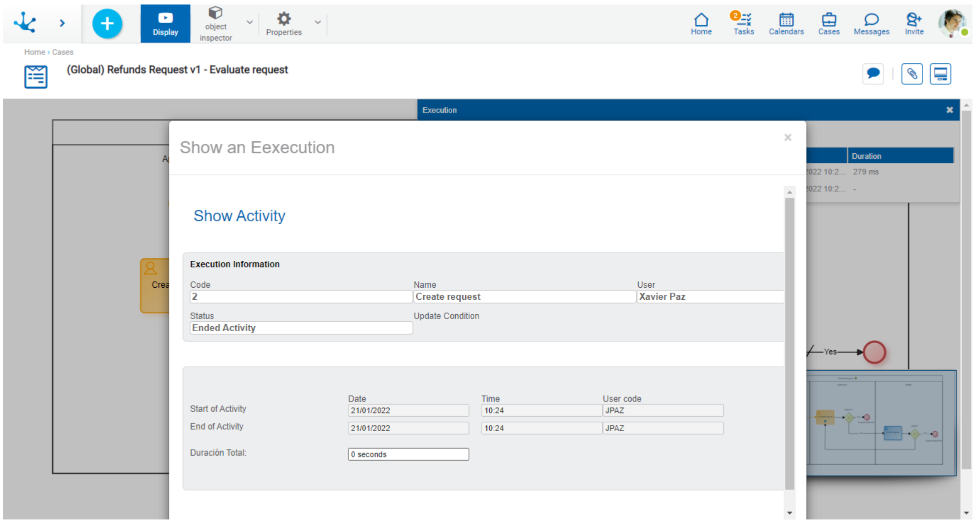
This panel allows to simulate the execution of the case:

Start the execution simulation. While the simulation is running, the icon corresponding to the pause is displayed.

Pause the simulation. Once it has stopped, the icon corresponding to the execution is displayed.

End the execution simulation.

When selecting an activity from the list in the display, a window opens with its detailed information.

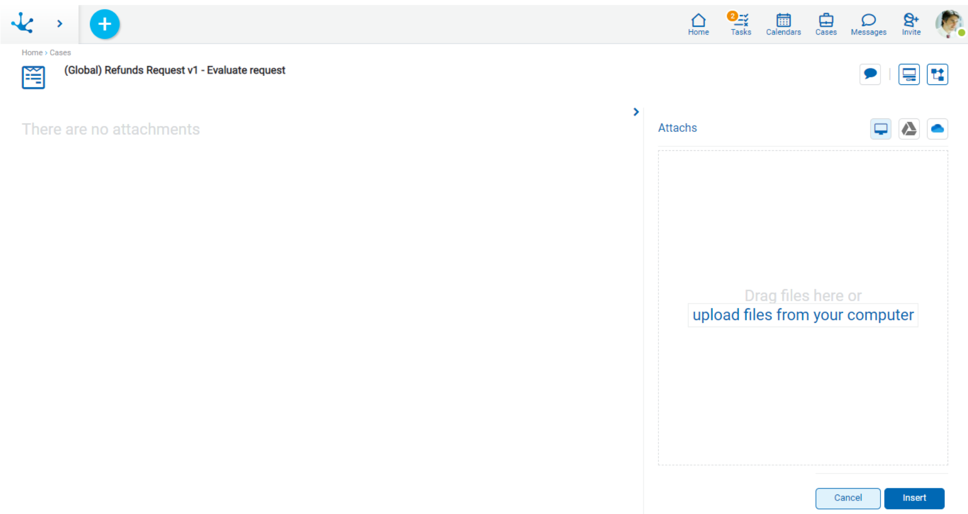


3.4.8.5. Attach Information

Information stored locally or on Google Drive can be attached to a case. Such information can be up-dated in different ways.

- From an activity that has a related form, where fields of file type or image type were modeled. Only the users that can execute the activity can attach information.
- From the chat associated to the case. All users involved in the case can attach information at any time. This information is available for show even when the case has been closed.
- From the case show. The responsible user for executing the activity in which the case is found can attach information.

To return to the window of the case, you must press the icon  .



From the attachments panel, all the information that was attached to the case is displayed, indicating the way it was attached. In this way the user can show the attached items easily and quickly.

Indicates that the file was attached from the form.

Indicates that the file was attached from the case chat.

Indicates that the file was attached from the case show.

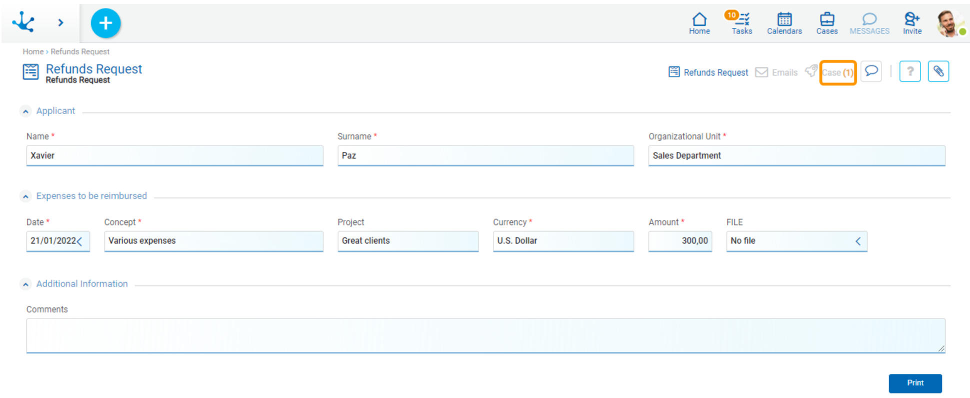
The name of the user who attached the information, the date, the time, and the name of the file or link are also displayed.

Hovering the cursor over each attachment enables the possibility of downloading the file to the user's local computer.

The information attached can only be deleted by the user that attached it.

3.4.8.6. Cases Related to a Form

The cases related to a form are those where the form is or has been used. If the form has modeled the property [Show Related Cases](), the option to show their related cases and their number are displayed in each instance.



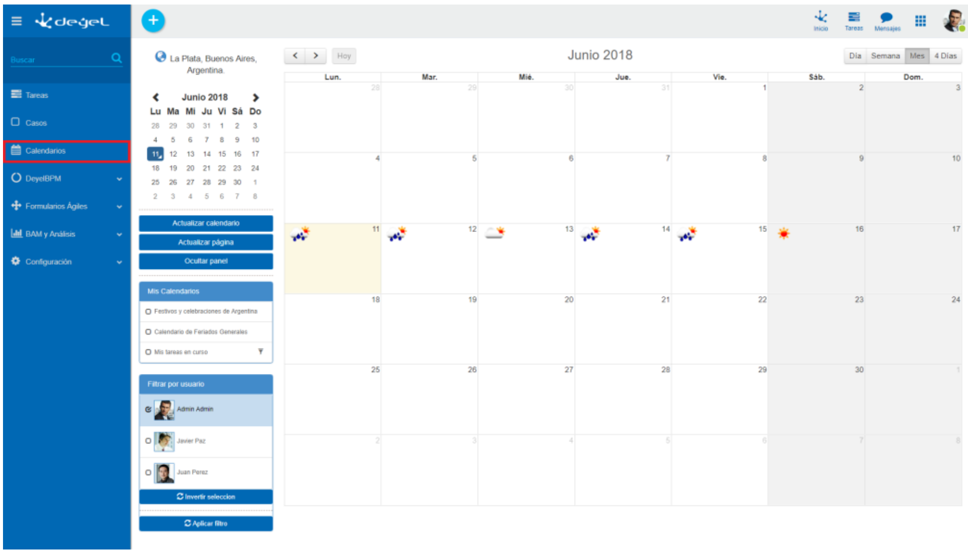
By clicking on the icon corresponding to the case or cases related you access the window of [case show]() when there is a case related, or to the [case grid]() related, when there is more than one.

3.4.9. Graphic Calendars

[Fase 3: Portal > Calendario y herramienta colaborativa]()

Para utilizar la funcionalidad de calendarios gráficos existen distintas alternativas.

- Hacer clic sobre la opción “ Calendarios” del menú principal.
- En la búsqueda rápida del menú ingresar “ Calendarios” y hacer clic en la opción listada.



En la porción superior central de la ventana se indica la fecha o periodo que se está considerando para la visualización de eventos dentro del **panel de eventos**.
Este panel de eventos se encuentra debajo y es donde se visualizan los indicadores del clima y los eventos de los calendarios.

Hacia la derecha se presentan una serie de botones que permiten controlar la forma de visualización de los eventos:

"Día" - Visualiza los eventos organizándolos por día. Se visualizan dentro de una agenda diaria.
"Semana" - Visualiza los eventos de la semana.
"Mes" - Es la visualización por defecto. Presenta los eventos del mes.
"4 Días" - Permite ver al calendario como una agenda con los eventos de los próximos 4 días.

Hacia la izquierda se presentan botones que permiten establecer la fecha o periodo que se considera para la visualización de eventos.

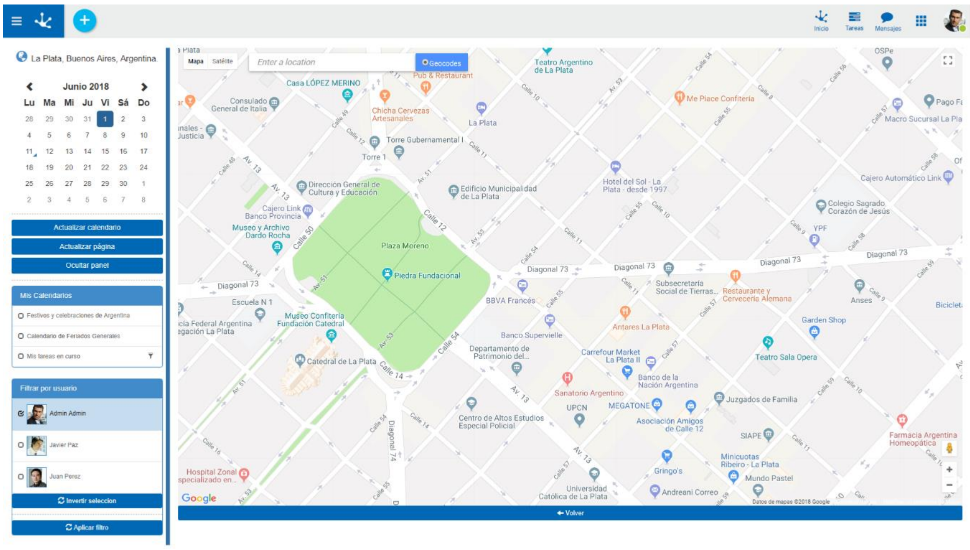
 Permite navegar la vista hacia atrás.
Ejemplo: Si la vista activa es por mes, retrocede un mes. Si la vista activa es por día, retrocede un día.

 Permite navegar la vista hacia adelante.
Ejemplo: Si la vista activa es por mes, avanza un mes. Si la vista activa es por día, avanza un día.

Acceso rápido al día de hoy.
Ejemplo: Si la vista activa es por mes, visualiza el mes en curso. Si la vista activa es por día, muestra la fecha actual.

Además de estos mecanismos de navegación descritos, se puede usar el selector de fechas o **“Date picker”,** que permite establecer una fecha específica.

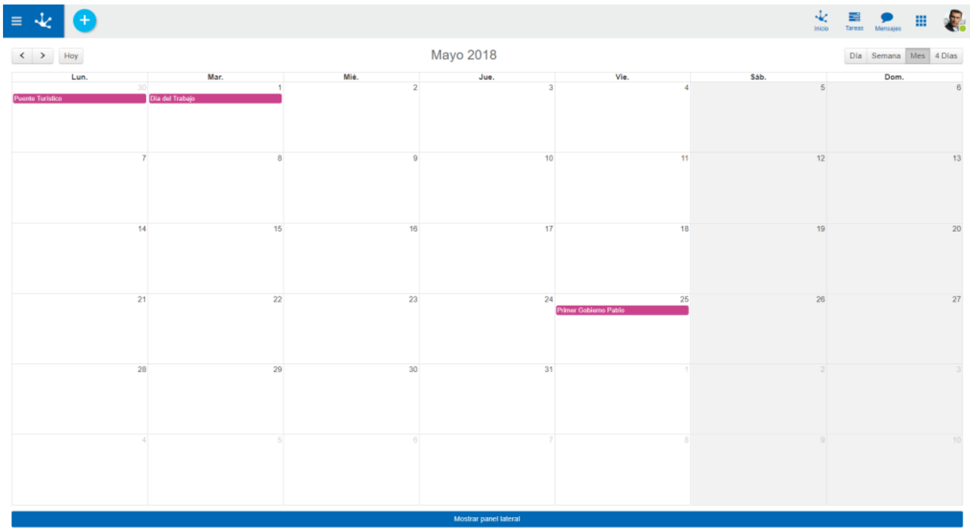
Ubicación Geográfica
En la porción superior izquierda de la pantalla se indica el lugar que **Deyel** está considerando para recuperar información del clima.
Esta ubicación puede ser cambiada abriendo el panel de configuración de ubicación:



La búsqueda de la ubicación debe hacerse mediante el cuadro de texto superior. Una vez modificada la ubicación actual, los iconos del clima se actualizarán. El botón “Volver” permite retornar a visualizar el calendario.

“Actualizar Calendario” - Actualiza el contenido del panel de eventos. Evita tener que recargar la página para obtener los últimos cambios.

“Actualizar página” - Actualiza la página completa. Esto implica que se inicializan los filtros, debiendo establecerlos nuevamente.
“Ocultar panel” - Oculta el panel lateral, para que el calendario ocupe el ancho total de la pantalla. Con el botón **‘Mostrar panel lateral’** se volverá a visualizar el panel ocultado.



Mis Calendarios.

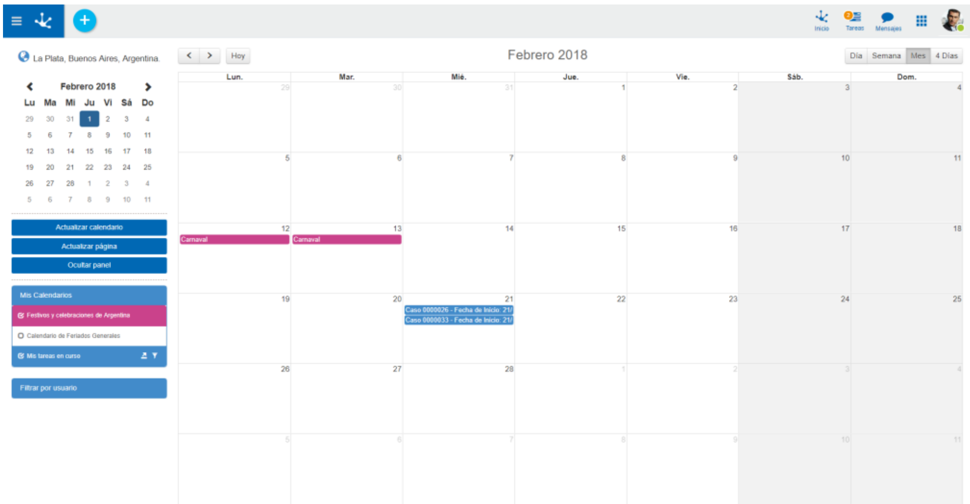
Este panel contiene la lista de los calendarios gráficos que el usuario puede visualizar.

Deyel ofrece algunos calendarios predefinidos, que pueden ser de utilidad al usuario.

- Calendario de Feriados en el país de origen de la instalación.
- Calendario de Feriados Generales. Muestra los días Feriados y Fechas Particulares definidos en la organización.
- Calendario de Mis Tareas

Estos calendarios gráficos se definen y configuran en la tabla auxiliar “Configuración de calendarios gráficos – T246”, referirse a la definición de la tabla y al tópico “Configuración” para más información.

Al hacer clic sobre un calendario gráfico, los eventos que corresponden a este calendario son visualizados en el panel de eventos.
Pueden seleccionarse varios calendarios simultáneamente y cada uno presenta sus eventos con un color específico.

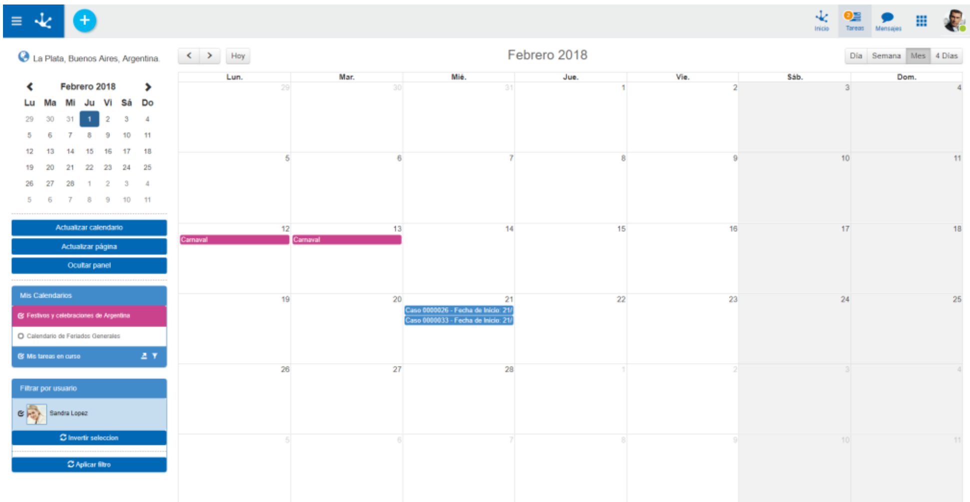



Cada calendario ofrece la posibilidad de filtrar los eventos. Al presionar este control se despliega el panel de filtrado, que presenta una serie de campos por los cuales filtrar los eventos a visualizar.


Permite integrar el calendario con otras aplicaciones, como por ejemplo Google Calendar. Esta funcionalidad se encuentra detallada en el tópico “Integración con otras aplicaciones.”

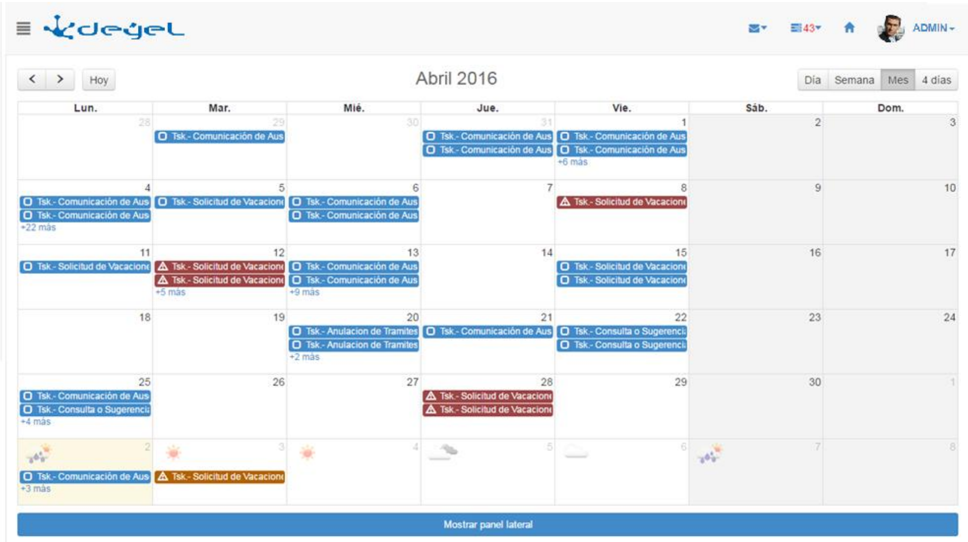
Panel de Selección de Usuarios

Si el usuario es responsable de una unidad organizacional , aparecerá el listado de usuarios registrados en dicha unidad. Este mecanismo permite que un coordinador visualice no sólo sus propios eventos sino también los de sus colaboradores. Una vez seleccionados los usuarios deseados, presione el botón **‘Aplicar filtro’** para actualizar el contenido del panel de eventos.

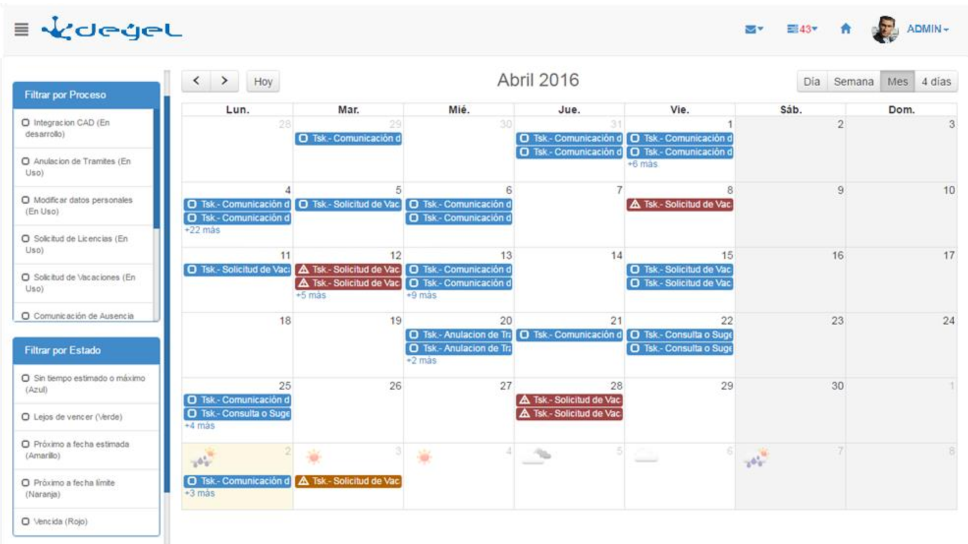


3.4.9.1. Calendar "My Tasks"

Este es uno de los calendarios predefinidos de **Deyel**.
Cada evento de este calendario representa a una tarea del usuario que está en ejecución, con lo cual este calendario es una manera alternativa de visualización de la lista de tareas del usuario.
Los eventos se visualizan con diferentes colores, dependiendo del vencimiento de la tarea que representan. Se utiliza el mismo esquema de semaforización que en la lista de tareas pendientes.



El calendario de "Mis Tareas" ofrece filtrar los eventos por los siguientes criterios:



Filtrar por Proceso - Permite ver las tareas pertenecientes a los procesos seleccionados.
Filtrar por Estado - Permite ver las tareas de acuerdo a los tiempos de ejecución de la tarea. Se considera la definición de tiempos promedios y tiempos máximos de ejecución de la actividad y se clasifica la tarea.

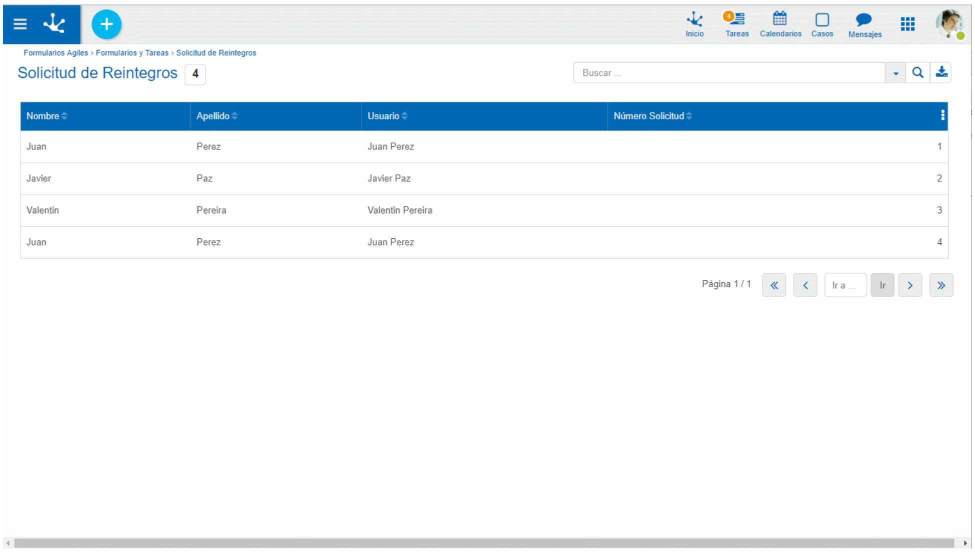
Haciendo clic sobre uno de los eventos se puede acceder a la consulta del caso correspondiente y a la ejecución de la tarea.

3.4.10. Results and Search Grid

La grilla de resultados permite visualizar la lista completa de instancias del formulario, paginando los resultados y permitiendo aplicar filtros de búsqueda para reducir la grilla.

Cada fila representa una instancia de formulario y cada columna representa datos propios de la instancia. Los datos que se visualizan en las columnas son aquellos que fueron ingresados en campos de formularios, modelados con la propiedad Incluido en Grilla marcada.

Las columnas pueden mostrarse u ocultarse para simplificar la lectura de la grilla. Para ocultar una columna basta con presionar el ícono , el cual se visualiza al pasar el mouse sobre la cabecera de la columna. También se pueden ocultar o mostrar columnas utilizando las marcas que se visualizan al presionar el ícono .

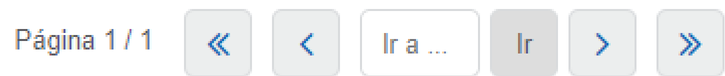


Ordenamiento

El ícono se visualiza en cada columna de la grilla y permite ordenar las líneas en base a dicha columna, de manera ascendente o descendente . El ordenamiento puede realizarse solamente por una única columna.

Paginado

Si la cantidad de líneas supera la cantidad máxima a mostrar en la ventana, se pueden utilizar los botones que se encuentran en la parte inferior derecha de la grilla para moverse hacia la página anterior y siguiente, al inicio o fin, o bien seleccionar una página específica.



Permiten ir al inicio o al final de la lista.

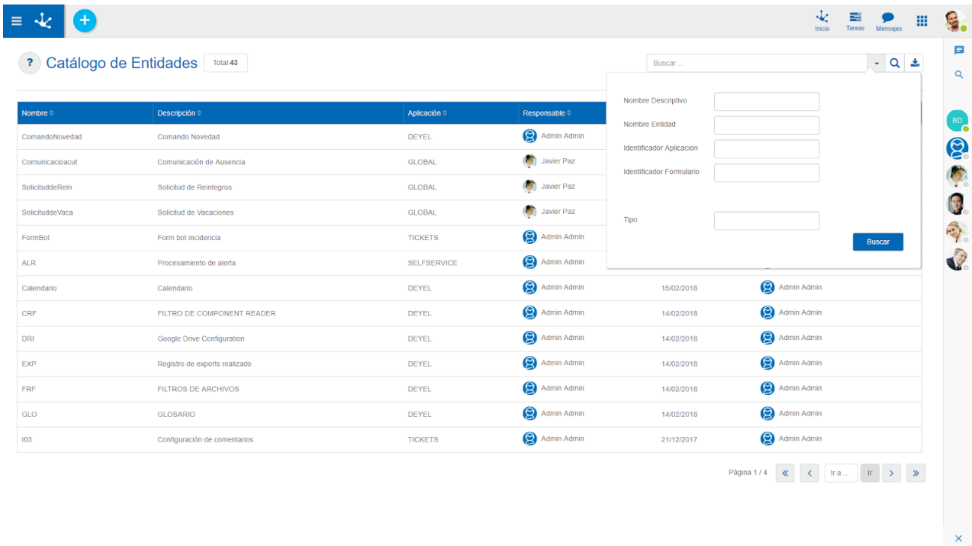
Permiten ir a la página anterior o siguiente.

Ir a ... Permite acceder a la página indicada.

Barra Búsqueda y Filtros

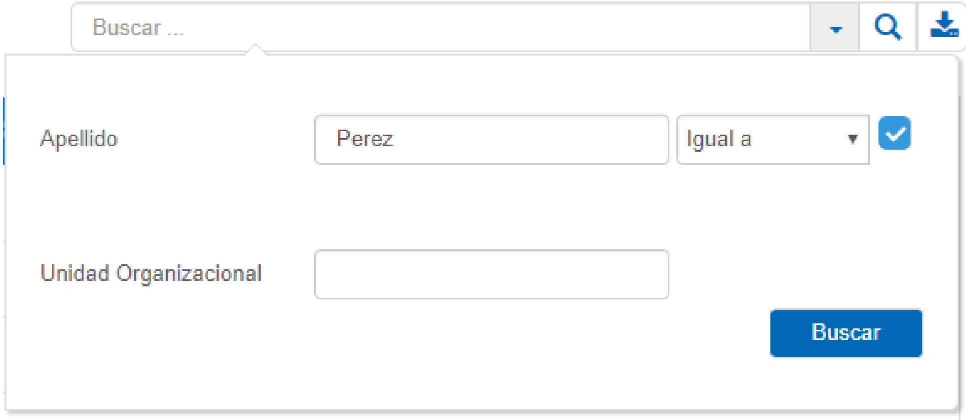
Al ingresar un texto en la barra de búsqueda y presionar el ícono o la tecla "Enter", se filtran en la grilla todos los objetos que contienen el valor ingresado en algunas de sus columnas.

El ícono permite desplegar el panel con filtros que pueden combinarse para definir el criterio de selección de las líneas. Los filtros que se visualizan son aquellos que hayan sido seleccionados como filtros de búsqueda al momento del modelado del formulario. Una vez realizada la selección de filtros se presiona el botón "Buscar" o bien el ícono para reducir la grilla visualizada.



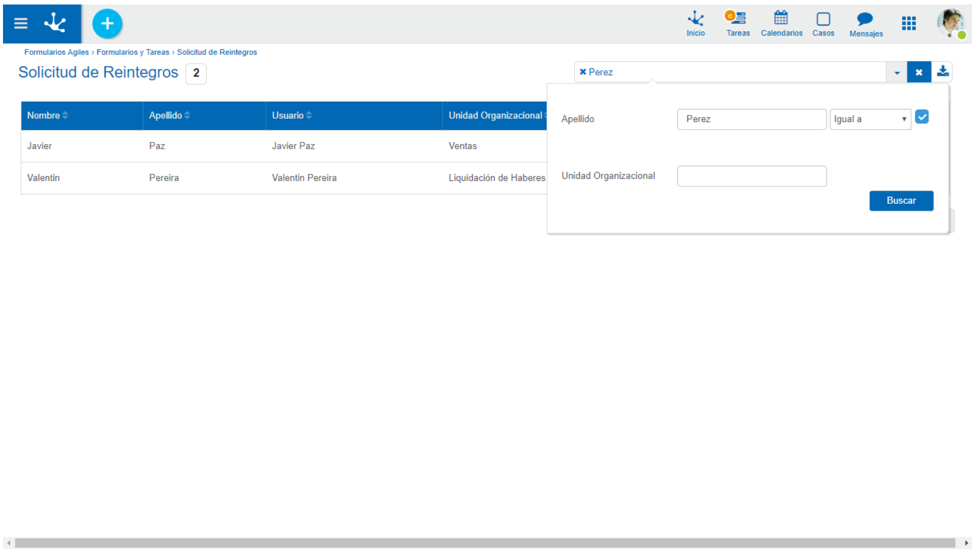
Elementos del Criterio de Selección

- Nombre del campo de filtro
- Valor de búsqueda
- Comparación (Igual, Contiene, Inicia con, Incluido, Mayor, Mayor o igual, Menor, Menor o igual)
- Marca para negar la condición



Ejemplo

Se desean listar las solicitudes de reintegro que no contienen el valor "Perez" en el campo Apellido, mediante el uso de la marca para negar la condición de cada campo.
Presionando el ícono o el botón "Buscar" se obtiene el resultado de la consulta de instancias con el filtro ingresado.



El buscador permite filtrar resultados en base a la negación de una condición, mediante el uso de la marca para negar la condición de cada campo.

Descarga de Datos

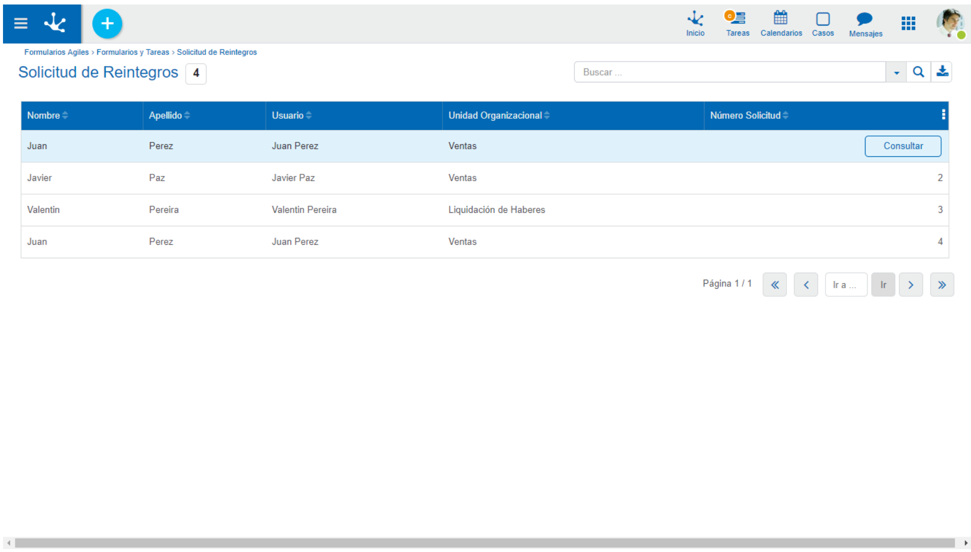
El ícono permite descargar a un archivo Excel los datos de los formularios que se visualizan en la grilla de resultados, ya sea en su totalidad o los que resulten de aplicar un filtro. En caso que el usuario posea permisos de seguridad para realizar la funcionalidad "Exportar", además puede realizar la descarga a un archivo XML, que se comprime con extensión .ZIP.

Operaciones

Al desplazar el mouse sobre cada una de las filas de la grilla de resultados, se visualizan los botones correspondientes a las operaciones que se pueden realizar sobre el formulario, dependiendo de los permisos de seguridad que el usuario tenga definidos.

- Consultar
- Modificar
- Eliminar

La excepción es la operación Crear, que puede realizarse desde el ícono correspondiente al menú contextual.



3.4.11. Form Instances

Phase 2: Forms Modeling > Display form data

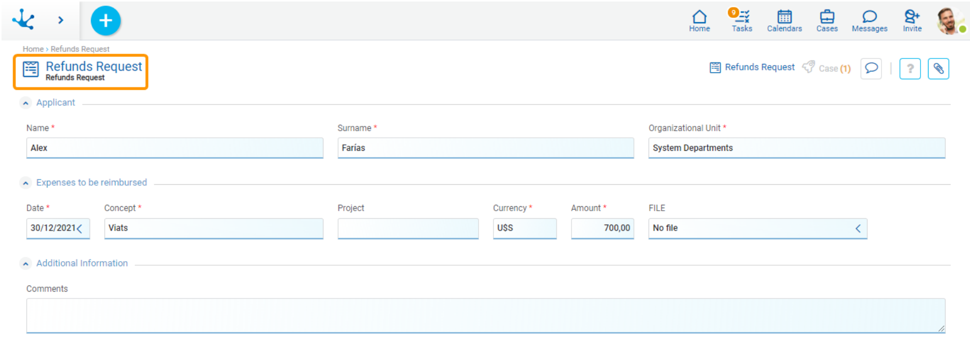
Form instances can be displayed by default or personalized.

The show of a form instance is made up of different sections.

Form Header

The elements displayed in the form header are modeled as general properties of the same.

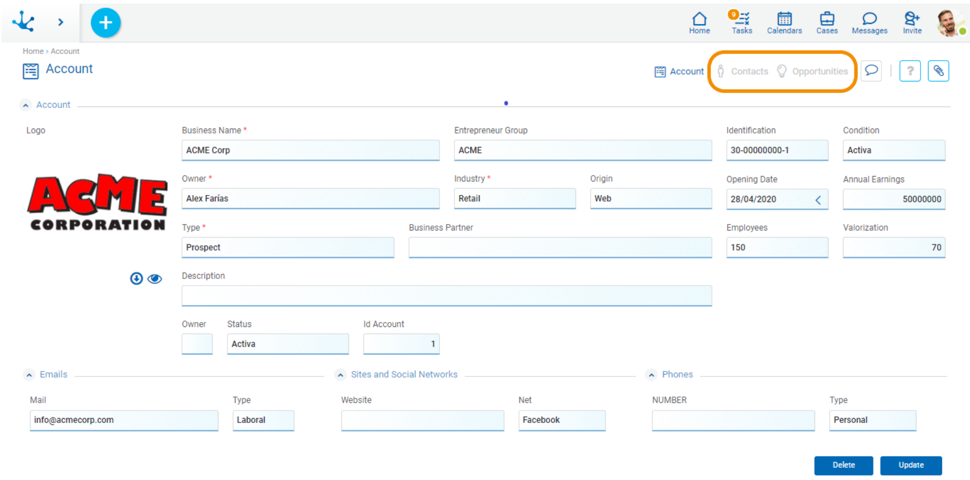
- Descriptive Name
- Icon
- Description



Relations Area

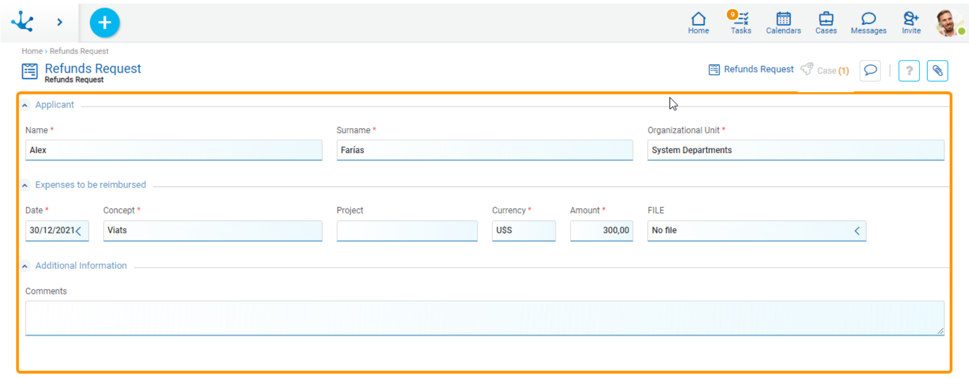
The relations area allows to display the set of entities that refer to the instance being showed.

It allows the user to navigate among related entities. Each relation is represented as a different tab. Selecting a tab opens the related form grid where only the related instances are displayed.



Fields Area

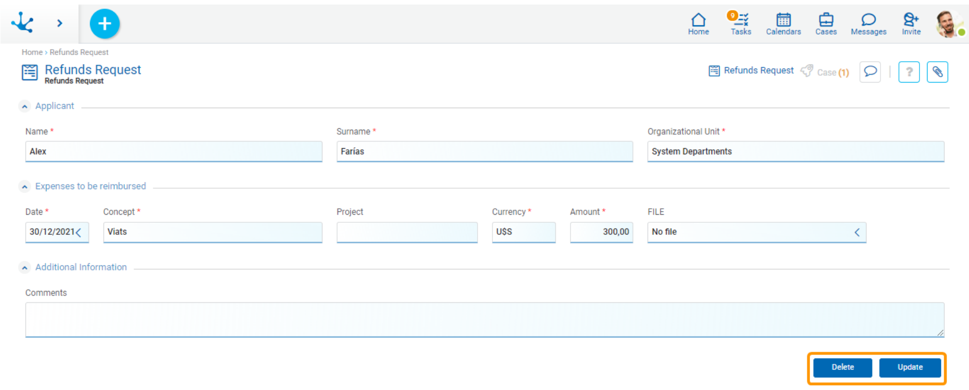
Containers and fields modeled on the form are displayed in the fields area. Their behavior depends on the modeled properties or on the definition of a process activity execution related to the form.



Operation Buttons

This section displays the buttons to perform operations on the form.

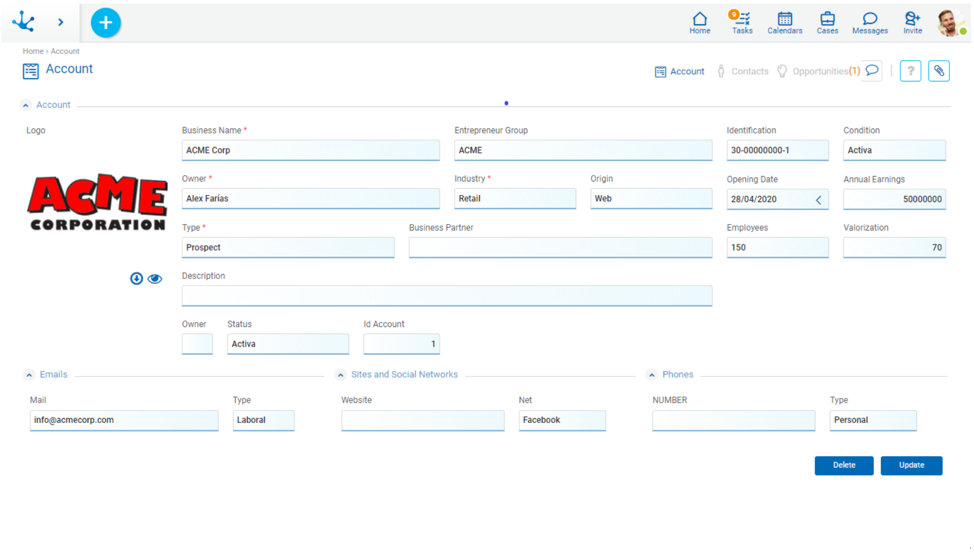
For each operation on the form instance, the buttons that are displayed vary according to the security permissions that the user has defined.



3.4.11.1. Related Entities

When a form is shown, the relations modeled with other entities are displayed in the upper right section, with their names and the number of instances associated with each relation.

If the relation is with a single instance, the modeled singular name is displayed and, pressing this name will show that instance. If the relation is with more than a single instance, the modeled plural noun is displayed and, pressing this name opens the results grid of the related form.



See Relations

This icon is displayed when the number of related entities occupy a space greater than that available in the upper line. When pressed, it shows a panel with the related entities.

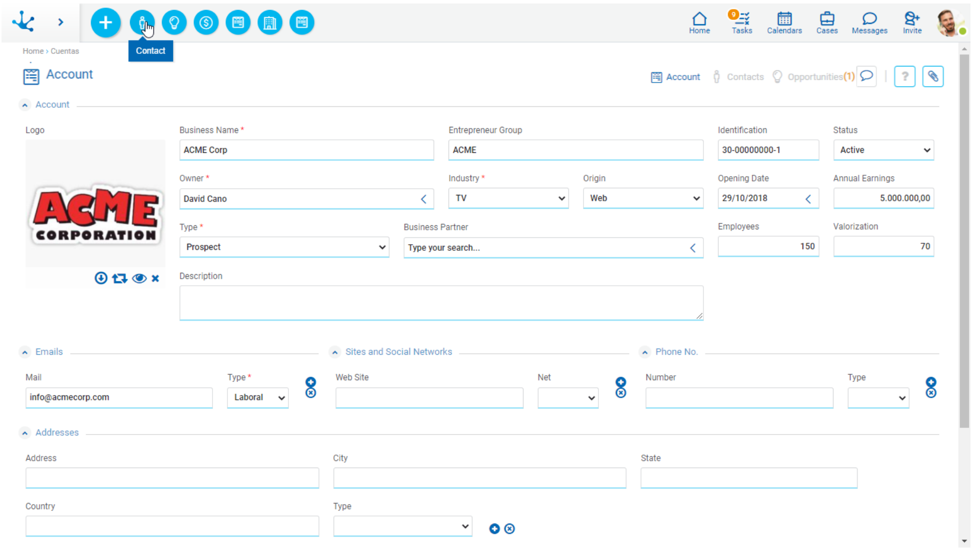
Use of Context Menu in Related Entities

The context menu adopts the general characteristics of the portal but adapted to the related entities.

The default values in the new instance take the content modeled in the value match panel.

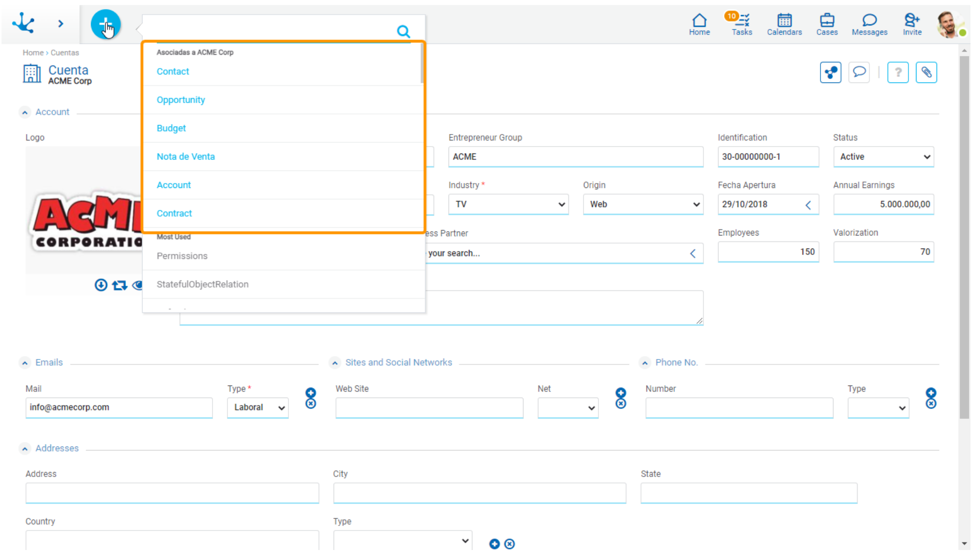
Icons Menu

On the icons menu there are icons corresponding to the related entities to which the user can create a new instance.



Expanded Menu

On the expanded menu panel there are options corresponding to the related entities to which the user can create a new instance.



3.4.11.2. Operations

The buttons for form instances operations are enabled by hovering over each line of the results grid, except for the create operation, which is started from the icon corresponding to the context menu.

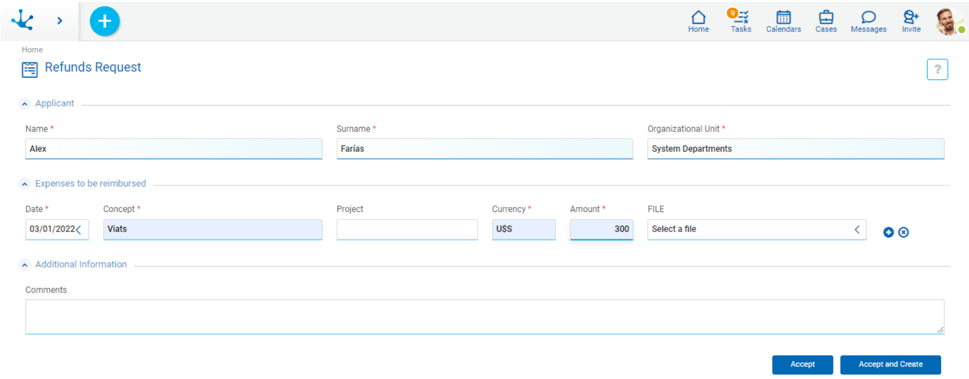
To perform operations on form instances, the form should not have related processes defined in the modeling or otherwise, the Process Variable property should not be selected.

Create

The user can create a new form instance by entering the values in the fields, pressing any of the available buttons they create an instance and the user receives a message indicating that data was saved. . The validations defined for the form and each of its fields are executed.

Buttons

- Accept: confirms the creation of a new form instance.
- Accept and Create: confirms the creation of a form instance and a new panel opens to create another one.

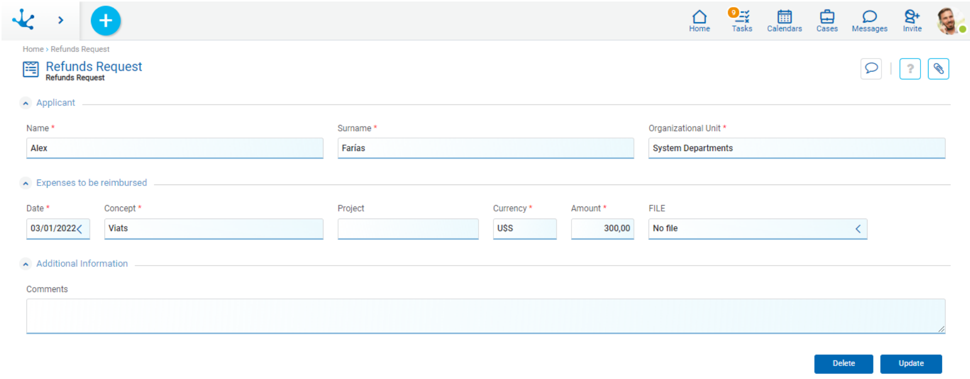


Show

Opens the selected form instance. Fields are displayed as non-editable and depending on the user's security permissions, the buttons available to operate with the instance being shown are enabled.

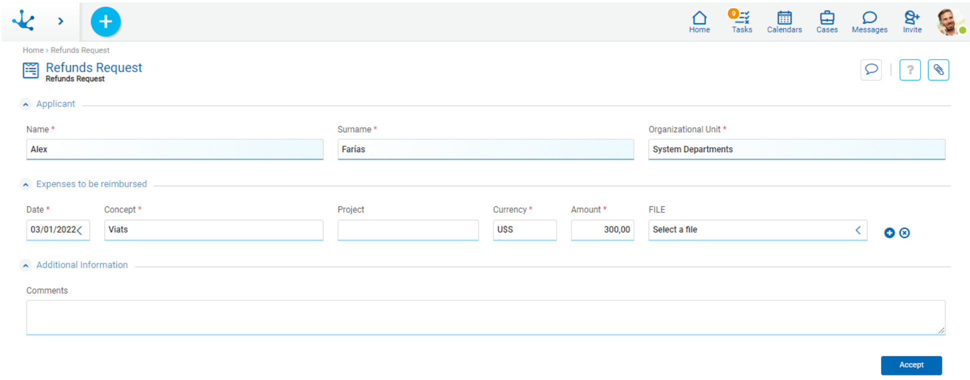
Buttons

- Update
- Delete



Update

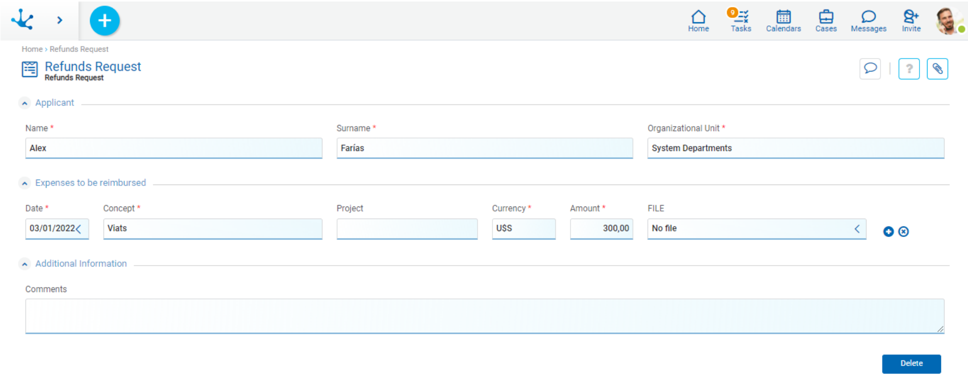
Opens the selected form instance with those fields that can be updated, as editable. To update, press the "Accept" button and the user receives a message indicating that data was saved. The validations defined for the form and each of its fields are executed.



Delete

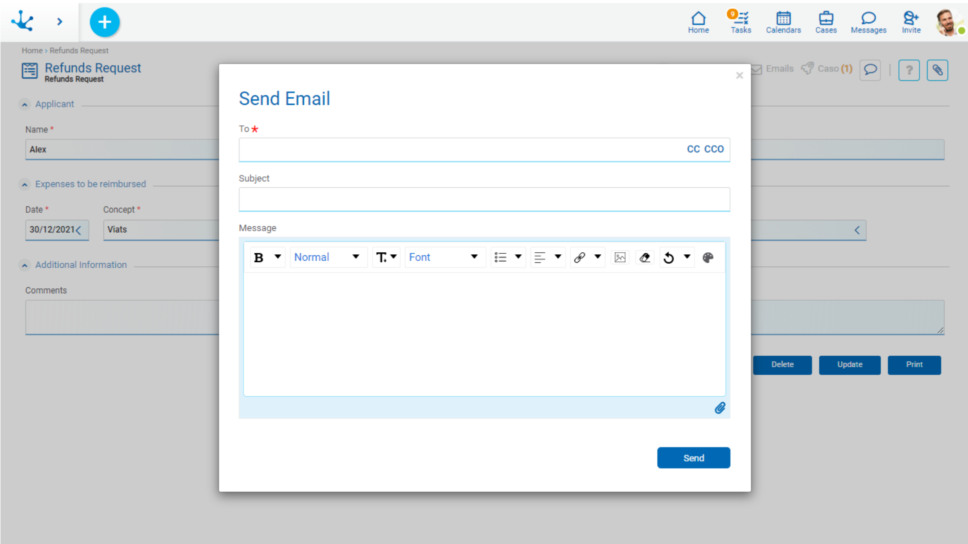
Opens the selected form instance and its fields are displayed as non-editable. To delete, press the "Accept" button and the user receives a message indicating that data was deleted.

> *A form instance cannot be deleted if it is related to a case.*



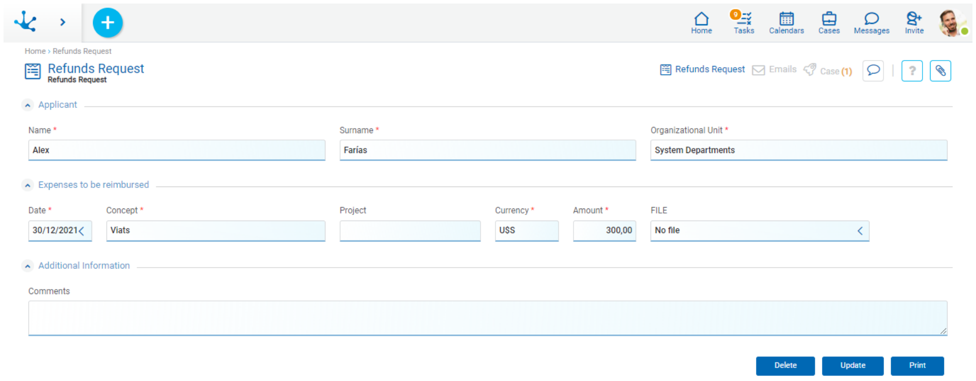
Send Email

If the [Send emails](#) form property was modeled, the icon is displayed by hovering the cursor over the icon corresponding to the [context menu](#),.
Pressing this icon opens a panel that allows to send an email, which is associated with the form instance that is being shown.
Recipients' email addresses are completed with the values from the form text fields that have the email value of the [Content Type](#) property.
The sender email address used is the one entered in the [profile of the user](#) viewing the form.

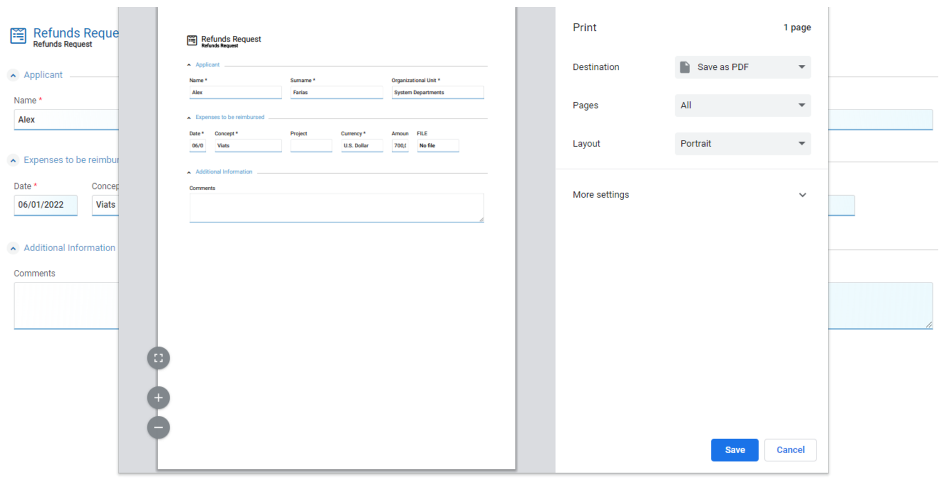


3.4.11.3. Printing

To print a form instance, it has to be modeled with the [Printable](#) property enabled. This displays the "Print" button when a form instance is shown, along with the buttons for other operations.



Pressing the "Print" button gives access to print the form in the browser.



It is recommended to select Horizontal Layout and Scale to 80%.

To extend the default behavior of printing, the modifyPrint() function should be defined in the advanced editing of the form.

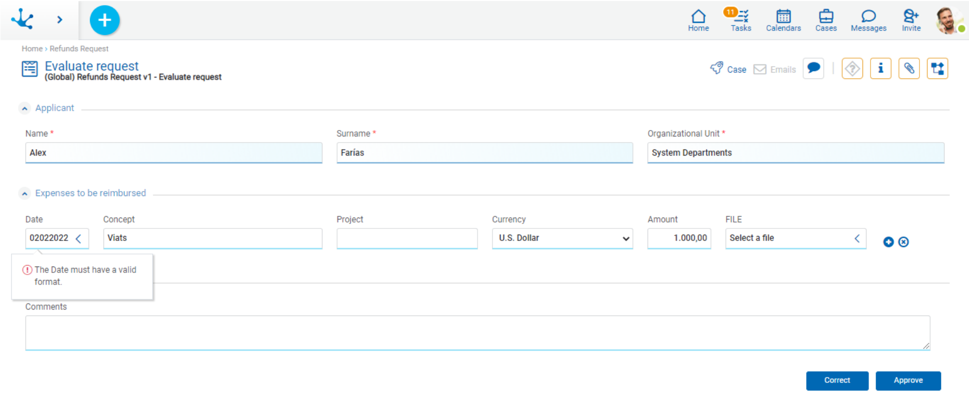
3.4.11.4. Validations

Field validations allow to control data format, fields behavior, and the business logic when using form instances, so that incorrect or invalid data for the business is not entered.

Data Format Validations

This validation is carried out implicitly for all form fields and controls that the format of the data entered by users is correct for each field.

Example
If a date does not verify the MM/DD/YY format, the user receives an alert message.

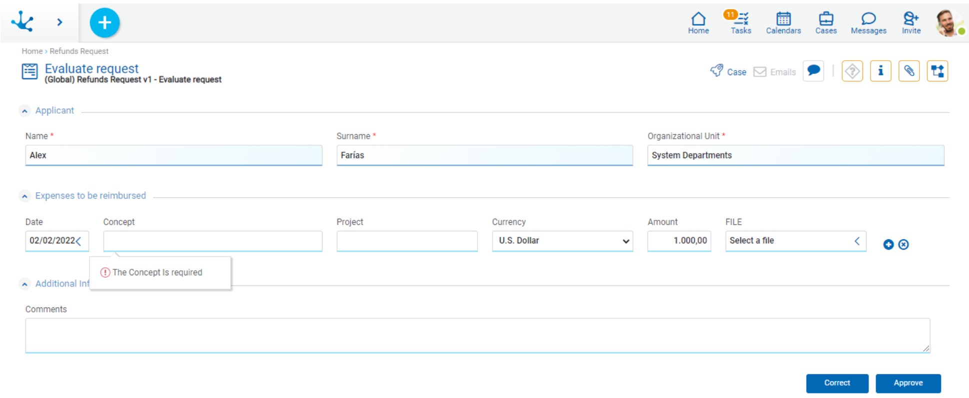


Required Validations

This validation verifies that data is entered in the required fields. In other words, a form instance cannot be created if the [required](#) input fields were not completed.

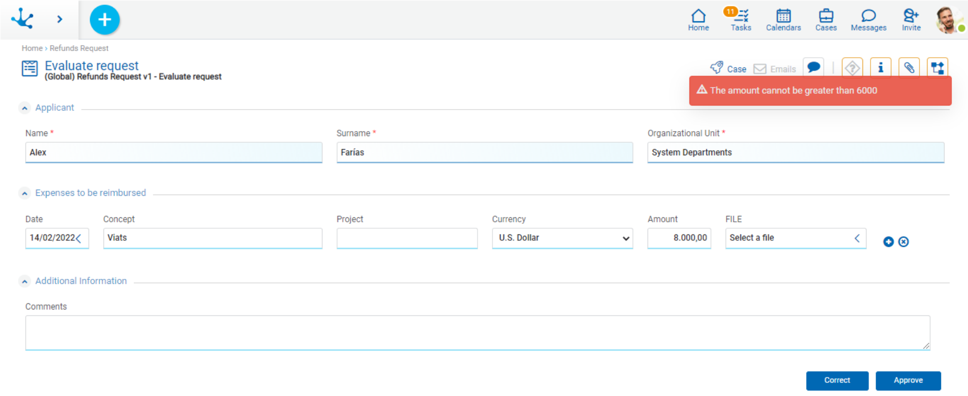
A required field is indicated by a red asterisk to the right of the label.

Example
If the Concept field is not completed, the user receives an alert message.



Logic Validations

Logic validations verify that the entered fields comply with the conditions modeled in the form by means of the field validation or form validation properties.



3.4.12. Forms Elements

A form is made up of a set of fields, containers and graphic elements, which are defined by modeling the form.

When using the form, the fields and containers are displayed according to the properties modeled for each one.

- Fields
- Containers

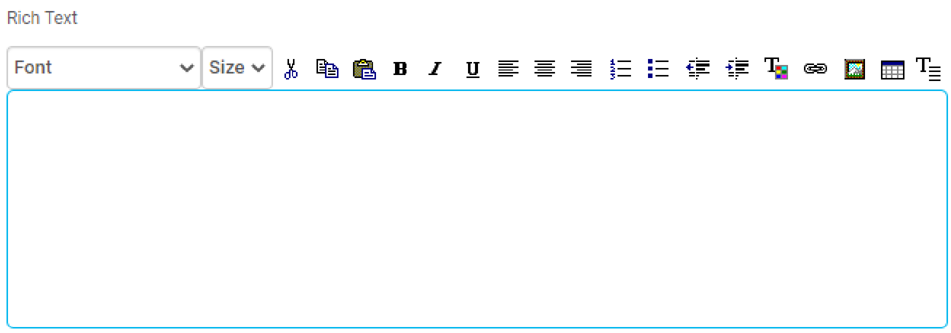
3.4.12.1. Fields

When using the form, the user visualizes the form fields, according to the properties modeled for the different types of fields. Each of them has been included in the form from the controls bar.

Types

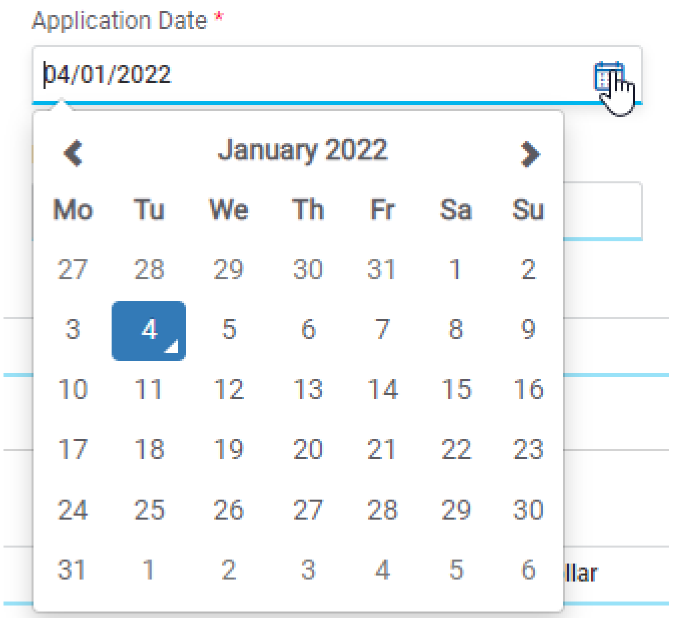
Rich Text

The rich text type control has an area for entering and modifying the text and different styles can be used. The font size, as well as applying underlining, bold and colors, among other options can be changed.



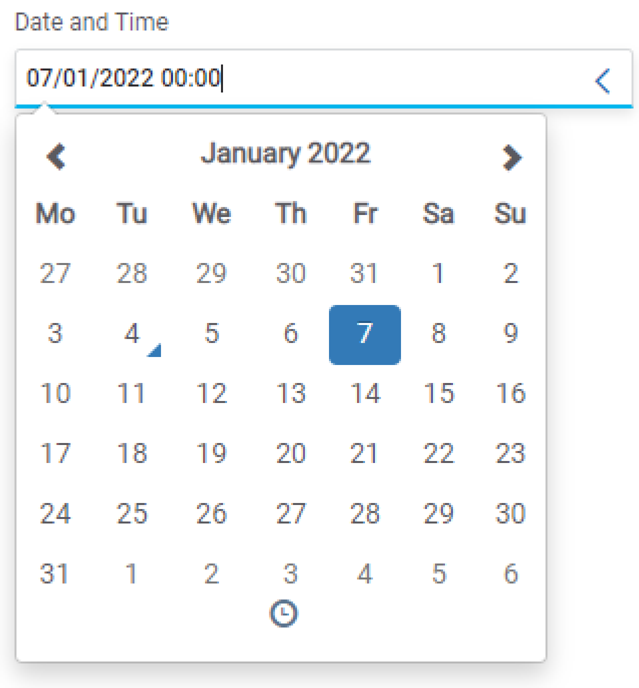
Date Picker

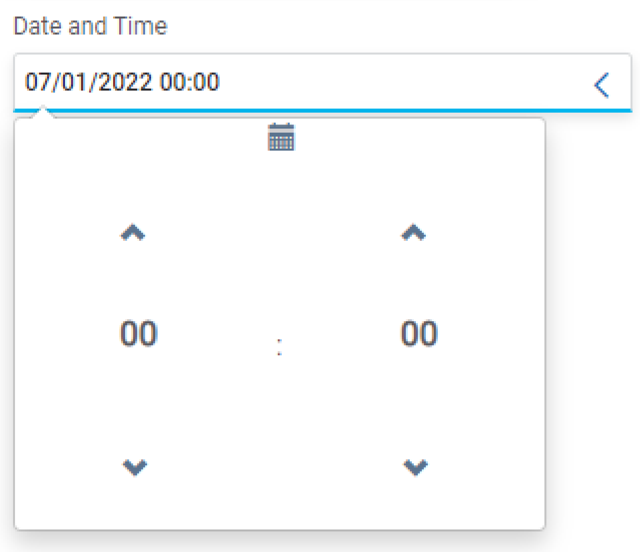
A date picker becomes visible when using a date type control. It allows to select the day, month and year, easily completing the field.



Date and Time Picker

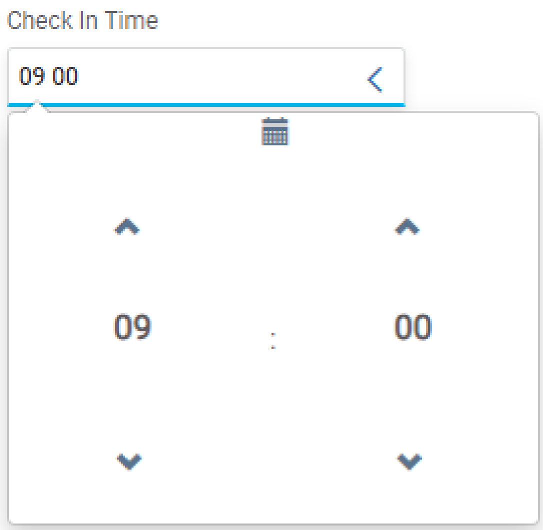
A date and time picker becomes visible when using a date type control. It allows to select the day, month and year, easily completing the field.
Pressing the icon allows to update hours and minutes. To return to date, press the icon .





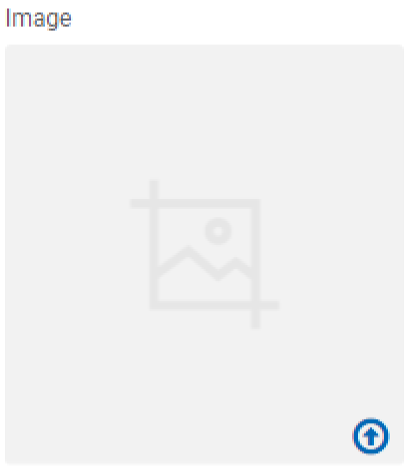
Time Picker

A time picker becomes visible when using a [time type](#) control. It allows to select hours and minutes.



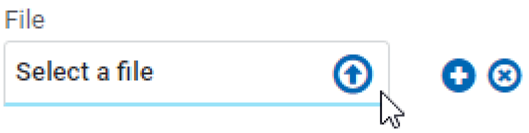
Image

To enter an image into an image type control, use a picker that is in the lower right part of the image field. Pressing this picker opens a panel for selecting a file from the user's computer.



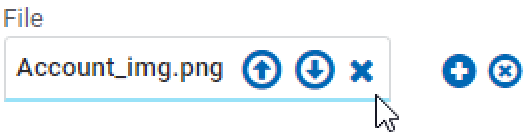
File

A file type control allows a file to be incorporated into the form from the user's computer or stored in Google Drive. If more than one file is to be incorporated, multiple occurrences should be modeled.



Open the window to select one or more files.
Generate a new occurrence to attach files.
Delete a file occurrence.

Once a file has been entered, operations on it can be performed.



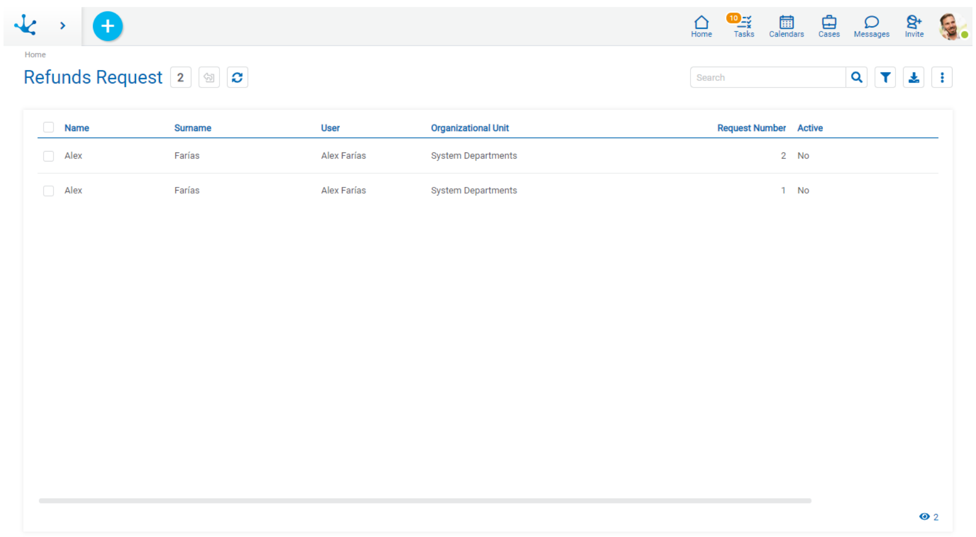
Replace the file by another one.
Download the file to your local computer.
Delete the file from the form instance.

Check

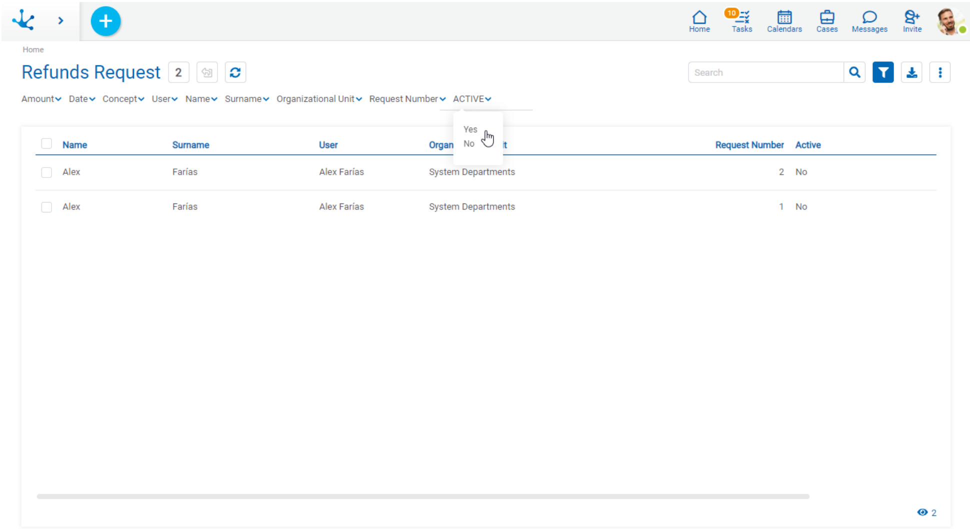
A check control represents logic information, being able to take "YES/NO" values. When the control is selected, the field takes a true value and its content is “YES”, otherwise it takes a false value and its content is “NO”.

It can be displayed in toggle format if the Display field property was modeled.

If the field is included in the results grid, its content is represented with “YES/NO” values in the corresponding column.

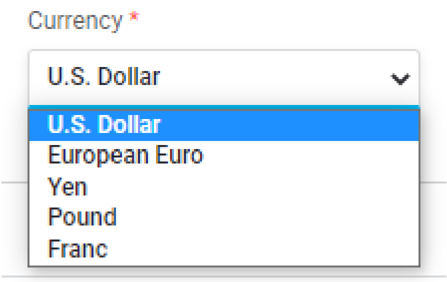


If it is used as a search filter, “YES/NO” values can be used.



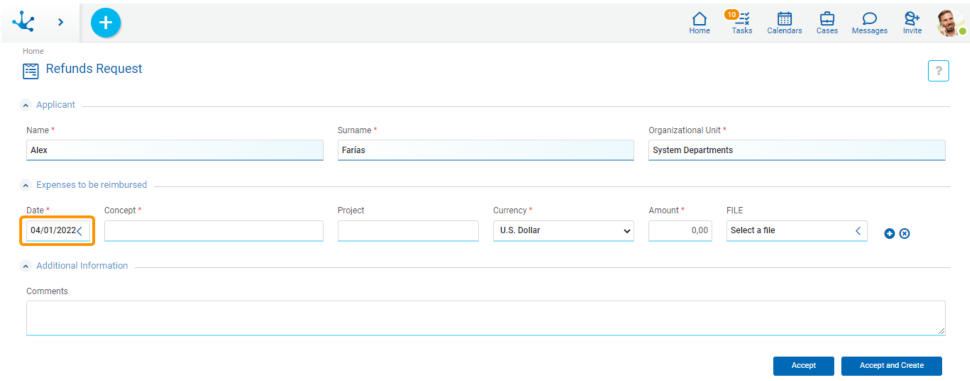
Value List

The fields represented by this control propose the value list defined when modeling the field,



3.4.12.1.1. Predetermined Values

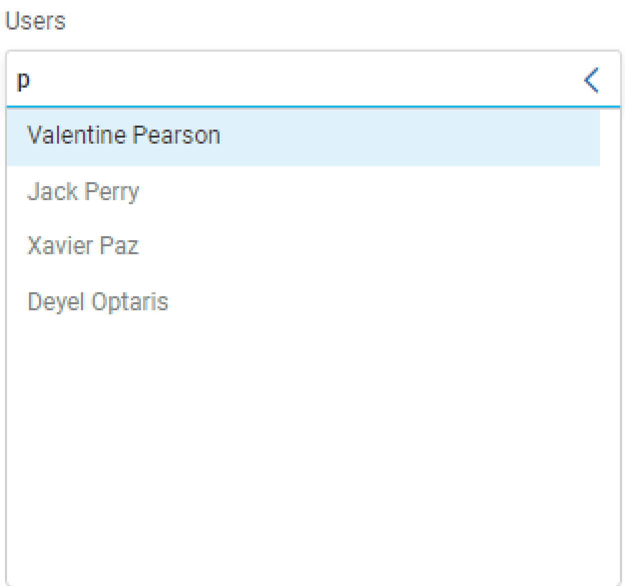
When modeling a form, predetermined values can be defined for their fields. When creating a new form instance, these fields are displayed automatically filled in with such value.



3.4.12.1.2. Autocomplete Fields

The fields modeled as autocomplete supplies a set of values that coincide with what the user starts to type in the field. In this way, the supplied values vary based on matches with earlier typed values

Example
When entering the letter "p" in the field, only users that contain that letter in some position can be selected.

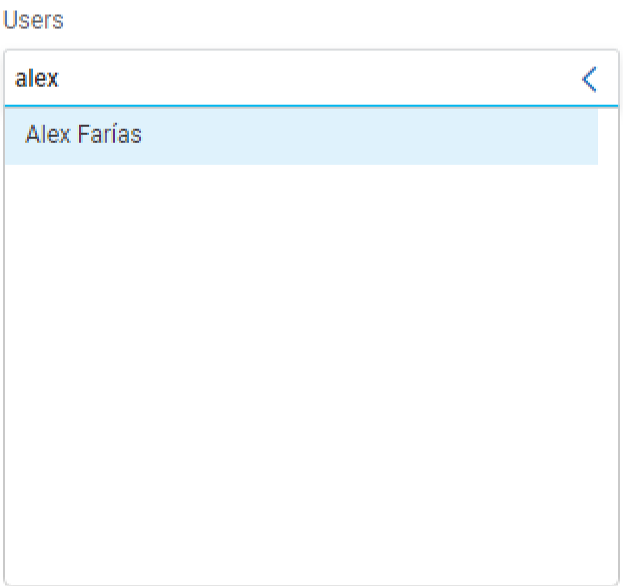


3.4.12.1.3. Related Fields

When modeling a form, the fields with relations to entities, value lists and rules can be defined.

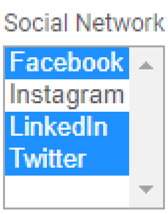
Single Selection

The values obtained from a modeled relation are displayed as a scrolled list, where the user can select one of them.



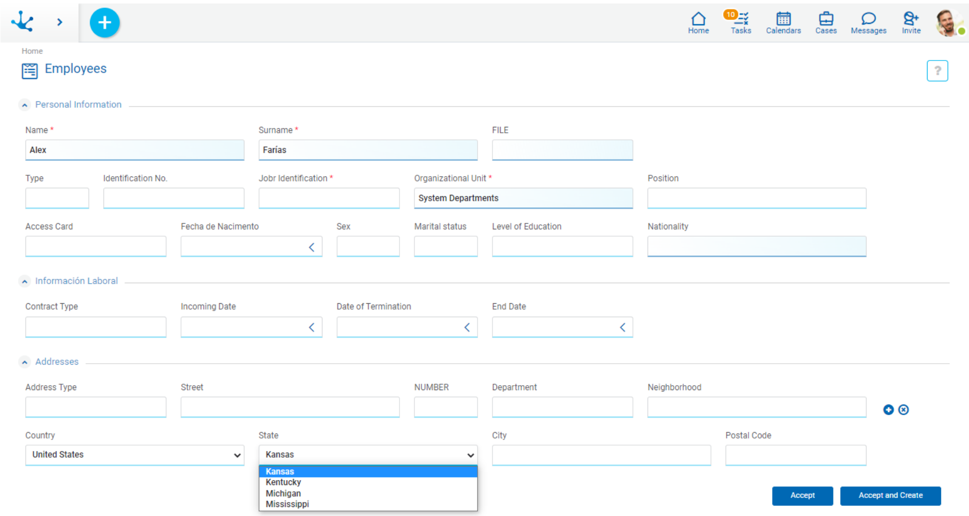
Multiple Selection

The fields modeled with a relation to a rule can be defined as multiple selection, using the Multiple property. Modeling this property allows to select more than one value from a scrolled list, holding down the 'CTRL' key while the items are being selected.



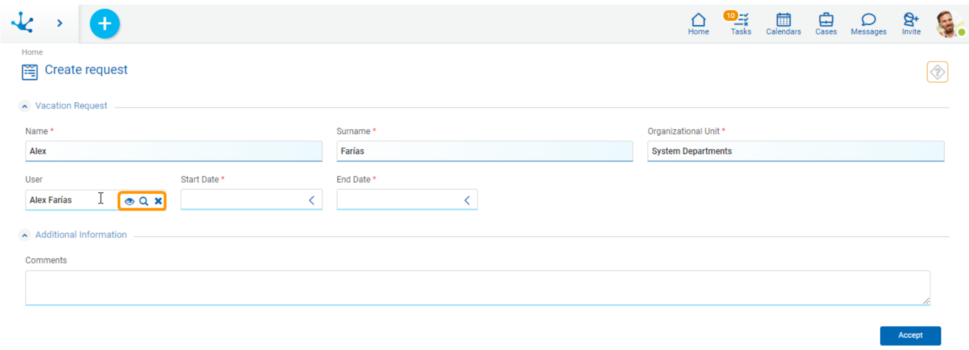
Filter Selection

A field filtered by a value selected in another form field allows the value list of related fields to become variable, depending on the value initially selected.



Relation with Entities

When using the form, in the fields modeled with [relation to an entity](), an indicator is displayed on the field that enables a set of icons to perform different actions.



Clear Field

It allows to delete the value entered in the field.

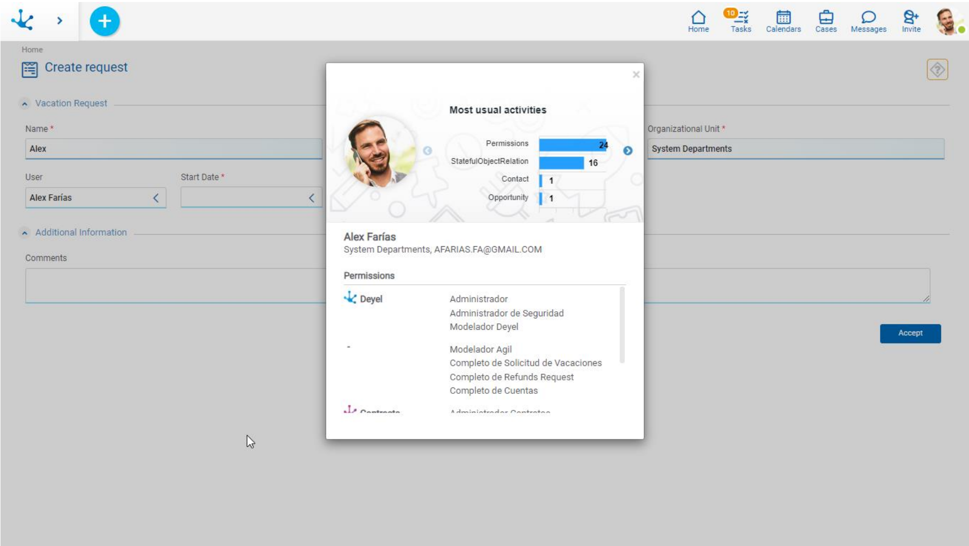
Select

It allows to search and select instances of entities to which the field is related. Pressing this icon opens a new window with the results grid of the related entity.

Show

It allows to see the data of the entity related to the field, opening a new window with the corresponding related entity instance.

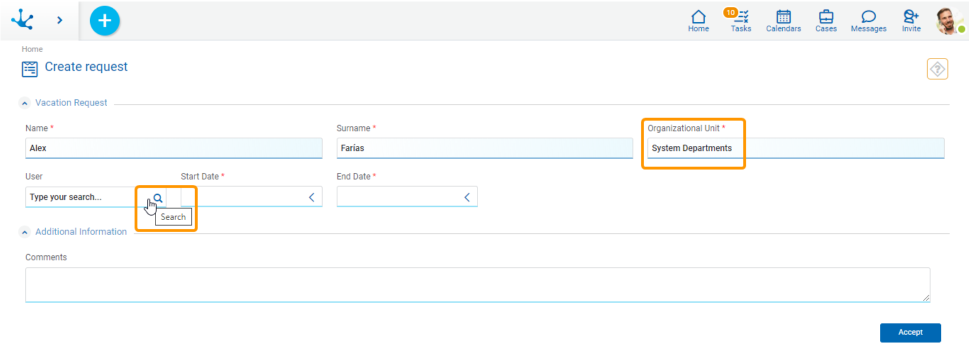
Example
If the related entity is the user, a window with the information of the user informed in the field is opened.



Filtered Entities

When filtered entities are modeled in forms, the values displayed from the magnifier in the show depend on the filter that has been modeled.

Example
The values available for the user field are filtered by sales, the previously selected organizational unit



3.4.12.1.4. Attached Files

Files from different sources can be used when using the form. To [attach more than one file](#) the field should be modeled within a multi-occurrence container.

Attach Files from User's Computer

.

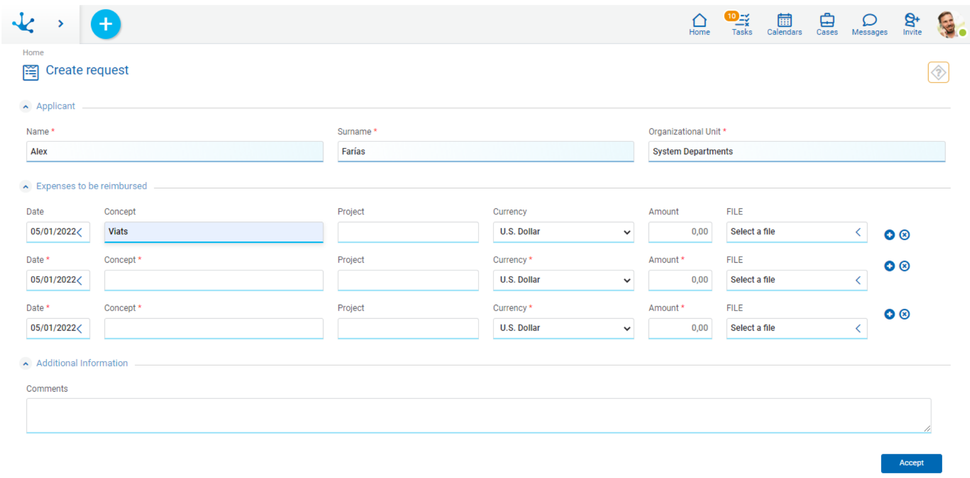
It allows to open a window where files can be selected from the user's computer, or by using the "Drag and drop" facility if it is necessary to attach multiple files.

Attach Files from Google Drive

It allows to open a window where you can select a Google account of the user and then the file or files to attach.

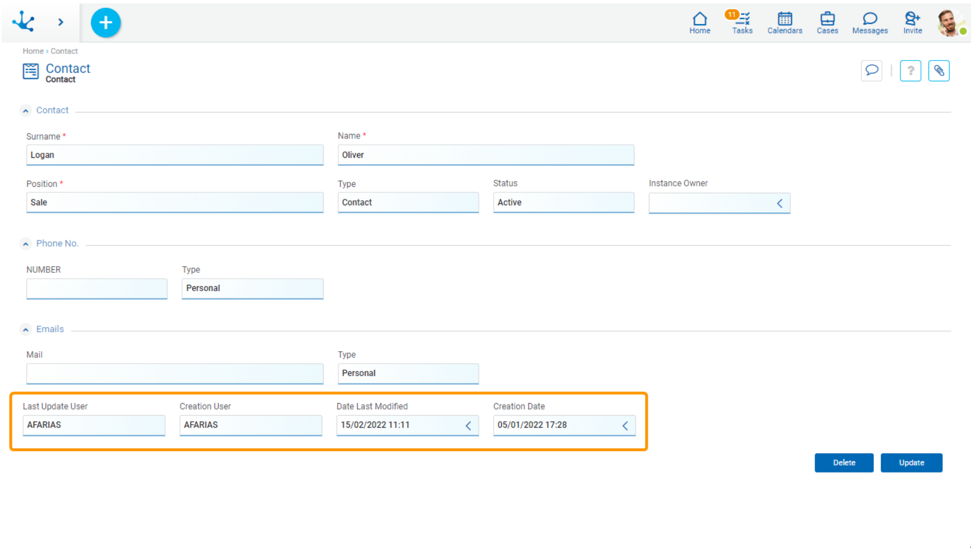
The user should have the access permissions for the information stored in this service. The administration of Google Drive permissions is external to **Deyel**. If the user is not logged in, a window opens to enter the Google Drive username and password.

When the user connects from **Deyel** to Google Drive for the first time, an additional window opens to authorize **Deyel** to securely access their data. The "Advanced configurations" option should be selected to allow access.

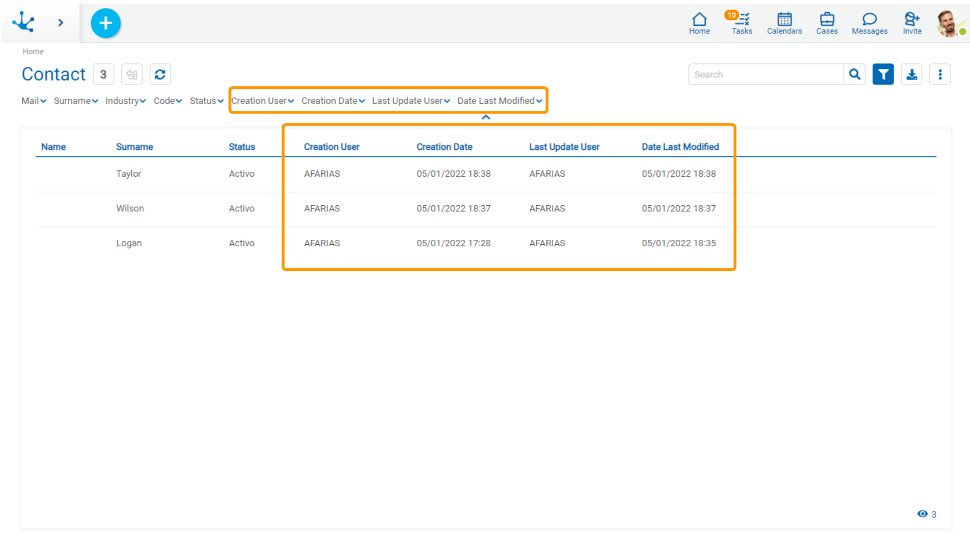


3.4.12.1.5. Audit Fields

A form may have some or all of its audit fields visible, or not, but they cannot be edited by the user since they are completed automatically.



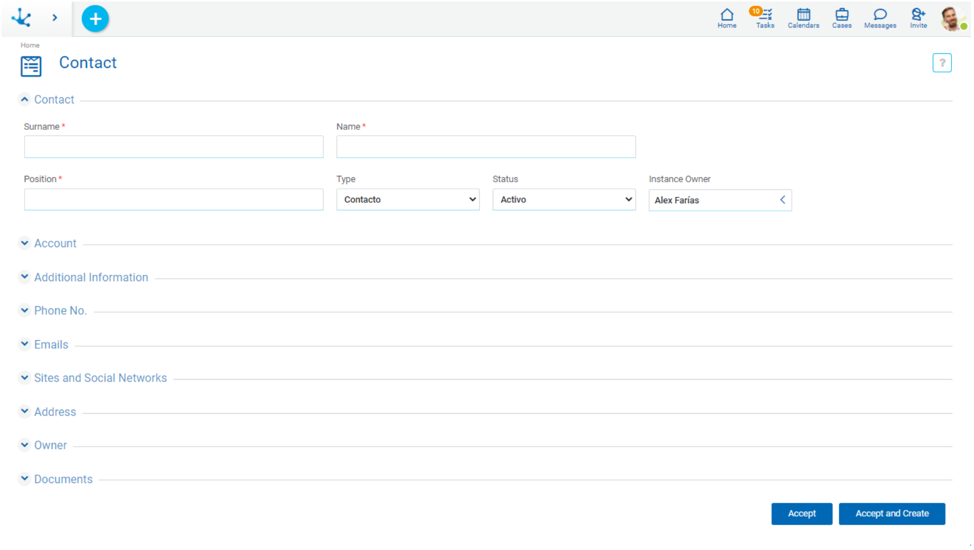
Audit fields can be present in the results grid and be part of the search filters regardless of whether they are visible in the form.



3.4.12.1.6. Instance Owner Field

An instance owner field can be modeled related to the entity "User" and it is displayed like any field related to an entity of the form

If it is related to a rule, the relation control is not displayed, instead, the set of values returned by the associated rule is displayed.



3.4.12.2. Containers

[Containers](#) group a set of elements within a form instance. When modeling the form, different types of containers can be defined, each with its display characteristics.

- Single Container

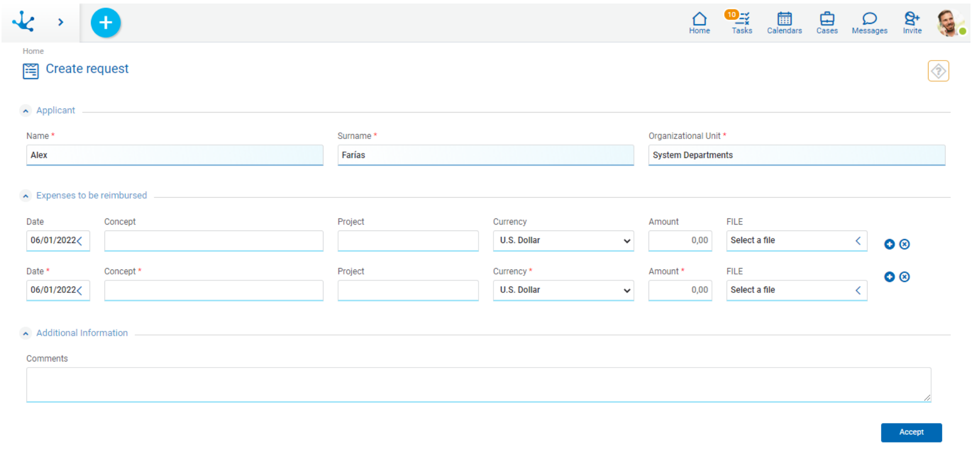
It allows grouping elements and modeling the visibility of form sections, according to business rules.

- Graphic Container

It also allows grouping elements and modeling the visibility of form sections, according to business rules. When executing the form, graphic containers can be seen expanded or collapsed, this behavior can be modeled in the form or in the process activities that use it.

- Multiple Occurrences Container

It allows generating multiple occurrences of the fields that are within it. It can be modeled as visible or not visible according to business rules.



3.5. Agile Forms

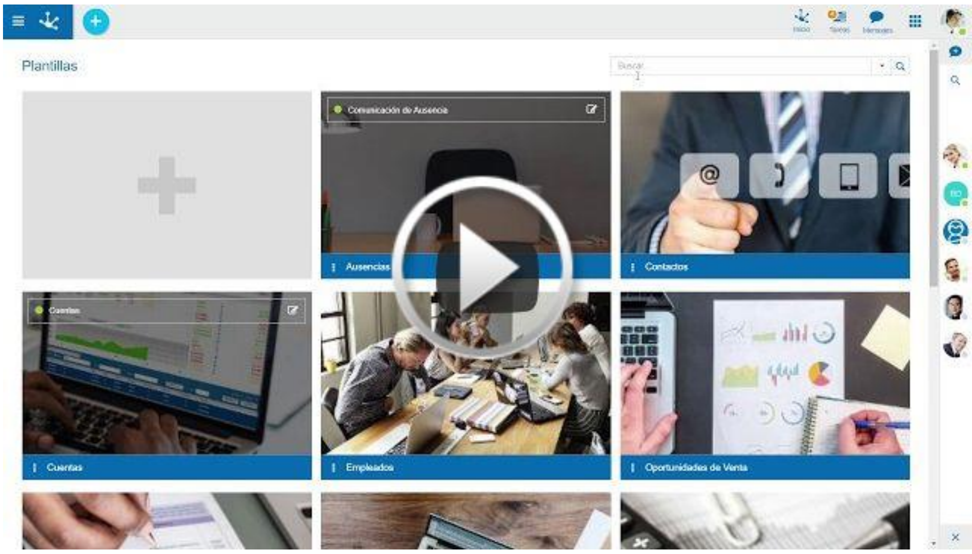
[Fase 1: Introducción a Deyel > Modelador Agil - Introducción]

Formularios Agiles es una plataforma para crear y mantener aplicaciones basadas en formularios y procesos de negocio, de forma inmediata.

Los usuarios de negocio de una empresa pueden definir sus formularios web a partir de plantillas de una galería existente o realizando su diseño completo, adecuarlos a las necesidades del negocio, agregarles un proceso, así como también definir los permisos de acceso y su visibilidad, finalmente se publican para su uso.

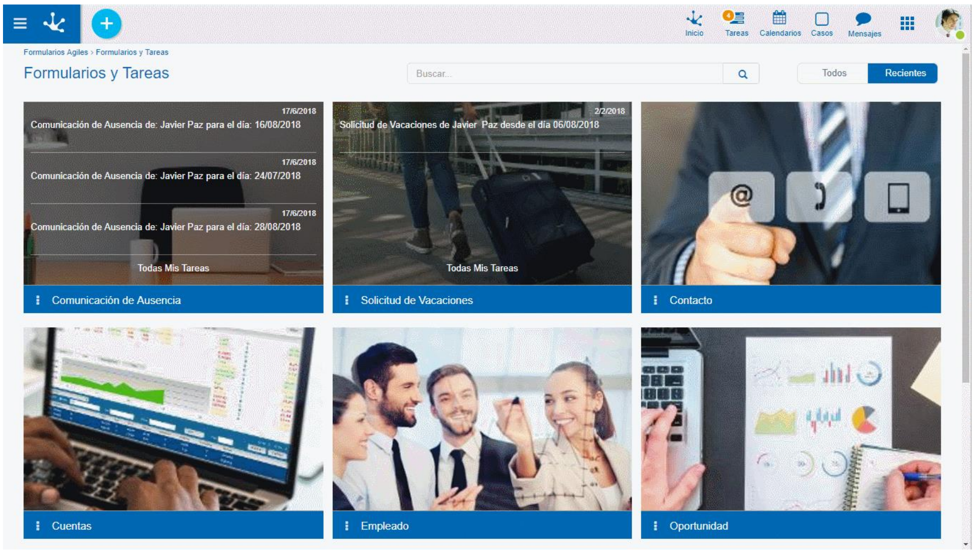
De esta forma se pueden automatizar y optimizar fácilmente una gran cantidad de procesos de negocio que actualmente están basados en documentos en papel y tareas manuales. Ejemplos de este tipo de aplicaciones van desde la autorización de facturas y comprobantes de gastos hasta solicitudes de diversos tipos, formularios de consultas, encuestas y registros, entre otros.

La utilización del formulario permite a los usuarios que participan del proceso, completar información, aprobar o rechazar desde su lista de tareas o usar la red social empresarial para comentar acerca de cada instancia.



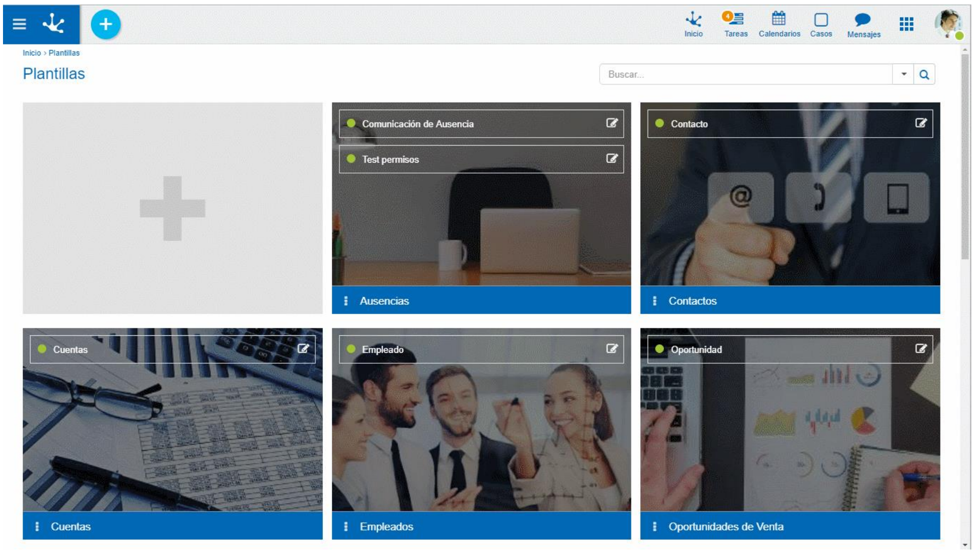
Formularios y Tareas

Los usuarios de negocio que participan del proceso pueden iniciar diferentes formularios y tareas que fueron previamente definidos como formulario o como proceso.



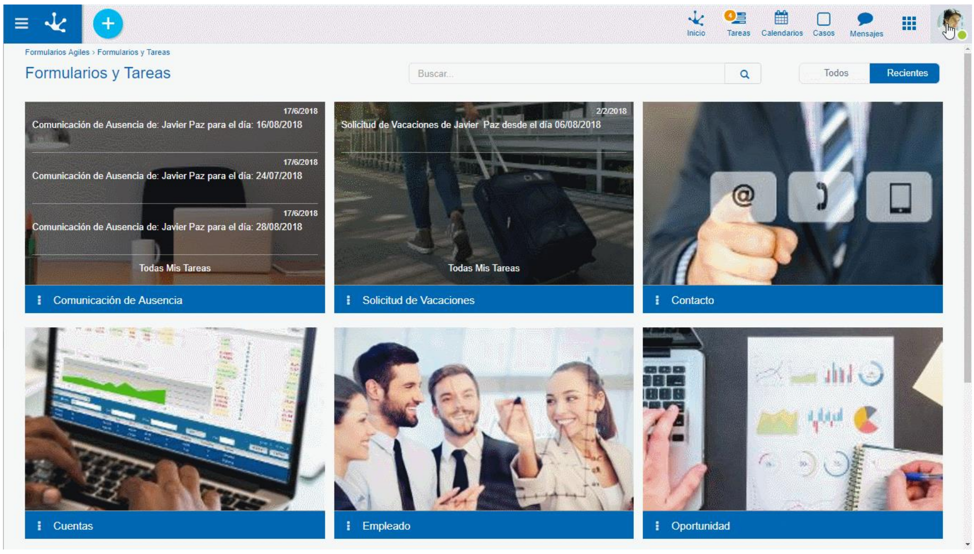
Plantillas

Los usuarios de negocio pueden definir sus propias plantillas o sus formularios, éstos últimos a partir de un diseño preexistente o en forma completa.



Configuración

Los usuarios administradores pueden realizar la [configuración](#) de usuarios, permisos, roles y unidades organizacionales.



3.5.1. Conociendo Formularios Agiles

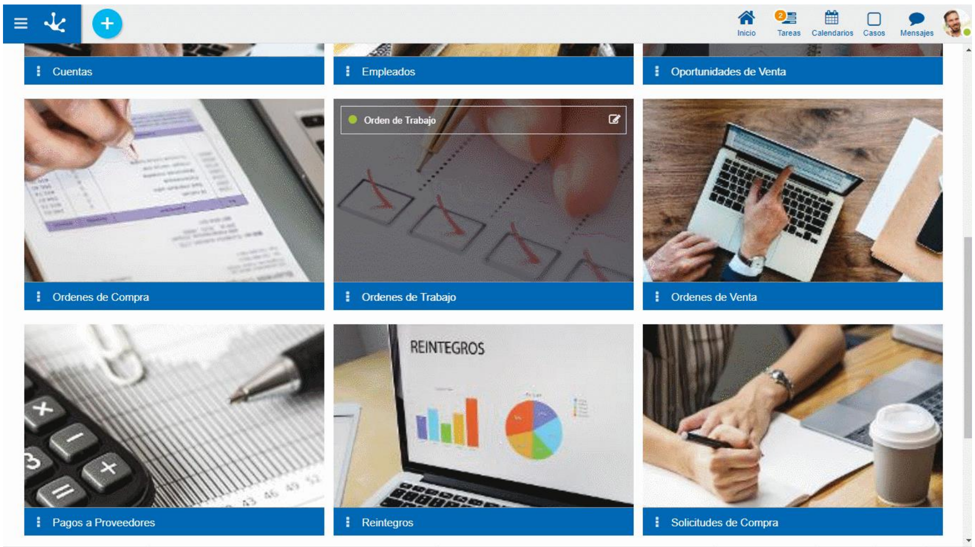
[Fase 1: Introducción > Modelador Agil - Parte 1](#)

[Fase 1: Introducción > Modelador Agil - Parte 2](#)

Se describen a continuación los pasos para crear rápidamente aplicaciones ágiles.

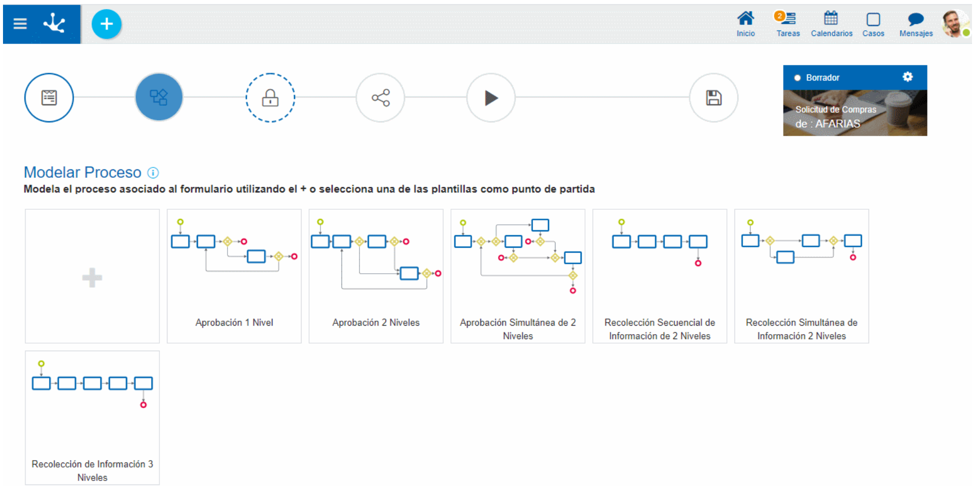
Paso 1

Seleccionar una de las plantillas existentes en la galería para crear un formulario, la cual contiene un conjunto de campos y secciones predefinidos. El formulario puede adecuarse a la necesidad del usuario, modificando sus elementos gráficos, incorporando relaciones y reglas de negocio.



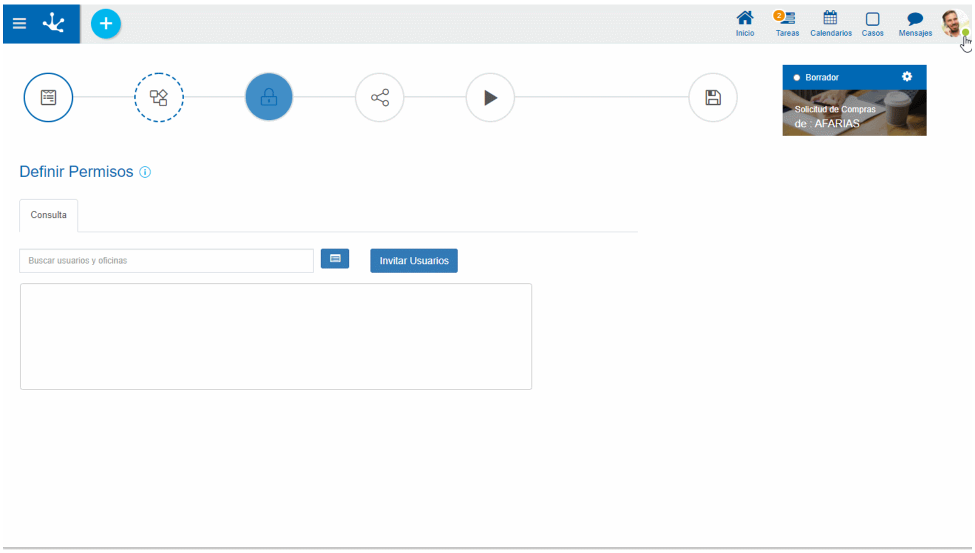
Paso 2

Asociar un proceso al formulario, vinculándolo con uno de los procesos predefinidos, donde se pueden definir participantes y crear condiciones que permitan determinar el flujo de los datos y la visibilidad de los mismos.



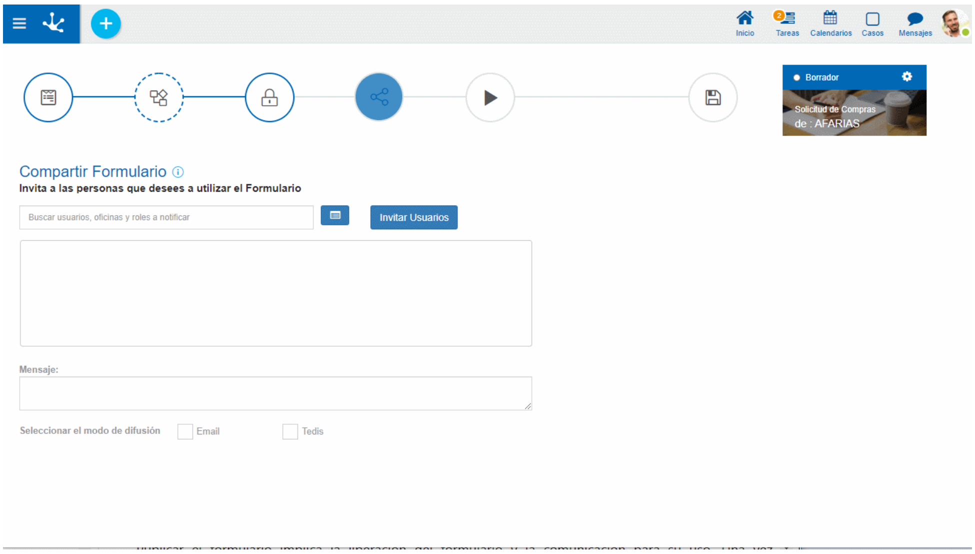
Paso 3

Permitir la utilización del formulario a los usuarios o grupos dentro de la organización para consulta, modificación y anulación, o bien invitar usuarios externos.



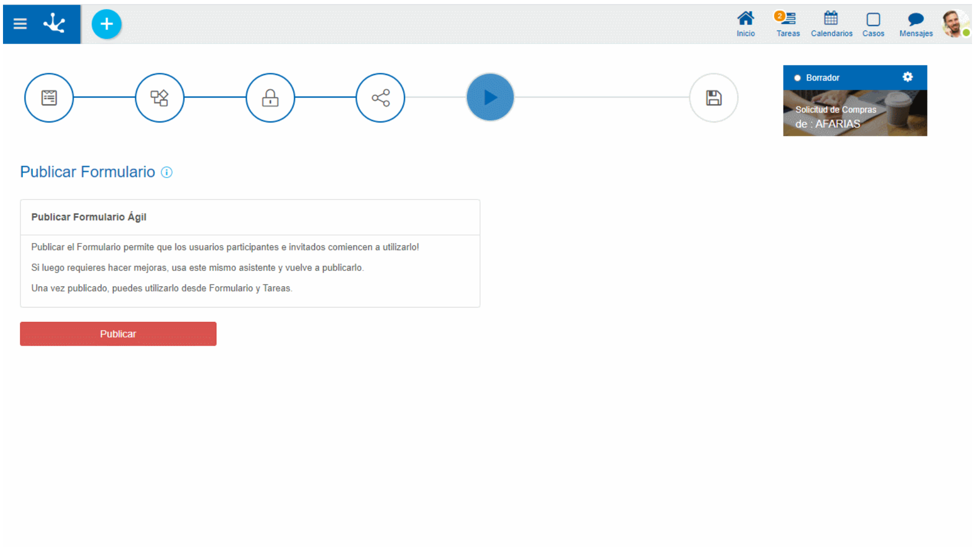
Paso 4

Compartir el formulario difundiendo la funcionalidad del mismo a través de email o de la red social empresarial.



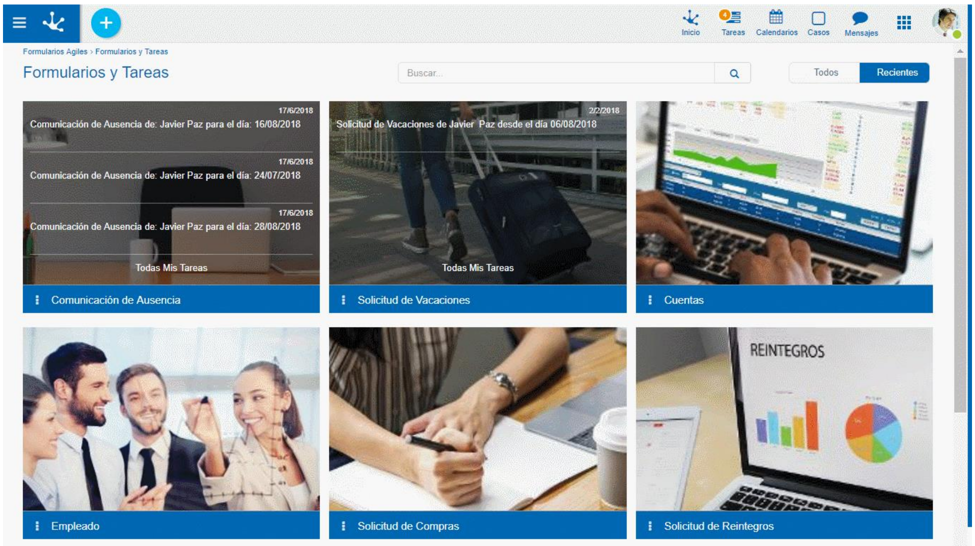
Paso 5

Publicar el formulario implica la liberación del formulario y la comunicación para su uso. Una vez publicado, el formulario puede ser utilizado por los usuarios participantes de acuerdo a los permisos otorgados tanto a nivel del formulario como del proceso si tuviera uno asociado.



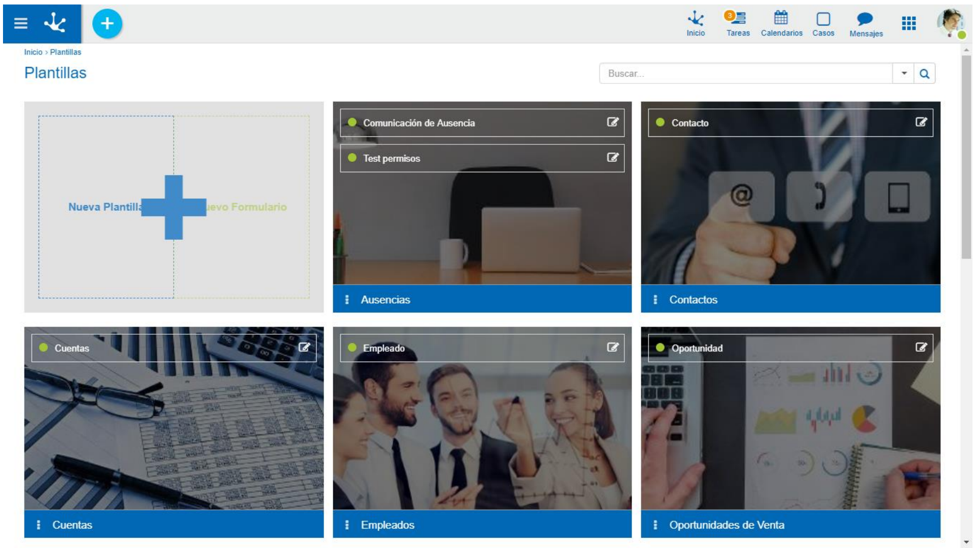
Ejecución de Aplicaciones Agiles

Una vez publicado, el formulario puede ser utilizado por los usuarios participantes de acuerdo a los permisos otorgados tanto a nivel del formulario como del proceso, si tuviera uno asociado.



3.5.2. Plantillas

Para comenzar a utilizar la galería de plantillas se debe abrir el menú de la izquierda, seleccionar la opción “Formularios Agiles”.



El primer elemento permite iniciar diseños nuevos, mientras que los siguientes corresponden a plantillas y formularios previamente definidos. Los elementos identificados con una barra color azul corresponden a plantillas, mientras que las identificados con una barra verde corresponden a formularios sin plantilla.

Cada elemento de la galería permite realizar diferentes acciones dependiendo de lo que representa, se describen a continuación las diferentes posibilidades.

Nueva Plantilla

Desde el signo  del primer elemento, se puede crear una plantilla a partir de un diseño propio, que luego será utilizada para definir formularios ágiles basados en la misma.

Nuevo Formulario

Desde el signo  del primer elemento, también se puede crear un formularios ágil a partir de un diseño propio, es decir sin utilizar una plantilla preexistente. Dicho diseño se realiza mediante el modelado de formularios de **Deyel**.

Plantilla

Desde un elemento identificado con una barra azul se puede crear un formulario basado en una plantilla preexistente.

Secciones del Elemento

Líneas de Formularios

Si la plantilla tiene formularios ágiles definidos basados en ella, los mismos se visualizan en diferentes líneas dentro de cada elemento. Cada formulario se identifica con la propiedad Nombre Descriptivo definida en las propiedades del formulario, en el momento de su creación.

En cada linea pueden visualizarse los siguientes íconos:

- Permite editar el formulario ágil.
- Este ícono solamente se visualiza si el formulario no se encuentra publicado y permite eliminar el formulario ágil.
- Identificador de Estado: El estado del formulario indica la etapa de desarrollo en la que se encuentra el mismo y se identifica por un color.
- Si una plantilla tiene definido una cantidad de formularios mayor a la que puede visualizarse dentro de un elemento, se puede avanzar y retroceder en la lista hacia derecha e izquierda mediante el uso de este ícono.

Menú

Permite visualizar las acciones disponibles para la plantilla.

- Nuevo: Permite crear un nuevo formulario ágil basado en la plantilla.
- Editar: Permite modificar la plantilla utilizando las facilidades de modelado.
- Eliminar: La plantilla puede eliminarse solamente si fueron eliminados todos los formularios basados en la misma, esto se hace desde el cuadro de identificación de cada uno.

Formulario

Desde un elemento identificado con una barra verde se puede editar un formulario creado a partir de un diseño propio, es decir que no está basado en una plantilla.

Secciones del Elemento

Identificador de Estado

El estado del formulario indica la etapa de desarrollo en la que se encuentra el mismo y se identifica por un color.

Menú

Permite visualizar las acciones disponibles para el formulario.

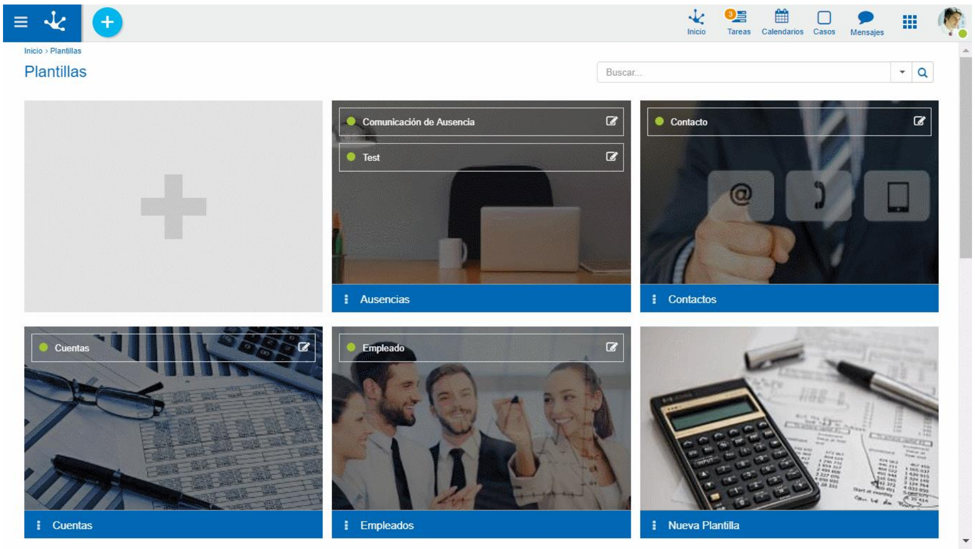
- Editar: Permite modificar el formulario utilizando las facilidades de modelado
- Eliminar: El formulario puede eliminarse solamente si fue eliminada su publicación, esto se hace desde el cuadro de identificación.

Filtros de Búsqueda

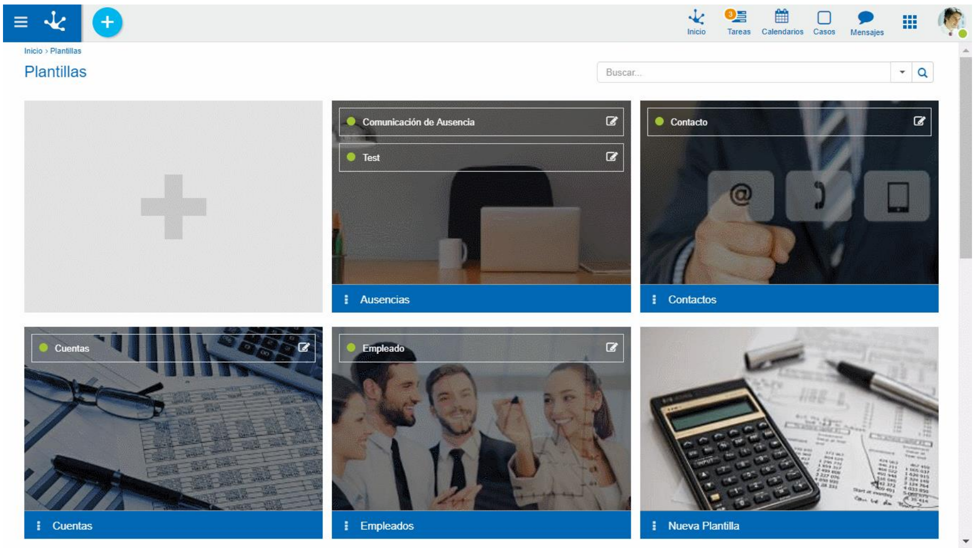
La cantidad de elementos de la galería puede reducirse utilizando un filtro de búsqueda, el cual se aplica al nombre del formulario. A medida que el usuario ingresa caracteres en el campo de búsqueda, la cantidad de elementos en la grilla se reduce a aquellos formularios cuyos nombres contienen los caracteres ingresados.

También pueden agregarse filtros por tipo de elemento, donde puede optarse por plantillas o formularios, y en caso de tratarse de estos últimos también se puede sumar un filtro por estado.

- **Filtro por Tipo**

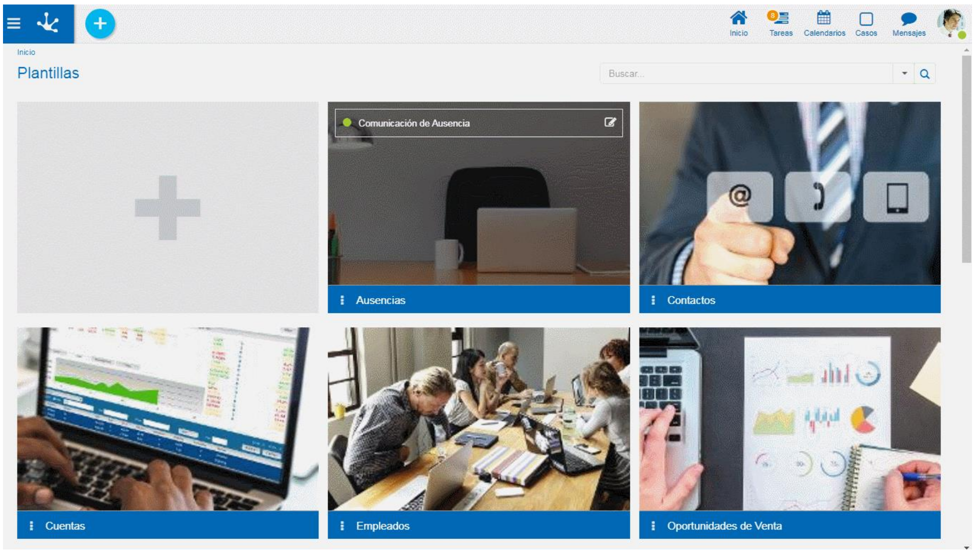


- **FIltro por Tipo y Estado**



3.5.2.1. Crear Plantilla

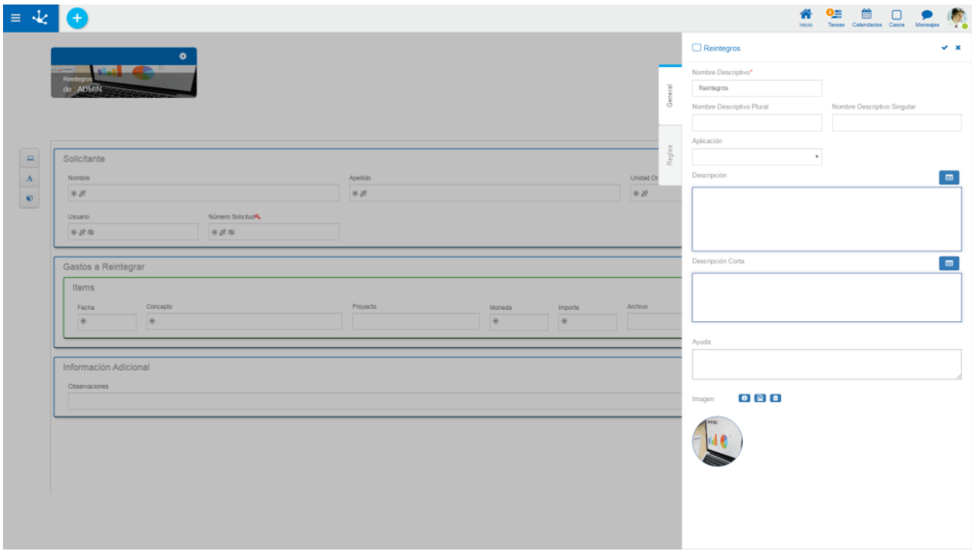
El usuario modelador puede diseñar su propia plantilla para ser utilizada para la creación de nuevos formularios ágiles. El diseño se inicia desde el área de edición vacía, pudiendo incluir campos, contenedores y diferentes elementos gráficos.



La creación se inicia partiendo de la opción "Nueva Plantilla" en la galería de plantillas, lo que lleva a un área de modelado vacía para comenzar un diseño propio. Se pueden definir diferentes elementos gráficos, relaciones y reglas de negocio.

Identificación de la Plantilla

Sobre área de diseño se visualiza un cuadro con la identificación de la plantilla y la imagen que se haya definido para representarla. Las propiedades de la plantilla pueden modificarse en el panel que se abre al seleccionar el ícono



Un asterisco "" en la etiqueta indica que la propiedad es obligatoria.*

Cuadro de Identificación de la Plantilla

Nombre de la Plantilla
Corresponde con la propiedad Nombre Descriptivo que se indica al crear la plantilla.

Propietario

Es el responsable de la plantilla, quien hizo la definición de la misma.

Imagen

Corresponde con la propiedad Imagen que se indica al crear la plantilla.

Propiedades – Pestaña General

Se accede haciendo clic en el ícono que se encuentra en el cuadro de identificación de la plantilla.

Nombre Descriptivo

Es el nombre que se visualiza en la grilla de plantillas. Soporta multi-idioma.

Nombre Descriptivo Plural

El texto ingresado en esta propiedad es utilizado como título en la grilla de resultados del formulario, mientras que si no se completa, se utiliza la propiedad Nombre. Soporta multi-idioma.

Nombre Descriptivo Singular

El texto ingresado en esta propiedad es utilizado en la lista de entidades relacionadas, mientras que si no se completa, se utiliza la propiedad Nombre. Soporta multi-idioma.

Descripción

Texto que define al modelo describiendo su funcionalidad y opcionalmente su contenido. Soporta multi-idioma y puede incluir valores de variables definidas en el área de diseño, que se incorporan mediante el uso del asistente de variables. Los formularios definidos a partir de la plantilla heredan este texto.

Descripción Corta

Versión resumida de la propiedad Descripción. Soporta multi-idioma y puede incluir valores de variables del mismo formulario, que se incorporan mediante el uso del asistente de variables. Puede ser utilizada a modo descriptivo al relacionar entidades. Los formularios definidos a partir de la plantilla heredan este texto.

Ayuda

Texto informativo que se visualiza al presionar el ícono ? cuando se utiliza el formulario generado a partir de esta plantilla, solamente cuando se utiliza fuera del workflow. Soporta multi-idioma.

Imagen

Imagen que se visualiza en la grilla de plantillas y en la barra superior al crear modelos. Se recomienda que esté relacionada con la funcionalidad o información que el modelo representa. Los formularios definidos a partir de la plantilla heredan esta imagen.
Informa sobre la utilidad de la imagen.
Permite elegir una imagen desde una ventana de selección de archivos.
Permite eliminar la imagen actual asociada a la plantilla.

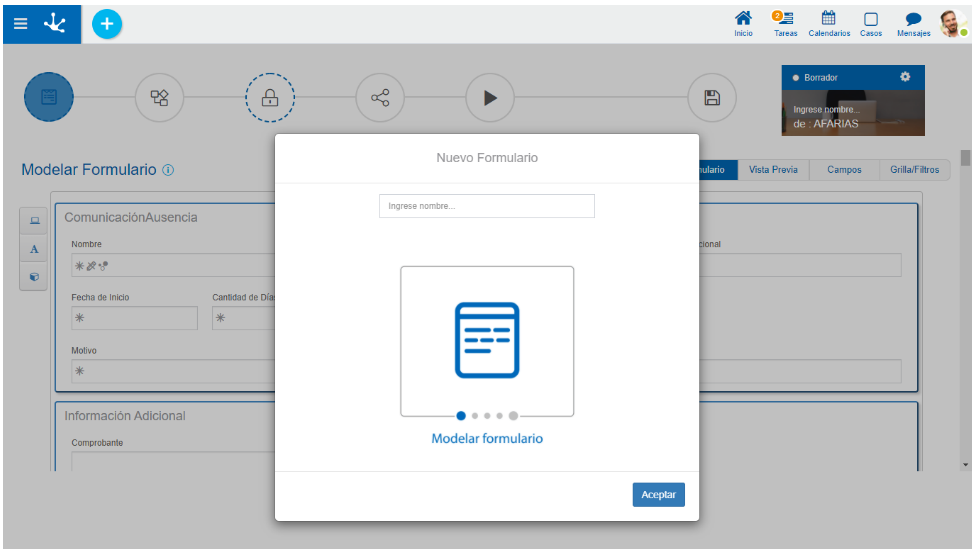
Propiedades – Pestaña Reglas

La última pestaña del panel lateral corresponde a las reglas de validación asociadas a la plantilla.

3.5.2.2. Crear Formulario

La creación de un formulario ágil puede realizarse a partir de un diseño propio o bien a partir de una plantilla preexistente en la galería.

En ambos casos se inicia el Asistente de Formularios Agiles, donde se define el nombre del formulario y se completan los pasos que permiten llegar a su publicación.



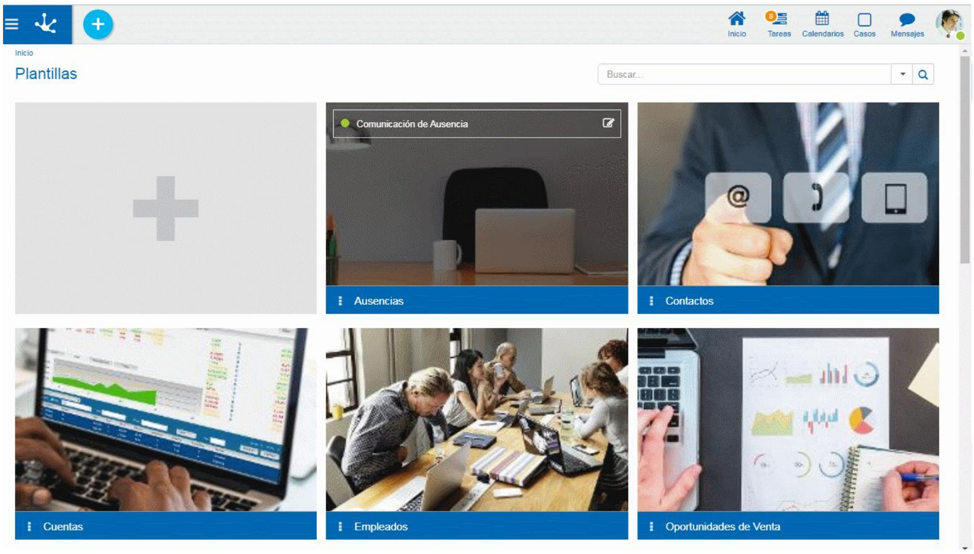
La creación de un formulario ágil incluye la creación de la entidad correspondiente, así como también la generación de permisos para usuarios y unidades organizacionales.

Crear Formulario Agil sin Plantilla

Crear Formulario Agil con Plantilla

3.5.2.2.1. Crear Formulario sin Plantilla

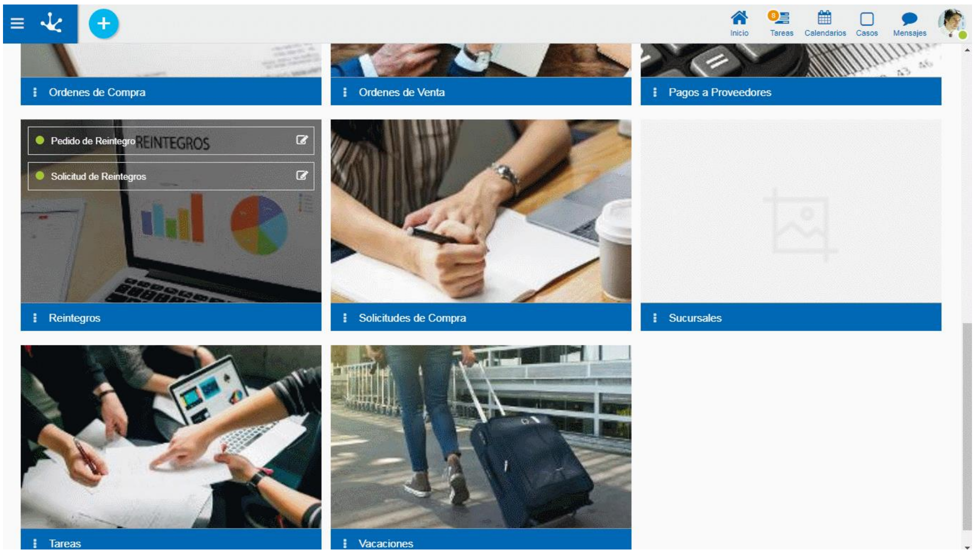
El usuario modelador puede diseñar su formulario desde el área de edición vacía, es decir, sin utilizar una plantilla como base, pudiendo incluir campos simples, iterativos, contenedores y diferentes elementos gráficos.



La creación se inicia partiendo de la opción “Nuevo Formulario” en la galería de plantillas, lo que lleva al Asistente de Formularios Agiles, donde se presenta un área de modelado vacía para comenzar un diseño propio. Se pueden definir diferentes elementos gráficos, relaciones y reglas de negocio.

3.5.2.2.2. Crear Formulario con Plantilla

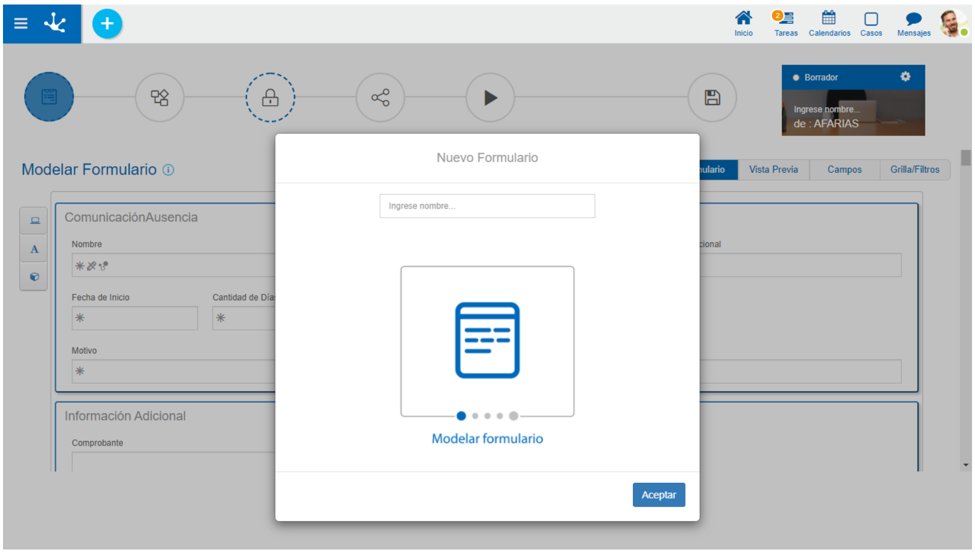
El usuario modelador puede crear su formulario tomando como base una plantilla de la galería.



Se selecciona la plantilla y se presiona la opción de menú "Nuevo" en el ícono ⋮ para crear un formulario ágil, de esta forma se ingresa al Asistente de Formularios, donde se presenta un área de modelado con el diseño predefinido. El formulario puede adecuarse modificando los elementos gráficos propuestos, incorporando relaciones y reglas de negocio.

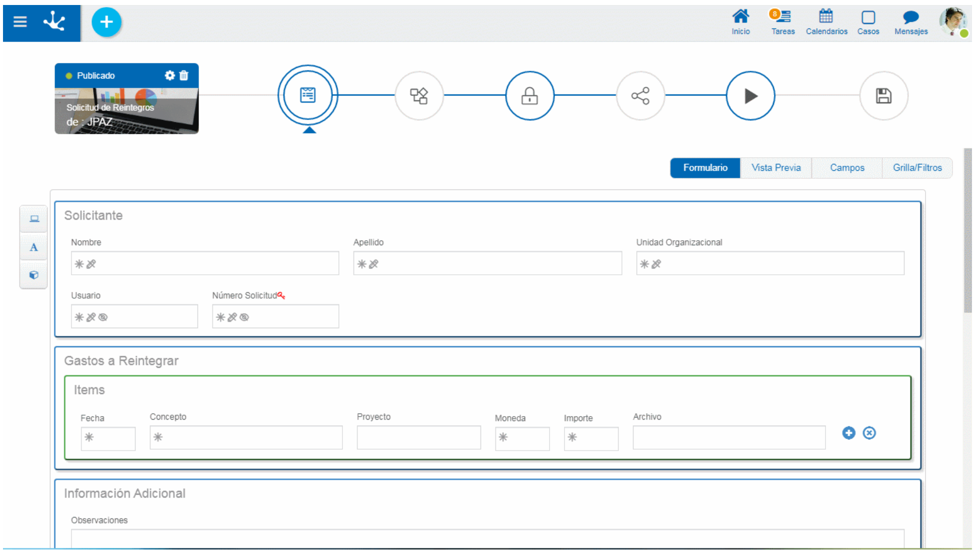
3.5.2.2.3. Asistente de Formularios

Para crear un formulario ágil en primer lugar se debe definir su nombre y luego completar los pasos necesarios para su definición con la ayuda del asistente.



Identificación del Formulario Agil

En la parte superior izquierda se visualiza un cuadro con la identificación del formulario y la imagen que se haya definido para representarlo. Las propiedades del formulario pueden modificarse en el panel que se abre al seleccionar el ícono



Cuadro de Identificación

Estado

El estado del formulario indica la etapa de desarrollo en la que se encuentra el mismo y se define automáticamente a medida que el usuario va trabajando sobre el formulario.

- Borrador: cuando empieza a definirse o fue guardado pero aún no fue publicado.
- Modificado: cuando se modifica luego de haber sido publicado.

- Publicado: se liberó y está disponible para ser utilizado.

Propiedades
Al presionar este ícono se abre el panel de propiedades del formulario.

Eliminar
Al presionar este ícono se abre un panel para que el usuario seleccione la información que desea eliminar.
- Eliminar Datos
- Eliminar Datos y Publicación
- Eliminar como Formulario Agil

Nombre
Corresponde a la propiedad Nombre Descriptivo que se define en las propiedades del formulario, en el momento de su creación.

Propietario
Es el responsable del formulario, quien hizo la definición y es el encargado de publicar el formulario.

Imagen
Corresponde a la propiedad Imagen que se define en las propiedades del formulario, en el momento de su creación.

Pasos para la Generación de un Formulario Agil

La creación de un formulario consta de 5 pasos representados en la barra superior del asistente por medio de círculos, donde el color y el tipo de borde definen la obligatoriedad de cada acción.

- Línea azul continua: acción obligatoria.
- Línea azul cortada: acción obligatoria condicional, es decir, puede ser obligatoria dependiendo de algún paso previo.
- Línea gris continua: acción opcional.

	Modelar Formulario Agil Se utiliza para crear y modificar el diseño del formulario partiendo del inicio o de un modelo existente. Este paso es obligatorio.
	Modelar Proceso (opcional) Se selecciona un proceso de la galería de procesos predefinidos a los que el formulario puede asociarse para su configuración. Este paso no es obligatorio.
	Definir Permisos (opcional) Define permisos para los usuarios que utilizan el formulario. Este paso es obligatorio si no se modela un proceso (Paso 2).
	Compartir (opcional) Permite difundir la funcionalidad que brinda el nuevo formulario. Este paso no es obligatorio.

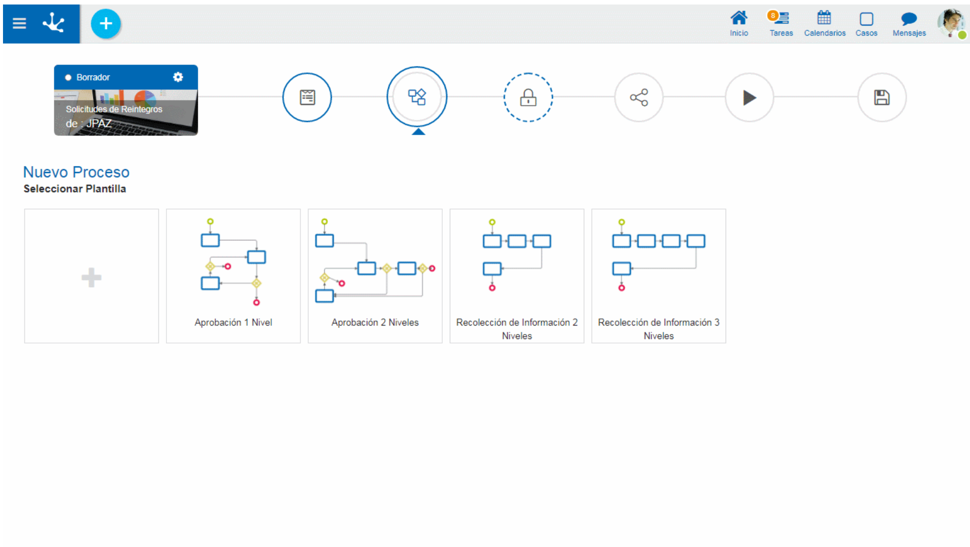
	Publicar Implica la liberación del formulario para su uso. Este paso no es obligatorio.

Existe un paso adicional que corresponde a la acción de guardar

	Guardar Guarda la configuración y el diseño del formulario, sin que esto implique la puesta en uso del mismo.

3.5.2.2.3.1. Modelar Proceso Agil

Se puede asociar un proceso al formulario ágil, vinculándolo con un workflow predefinido, en el que se definen los participantes y las condiciones que permitan determinar el flujo de los datos y la visibilidad de los mismos.



La opción Modelar Proceso, permite seleccionar una plantilla de la galería de procesos predefinidos. Este paso del asistente de formularios es opcional, ya que no es obligatorio que un formulario tenga un proceso asociado.

Desde el diagrama del proceso seleccionado, se configuran las propiedades de la pestaña General del proceso, las propiedades de los participantes y las de los elementos gráficos, haciendo doble click sobre los mismos o accediendo al menú contextual de cada figura. En el caso de las actividades, están disponibles las propiedades que se encuentran en la pestaña General y Ejecución, exceptuando la opción Editar en Modelador. En el caso de los eventos, algunos tipos están restringidos.

El ícono indica que es obligatorio configurar las propiedades del elemento gráfico. Una vez que las mismas fueron configuradas, el ícono desaparece.

La opción Seleccionar otra Plantilla, en la barra de herramientas superior, permite reiniciar el modelado de proceso. Al elegir esta acción se pierde la configuración realizada .

3.5.2.2.3.2. Modelar Permisos Agiles

Para cada una de las acciones que pueden realizarse sobre el formulario ágil, se pueden seleccionar los usuarios y unidades organizacionales que tengan autorización para ejecutarlas.

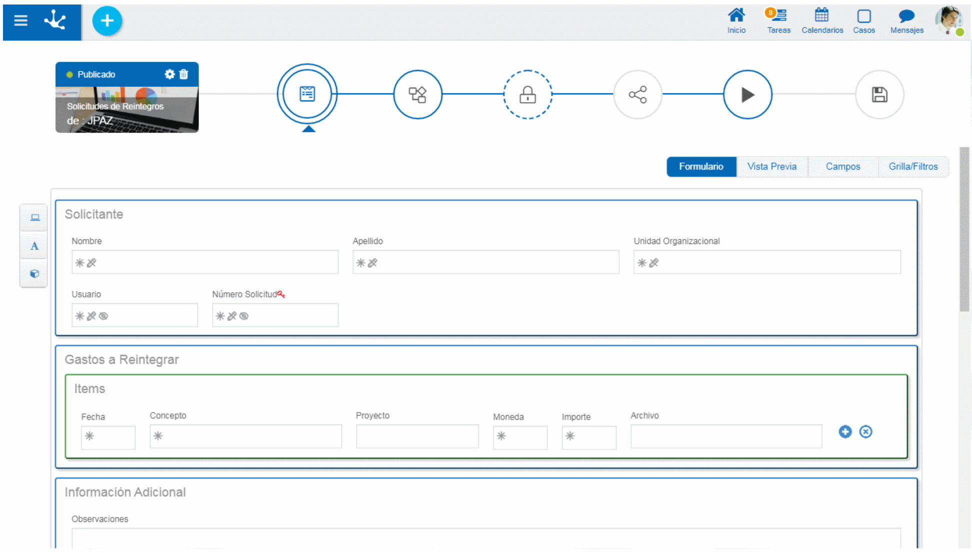
En caso de haberse modelado un proceso asociado al formulario, este paso es opcional y solamente se pueden definir permisos de consulta para los usuarios, mientras que en caso de no tener un proceso asociado al formulario, es obligatorio completar este paso del asistente de formularios.

En cada una de las pestañas se definen los permisos de los usuarios que utilizan el formulario para realizar siguientes acciones:

- **Consulta**
  Con el permiso de consulta el usuario puede buscar y visualizar los datos del formulario cargados por él o por otros usuarios.

- **Creación y Modificación**
  Con el permiso de creación y modificación el usuario puede crear y modificar los datos de los formularios, incluyendo implícitamente el permiso de consulta.

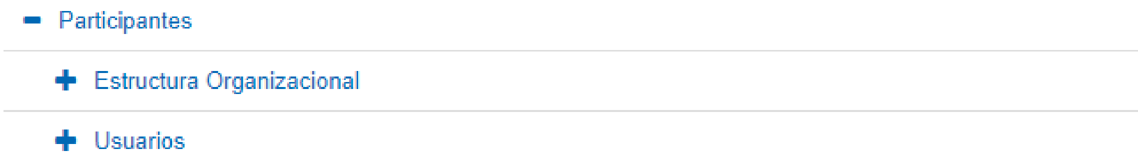
- **Eliminación**
  Con el permiso de eliminación el usuario puede eliminar los datos de los formularios, incluyendo implícitamente el permiso de consulta.



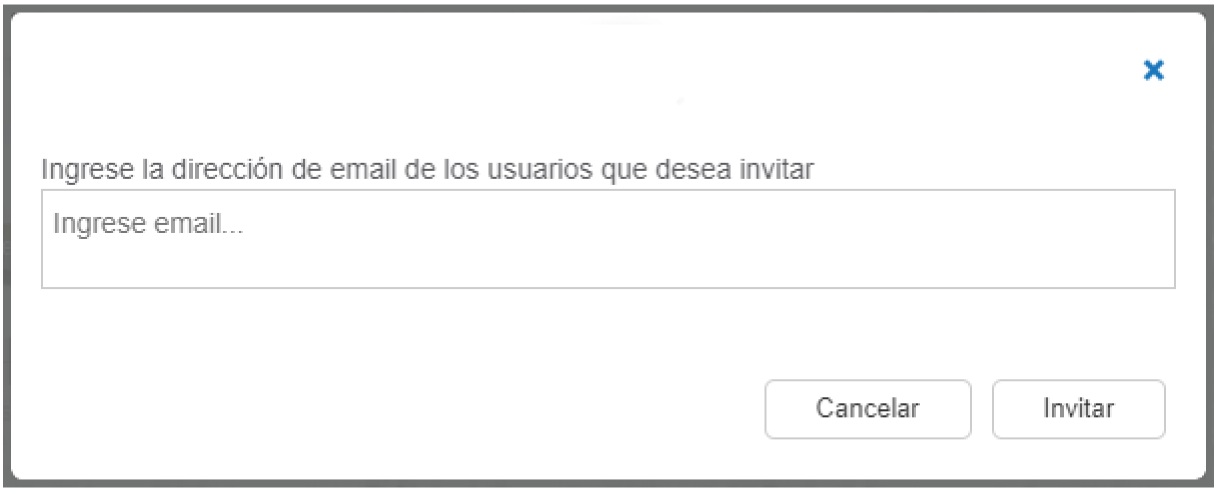
Propiedades

Barra de búsqueda
Se pueden buscar los usuarios y unidades organizacionales por nombre, utilizando la barra de búsqueda con la facilidad de autocompletar.

Asistente
Mediante el uso del asistente se pueden seleccionar los usuarios y unidades organizacionales desde un árbol jerárquico.



Invitar Usuarios
El botón permite definir como responsable a usuarios invitados por email, para lo que se debe ingresar la dirección o lista de direcciones de email. Si se invita a más de un usuario, automáticamente se inicia la generación de un nuevo rol.
Una vez presionado el botón "Invitar", se le concede el permiso al usuario, agregándolo en el Area de Usuarios y Oficinas.

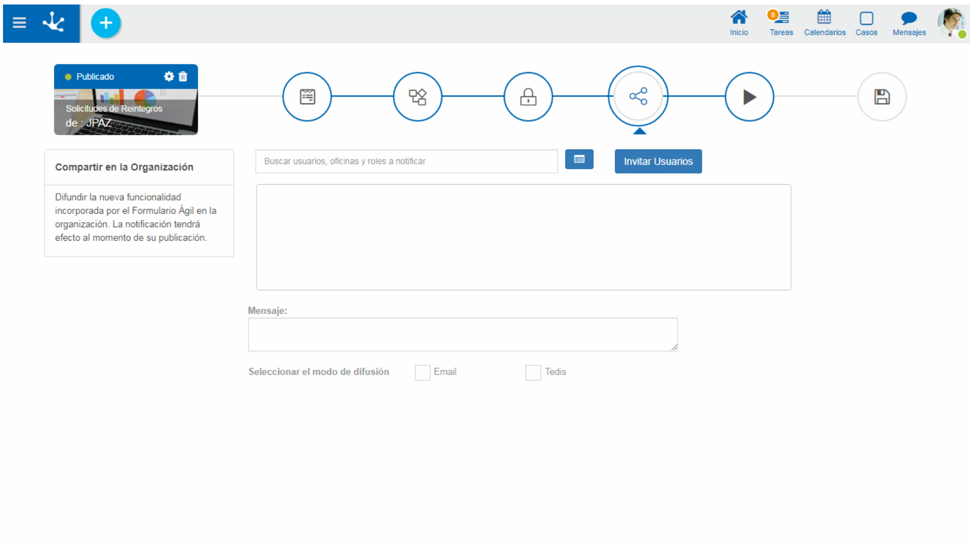


Area de Usuarios y Oficinas
Representa el conjunto de usuarios y unidades organizacionales para los distintos permisos.
Recordar que los responsables que presenten permisos de creación o eliminación, implícitamente podrán consultar.

3.5.2.2.3.3. Compartir Formulario Agil

Es posible definir el envío automático de un mensaje, el cual es enviado al momento de la publicación del formulario, pudiendo seleccionar como destinatarios varios tipos distintos de participantes.

Este paso del asistente de formularios puede no completarse ya que no es obligatoria la difusión de un mensaje.



Propiedades

Barra de búsqueda

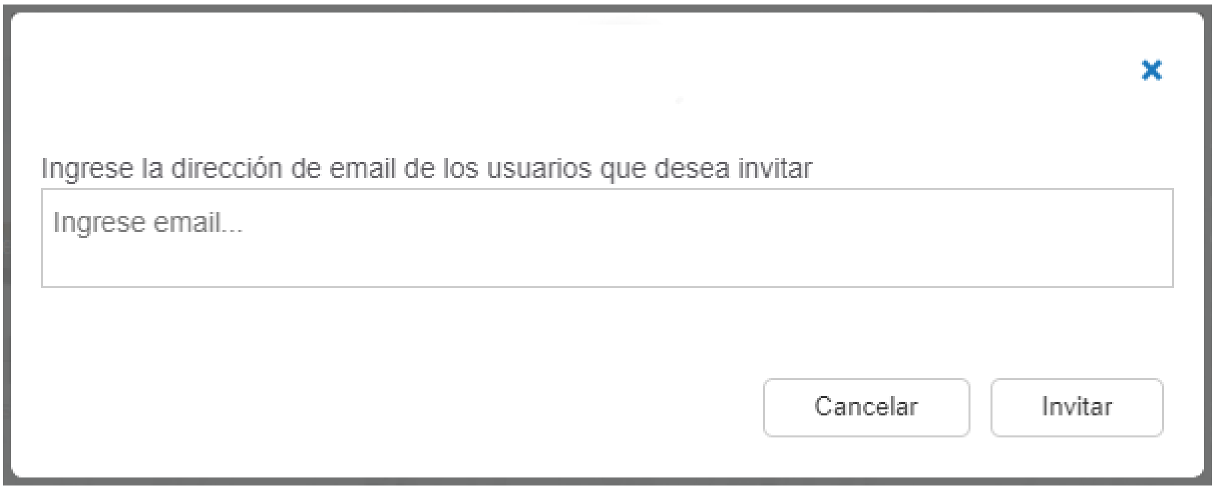
Se pueden buscar los usuarios, unidades organizacionales y roles por nombre, utilizando la barra de búsqueda con la facilidad de autocompletar. En el caso de que se seleccione una unidad o un rol, el mensaje será enviado a sus integrantes.

Asistente

Mediante el uso del asistente de participantes se pueden seleccionar los usuarios, unidades organizacionales y roles desde un árbol jerárquico.

Invitar Usuarios

El botón permite definir como participante a usuarios invitados por email, para lo que se debe ingresar la dirección o lista de direcciones de email.
Una vez presionado el botón "Invitar", se agrega el usuario en el Area de Destinatarios de Notificación.



Area de Destinatarios de Notificación
El área de destinatarios de notificación indica los usuarios, unidades o roles que serán notificados.

Mensaje
Permite definir el texto que se utiliza en el mensaje que se utiliza para la difusión.

Modo de Difusión
Marcas que permiten seleccionar el medio para notificar la publicación del nuevo formulario. Puede realizarse la difusión por medio de un email o por medio de chats.

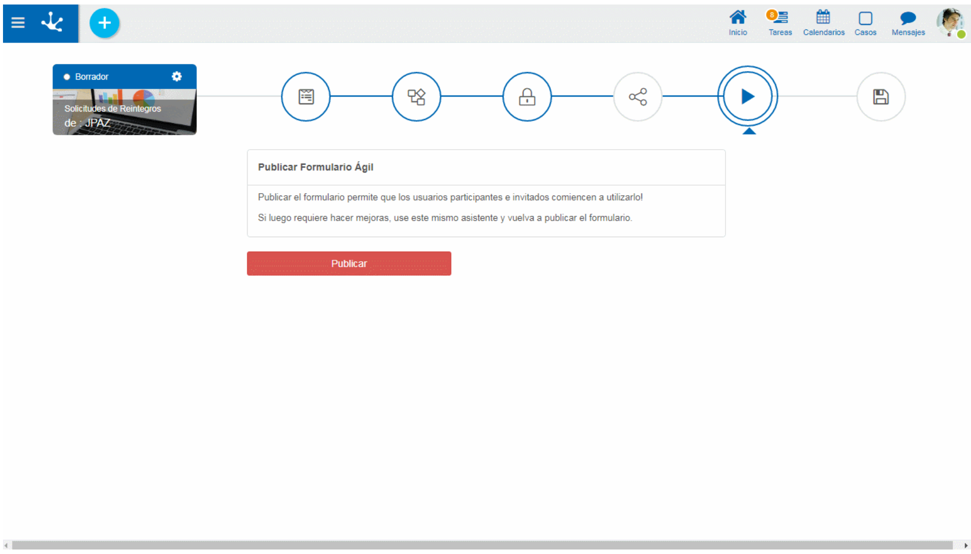
3.5.2.2.3.4. Publicar Formulario Agil

Publicar un formulario ágil permite que los usuarios participantes e invitados comiencen a utilizarlo. Una vez publicado, este puede ser utilizado por los usuarios de acuerdo a los permisos otorgados tanto a nivel del formulario como del proceso si tuviera uno asociado.

En caso de haberse definido un proceso asociado al formulario ágil en el segundo paso del asistente, la publicación implica que el workflow estará disponible para su uso.

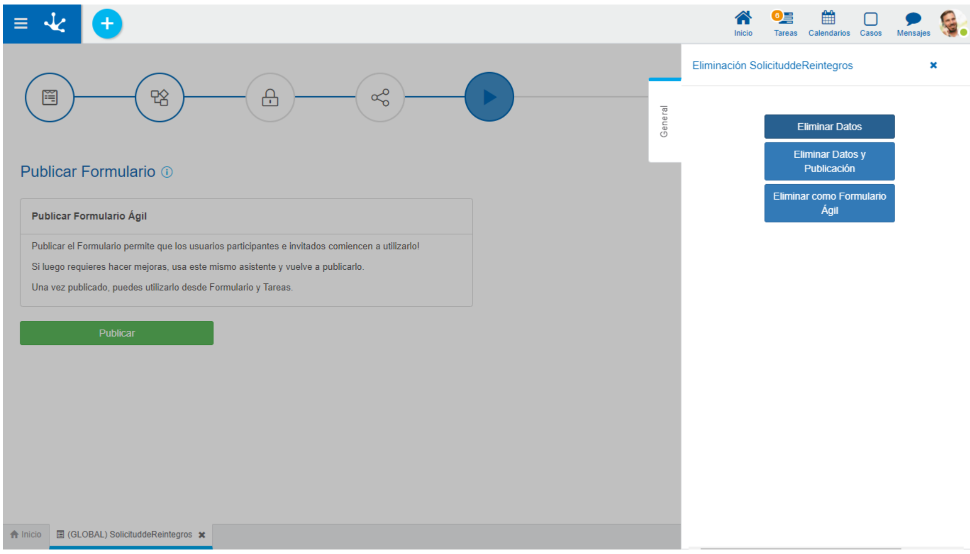
Si se requiere aplicar mejoras posteriores a la publicación, se debe volver a publicar con este mismo asistente.

El botón para publicar el formulario pasa de color rojo a verde luego una vez realizada la publicación.



3.5.2.2.3.5. Eliminar Formulario Agil

En el panel de eliminación se visualizan las tres modalidades de eliminación de un formulario ágil.



Opciones

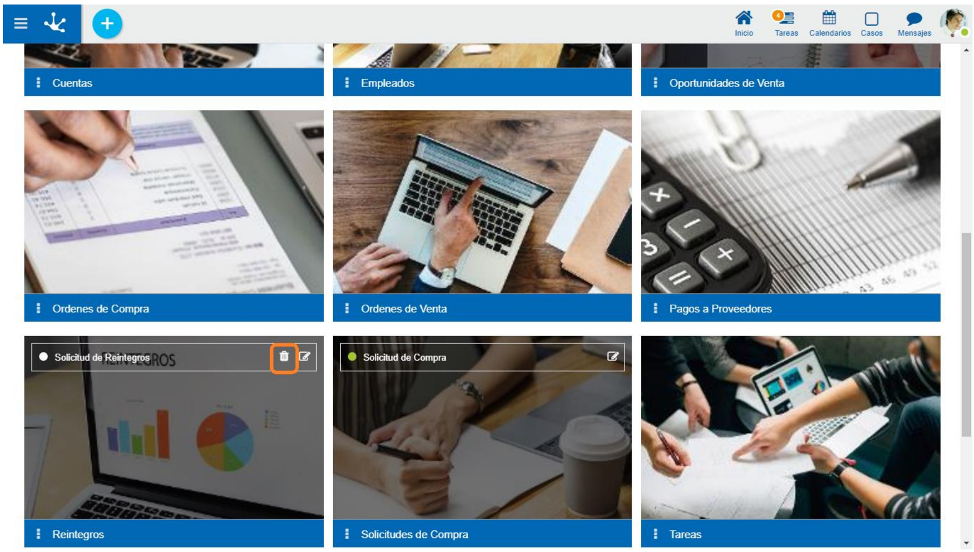
Eliminar Datos

Permite eliminar las instancias del formulario.

Eliminar Datos y Publicación

Permite eliminar las instancias del formulario y volver atrás la publicación del mismo, es decir que su estado pasa de "Publicado" a "Borrador".

Una vez eliminados los datos del formulario ágil y su publicación, en la galería de plantillas se habilita el ícono en la línea correspondiente al formulario en el elemento del formulario ágil. Dicho ícono permite eliminar el formulario que fue creado a partir de la plantilla. Si se tratara de un formulario que no tiene asociada una plantilla, entonces el mismo se borra desde el menú del elemento ⋮.



Eliminar como Formulario Agil

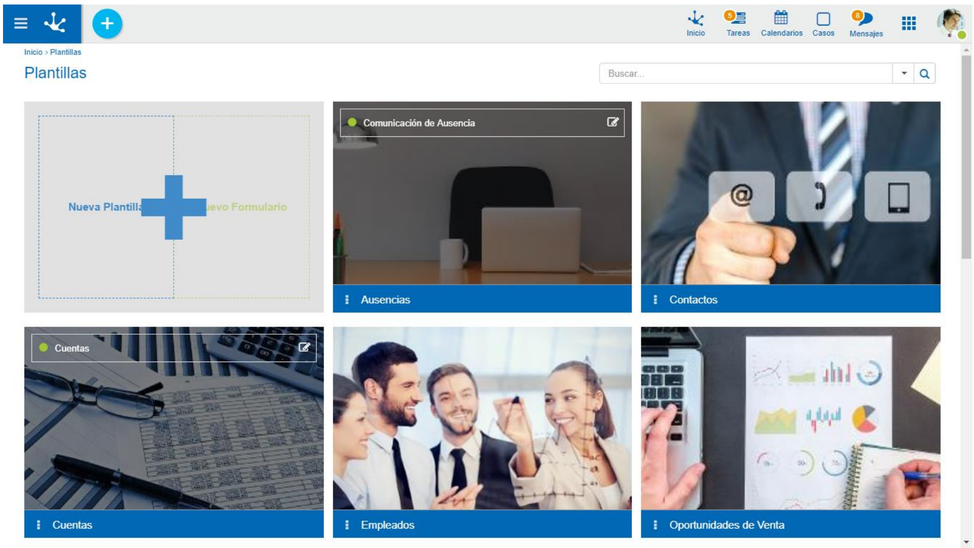
Permite convertir el formulario ágil en un formulario de **Deyel**, es decir que puede utilizarse desde el modelador de formularios. Si el formulario ágil incluye un proceso modelado, entonces este último también se convierte en un objeto de **Deyel**, que puede utilizarse desde el modelador de procesos.

Una vez eliminado el formulario ágil, deja de visualizarse en la galería de plantillas en el modelador ágil y en el modelador Deyel deja de verse como un objeto de tipo "Formulario Agil" para pasar a visualizarse como un objeto de tipo "Formulario". Si el formulario ágil incluyera un proceso, entonces también se crea un objeto de tipo "Proceso".

A partir de esta conversión los objetos resultantes pueden ser utilizados por los modeladores de TI y ya no por los usuarios de negocio.

3.5.3. Modelado de Formularios Agiles

El modelador de formularios es una herramienta que permite diseñar gráficamente formularios, así como también definir las características de sus campos y comportamiento en los procesos asociados.



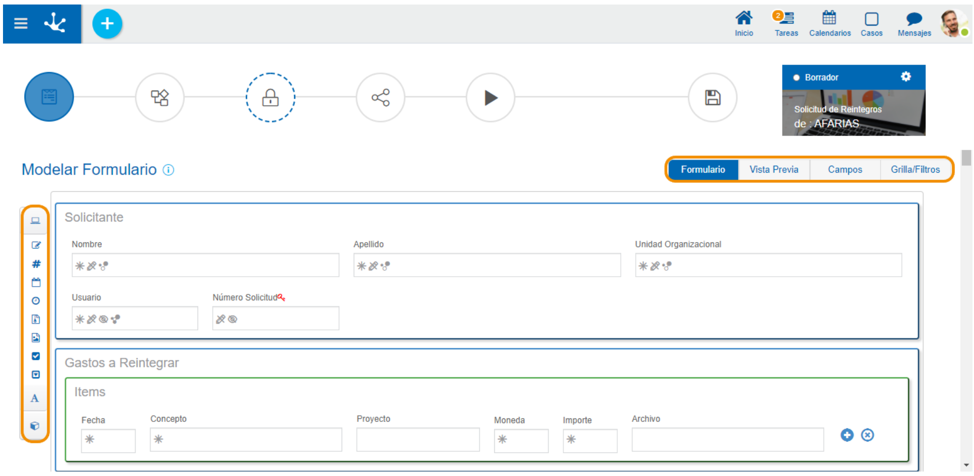
3.5.3.1. Facilidades de Modelado

Nuevo Formulario

El usuario modelador puede definir un nuevo formulario, que luego de ser publicado puede ser utilizado en el portal.

El área del modelado de formulario cuenta con diferentes secciones:

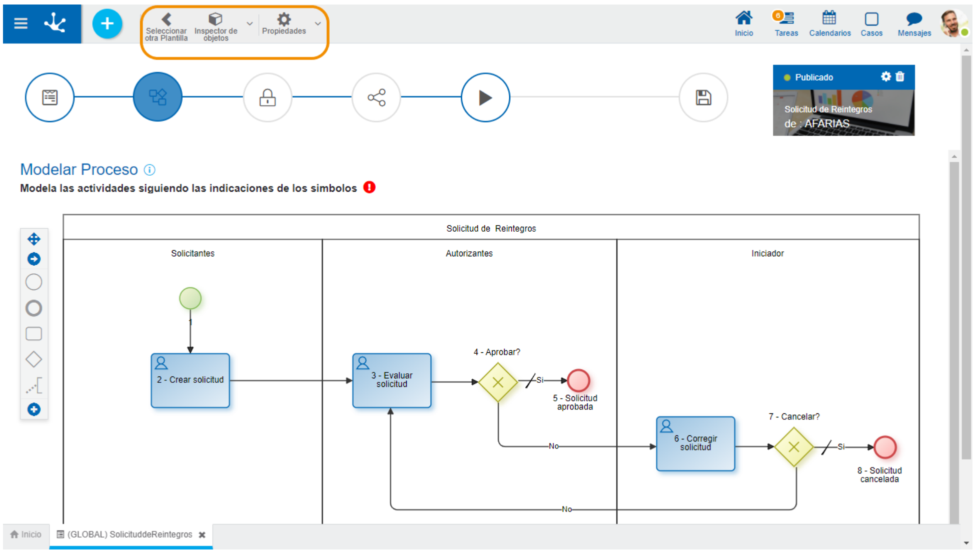
- Opciones de Diseño
- Barra de Herramientas Lateral Izquierda



3.5.3.1.1. Barra de Herramientas Superior

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its [state](), some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



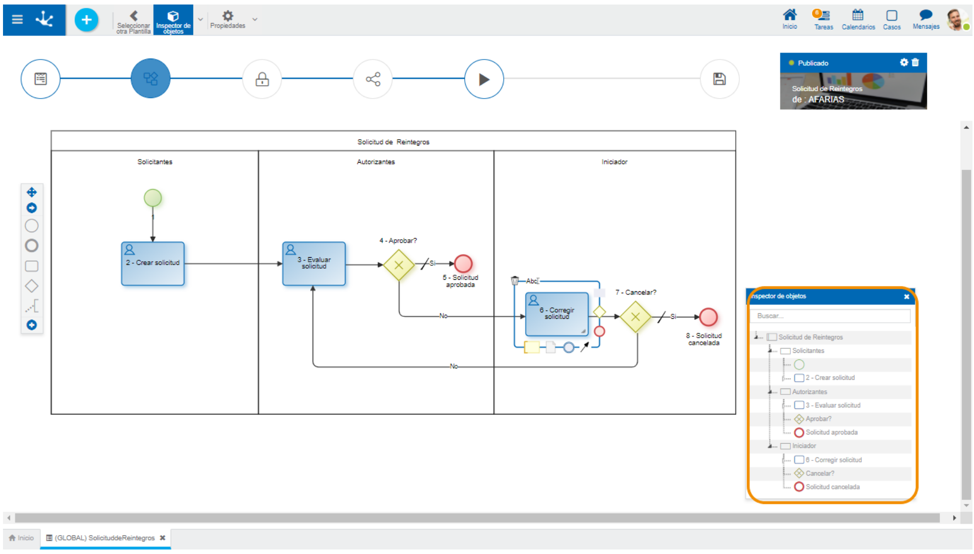
Seleccionar otra Plantilla

Permite seleccionar una plantilla de proceso diferente o generar una nueva, para el formulario ágil que se está definiendo.

Inspector de Objetos

Al presionar este ícono se visualiza/oculta un panel donde se muestran todos los elementos del proceso con estructura de árbol.

Esta visión facilita la tarea de análisis y desarrollo, especialmente en diagramas complejos.



En la parte superior del inspector se encuentra un campo de búsqueda que permite buscar elementos en base a su nombre, código de identificación, comportamiento referido a la ejecución de una actividad, o acciones automáticas definidas. Una vez ingresado el texto en el campo de búsqueda, el inspector muestra en forma resaltada los elementos del proceso que coincidan con el texto ingresado.

Desde el inspector de objetos se puede abrir el panel de propiedades de cada elemento al hacer doble clic sobre el nombre del mismo.

A la derecha del ícono se visualiza el ícono para abrir el segundo submenú.

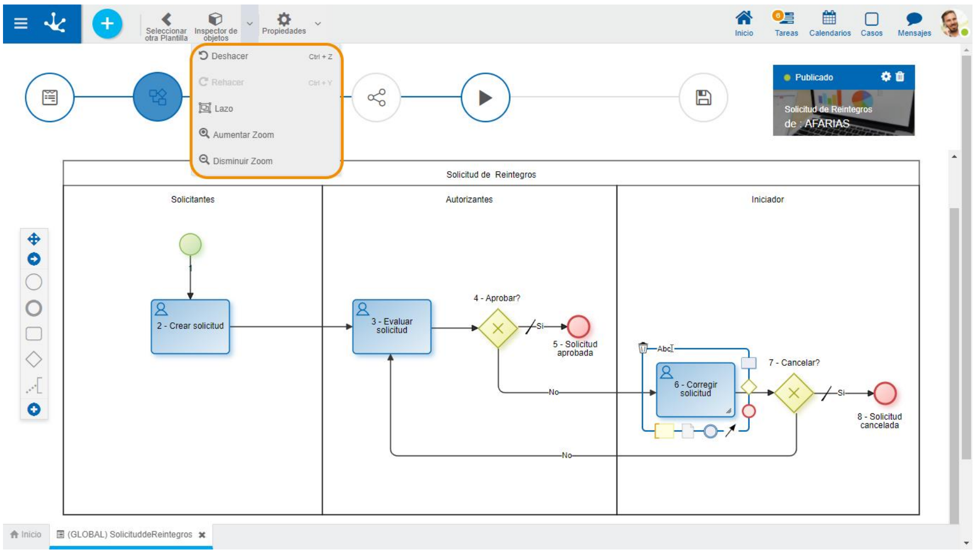
Propiedades

Abre el panel de propiedades del formulario.

A la derecha del ícono se visualiza el ícono para abrir el segundo submenú.

3.5.3.1.1.1. Primer Submenú

Este submenú puede abrirse presionando el ícono que se encuentra inmediatamente a la derecha del ícono .



Deshacer

Vuelve atrás la última modificación realizada al diagrama. El mismo comportamiento se obtiene con la combinación de teclas ctrl+z.

Rehacer

Rehace la acción sobre el diagrama que fue eliminada con la opción “Deshacer”. El mismo comportamiento se obtiene con la combinación de teclas ctrl+y.

Lazo

Permite seleccionar los elementos gráficos que quedan enlazados al presionar el botón derecho del mouse sobre un punto del diagrama y arrastrar hacia otro extremo sin soltar. Las figuras enlazadas quedan marcadas temporalmente con un borde y pueden ser desplazadas utilizando el cursor o eliminadas en conjunto.

Aumentar Zoom

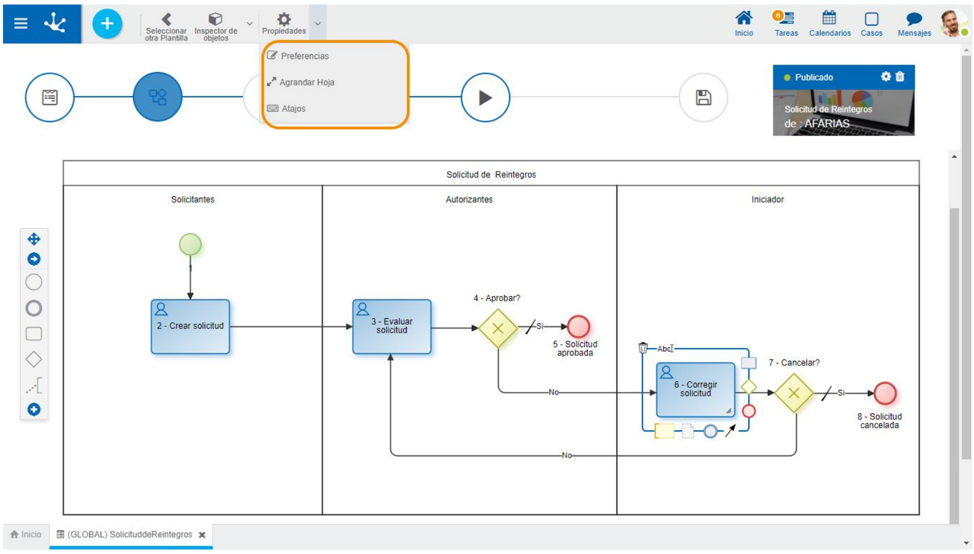
Aumenta el tamaño de visualización del diagrama.

Disminuir Zoom

Disminuye el tamaño de visualización del diagrama.

3.5.3.1.1.2. Segundo Submenú

Este submenú puede abrirse presionando el ícono que se encuentra inmediatamente a la derecha del ícono .



Preferencias

Define las preferencias de visualización para el modelado de procesos.

- Visualizar Identificadores
  Indica si se muestran en el diagrama los identificadores internos de los símbolos. El valor predeterminado es “No”.

- Orientación
  Indica la orientación en que se visualiza el diagrama. El valor predeterminado es “Vertical”.

- Tamaño de Grilla
  Definir la cantidad de pixeles utilizada cuando se mueven los símbolos en el diagrama, cuando se arrastran con el mouse. El valor predeterminado es “1”, aunque puede seleccionarse “10” o “20” para utilizar un movimiento más pronunciado cuando se desplazan los símbolos con el mouse.

- Vista en Miniatura
  Indica si se visualiza la vista en miniatura en el ángulo inferior derecho. Esta vista consiste en un pequeño panel donde se visualiza el proceso completo.

Agrandar Hoja

Incrementa el área de modelado, lo que hace que se visualicen barras de scroll y que en la vista en miniatura se vea sombreada la zona del diagrama que se encuentra visible en la ventana. A medida que se desplazan las barras de scroll, la zona sombreada se desplaza en la vista en miniatura.

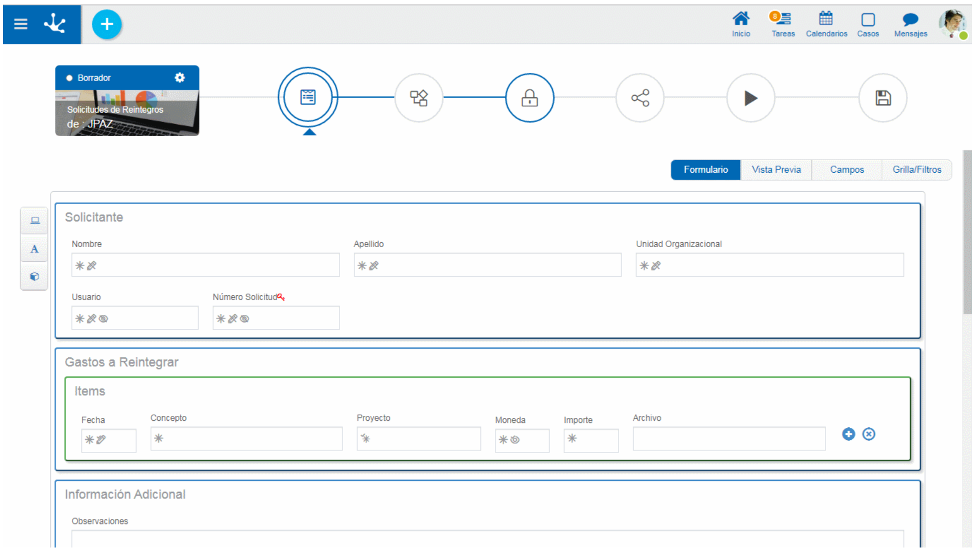
Atajos

Abre un panel con todos los atajos de teclado disponibles para utilizar en el modelado de procesos.

3.5.3.1.2. Area de Modelado Gráfico

El área de modelado gráfico es el espacio donde se arrastran los diferentes elementos desde la [Barra de Herramientas Lateral Izquierda](), permitiendo modelar la disposición gráfica de los elementos en el formulario.

El área de modelado se divide en filas y cada elemento del formulario ocupa al menos una celda dentro de la fila.



Operaciones sobre los elementos

Al arrastrar un elemento desde la barra de herramientas izquierda al área de modelado gráfico, el mismo se inserta en el lugar elegido. Al pasar el mouse sobre el elemento, se visualiza un conjunto de íconos que permiten realizar distintas operaciones. Las operaciones disponibles dependen del tipo de elemento con el que se esté trabajando.

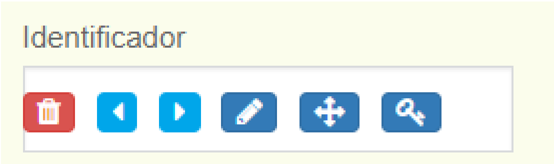
Permite eliminar un elemento. Al hacer clic sobre este ícono se muestra un mensaje de confirmación que, al ser presionado, elimina el elemento modelado.
En caso que el formulario se encuentre publicado y ya cuente con datos cargados, este ícono se encuentra deshabilitado.

Permite modificar el ancho gráfico del elemento. El ícono derecho agranda el ancho en una unidad y el izquierdo lo disminuye en la misma medida.

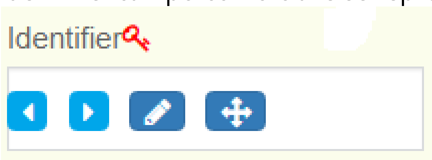
Permite ingresar a la sección de propiedades del elemento. Para mayor información sobre la configuración de los distintos tipos de elementos, ver [Propiedades de Elementos]().

Permite mover el campo a cualquier otro sector del área del modelador. Se puede arrastrar el campo manteniendo el clic sobre este símbolo y soltándolo sobre una fila, o sobre los separadores de celdas, así el campo se desplaza a la zona indicada.

Permite definir el campo como clave única del formulario. Una vez definido un campo clave en el formulario, el botón llave no se visualiza sobre el resto de los campos.



Al definir el campo como clave se representa con una llave a la derecha de la etiqueta.

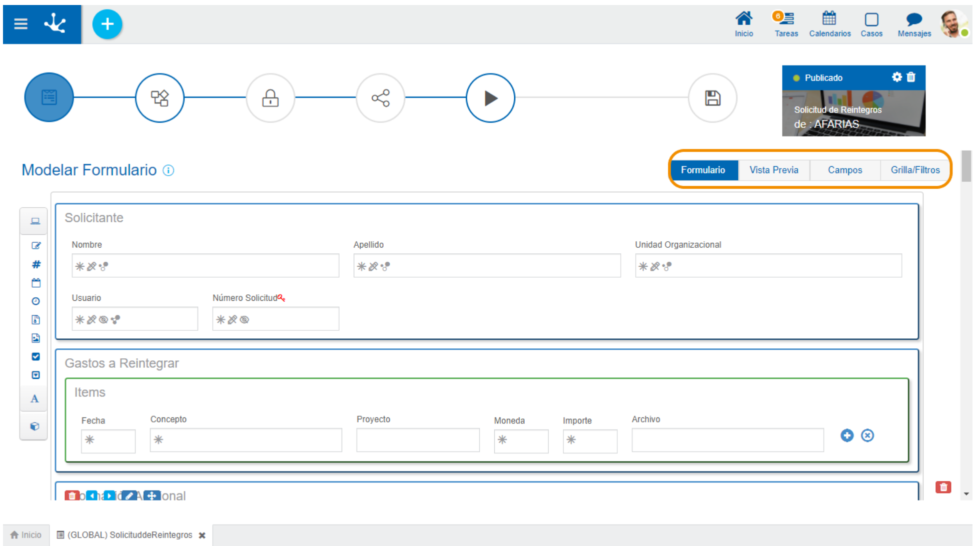


Visualización de íconos de reglas

En cada campo del formulario se visualizan los íconos correspondientes a las reglas establecidas en ellos, de acuerdo al criterio de visualización de reglas en el modelado

3.5.3.1.3. Opciones de Diseño

Al crear o modificar un formulario, permite definir el conjunto de campos, el tipo de información que se almacena en cada uno, la distribución de los mismos dentro del formulario y con qué características se presentan al usuario. De esta forma se puede trabajar sobre el modelo de datos y su visualización al mismo tiempo.



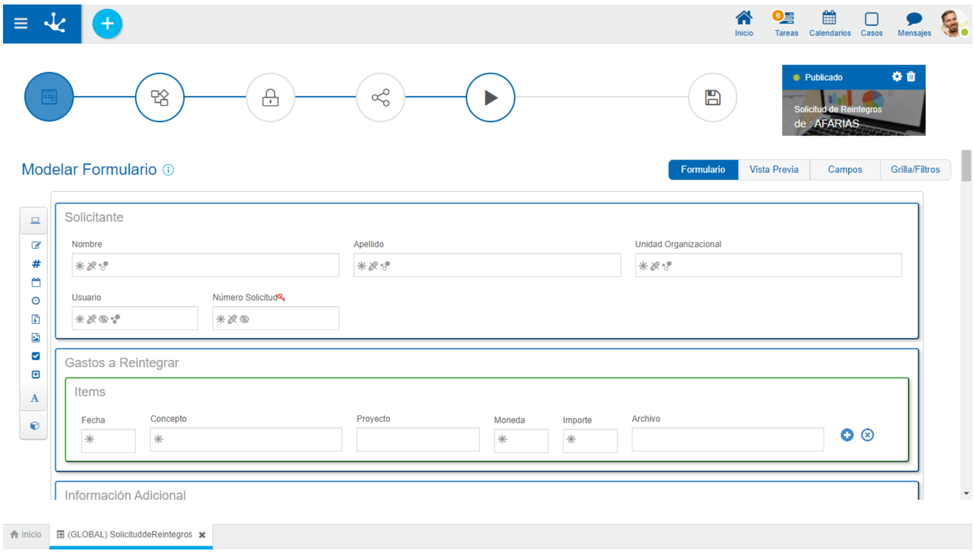
- Formulario
- Vista Previa

- [Campos]
- [Grilla y Filtros]

3.5.3.1.3.1. Formulario

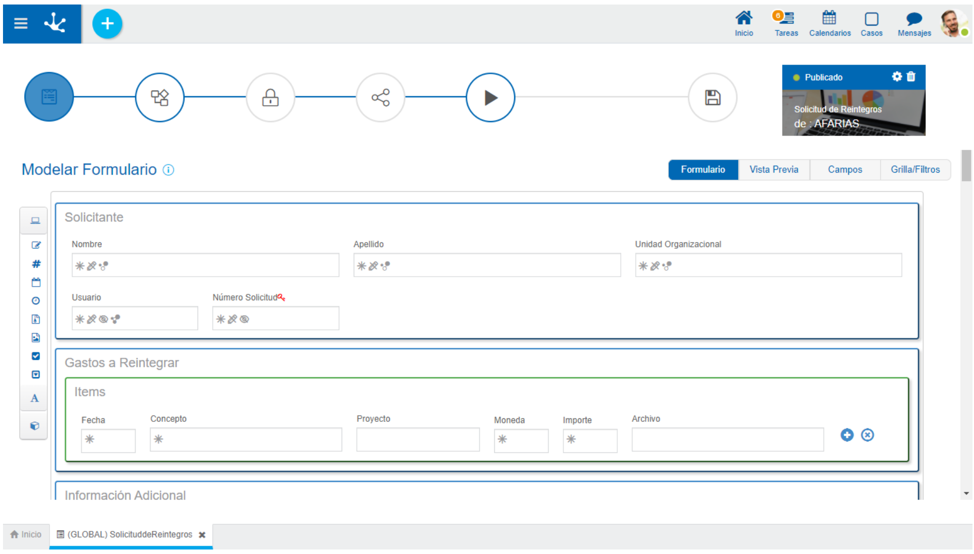
Se presenta el área de modelado gráfico cuando se inicia el modelador, donde pueden definirse campos, elementos gráficos y contenedores.

Estos elementos están disponibles en la barra de herramientas lateral, donde se explica su estructura y funcionamiento en detalle.



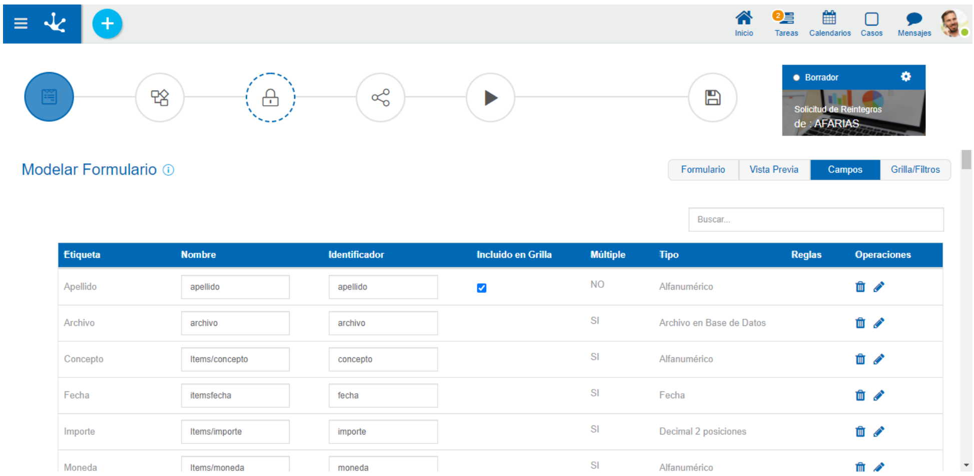
3.5.3.1.3.2. Vista Previa

Permite tener una visión del formulario modelado, mostrando cómo se vería en el portal de usuarios. Por ejemplo, se ocultan botones propios de la edición de la pestaña “Formulario” y se visualizan los contenedores (acordeones y pestañas), se ocultan los contenedores que tengan activa la propiedad de ocultar, etc.



3.5.3.1.3.3. Campos

Permite ver la lista de todos los campos del formulario en una tabla paginada, con capacidades de búsqueda rápida, filtros, orden, visualizando las propiedades de cada uno y permitiendo realizar operaciones.



Columnas

Etiqueta
Es el nombre que se asigna al campo para ser reconocido por el usuario.

Nombre
Es el nombre generado automáticamente a partir de la propiedad Etiqueta, por el que el campo es reconocido por el sistema.

Edición de Nombre

Permite la edición de la propiedad Nombre para que el usuario pueda modificarla. Este campo se encuentra habilitado solo cuando el formulario no presenta datos.

Incluido en Grilla

Indica si el atributo es parte de la [grilla de resultados](#).

Múltiple

Indica si el campo tiene múltiples ocurrencias.

Tipo

Indica el [tipo de dato](#) del campo.

Clave

Indica si el campo es único y sirve como identificador en el formulario.

Reglas

En caso que el campo tenga alguna regla asociada de [obligatoriedad](#), de [visibilidad](#), de [edición](#) o de [validación](#), se muestra un ícono indicando el tipo de regla.

Operaciones

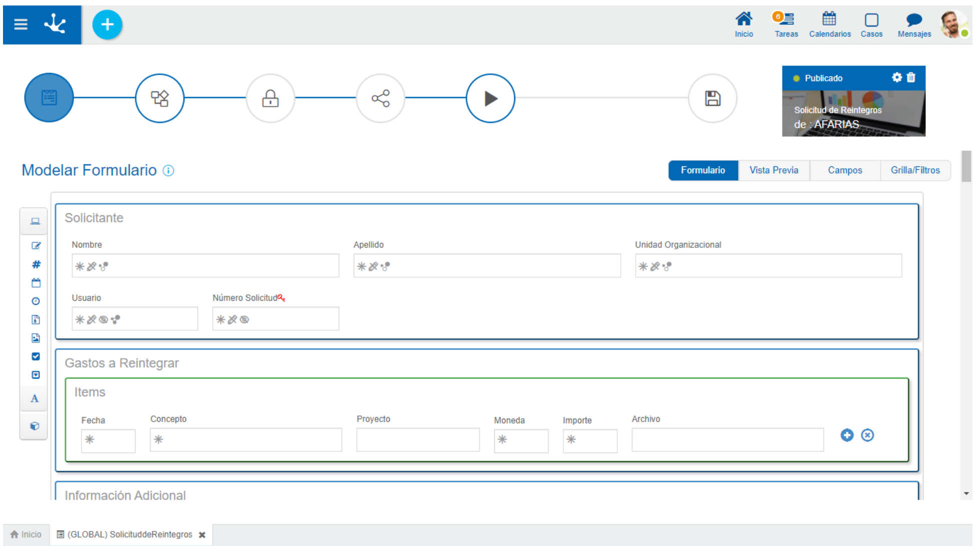
Permite eliminar el campo únicamente en formularios sin datos y requiere confirmación por parte del usuario.

La edición de atributos abre una nueva ventana que permite editar las [propiedades del campo](#).

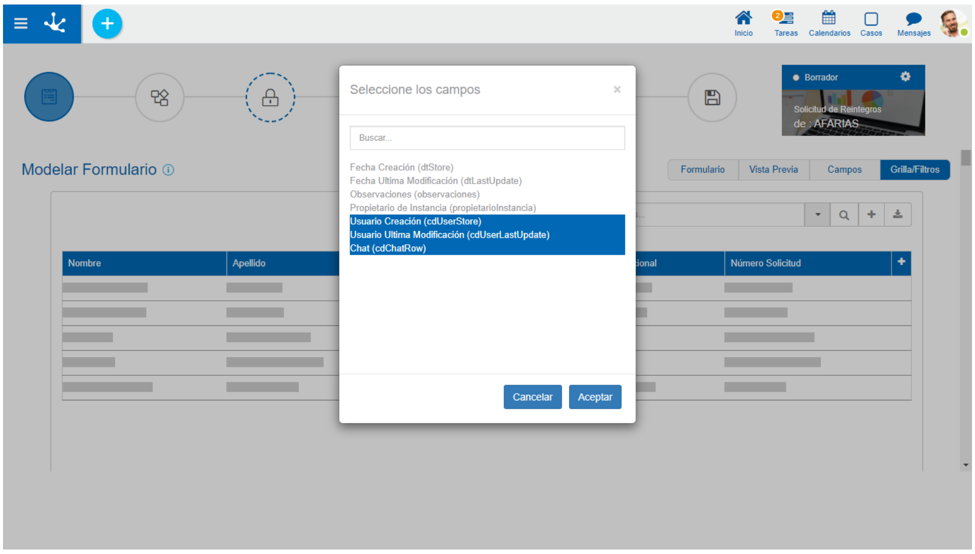
3.5.3.1.3.4. Grilla y Filtros

Grilla

Permite modelar las columnas que se visualizan en los listados de instancias. Las columnas predeterminadas de la grilla corresponden a aquellos campos que se han configurado con la propiedad Incluido en Grilla marcada. Pueden agregarse nuevos campos presionando el icono y su orden es modelable arrastrando las columnas para intercambiar sus posiciones.



Los formularios con procesos asociados pueden utilizar información de la ejecución de los mismos al modelar la grilla de resultados.



Propiedades Relacionadas a la Ejecución del Proceso

Actividad del caso

Es la actividad del proceso en la que se encuentra el caso.

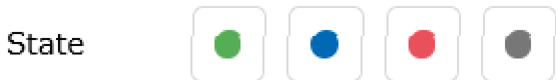
Responsable del Caso

Hace referencia al usuario, rol u oficina que tiene pendiente el caso en su lista de tareas.

Estado del Caso

Los posibles estados se visualizan con colores.

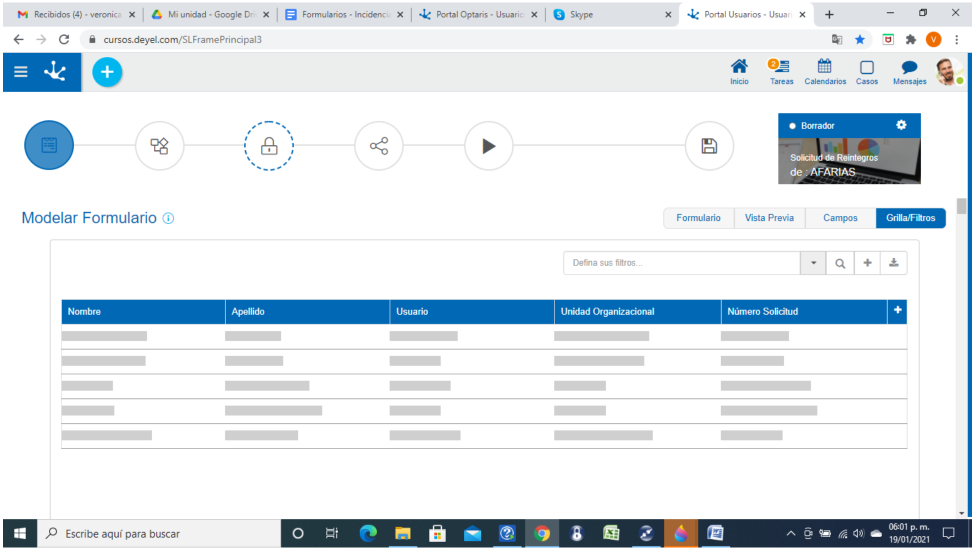
- Activo: Verde
- Finalizado: Azul
- Cancelado: Rojo
- Suspendido: Gris



Filtros

La definición de filtros permite enriquecer las variantes de búsqueda que se realizan sobre las instancias de formularios. Cada filtro corresponde a un campo del formulario e incorpora un criterio más por el cual un usuario puede buscar instancias.

Presionando el ícono se accede a la lista de campos disponibles para incluír en el filtro.



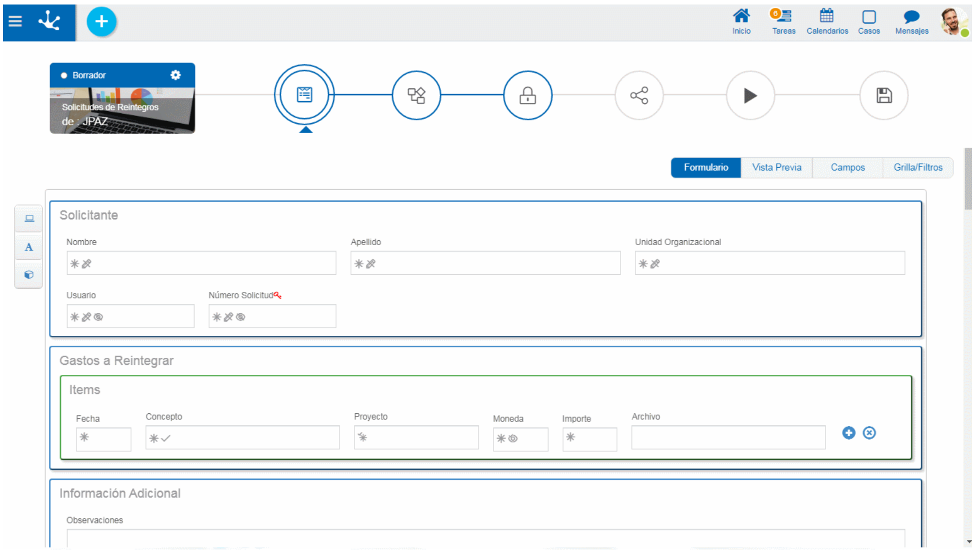
3.5.3.1.4. Barra de Herramientas Lateral

Es la barra de herramientas que contiene los íconos correspondientes a los diferentes tipos de elementos que pueden definirse en un formulario.

Para su uso, es necesario hacer clic sobre la sección correspondiente de la barra y seleccionar el tipo de elemento a agregar, arrastrándolo hacia el lugar del formulario que se desee.

Separadores

Son cuadros de color celeste que se visualizan a la derecha e izquierda, o arriba y abajo de los elementos definidos en el área de modelado, al arrastrar con el mouse desde la barra de la izquierda un campo, elemento gráfico o contenedor. Indican las posiciones dentro del área de modelado donde se puede soltar un campo, elemento gráfico o contenedor elegido para incluir en el formulario.

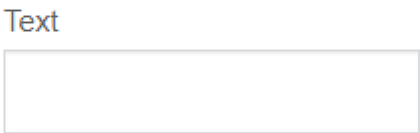


Elementos de la Barra

Creación de Campos

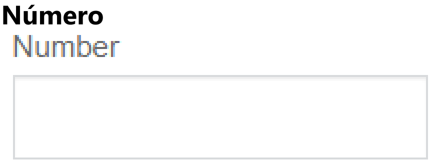
Al presionar este icono se despliega un subconjunto de elementos que permiten modelar campos representados por controles dentro del formulario. Cada campo puede tener asociado un tipo de dato, según el control que lo represente.

Texto



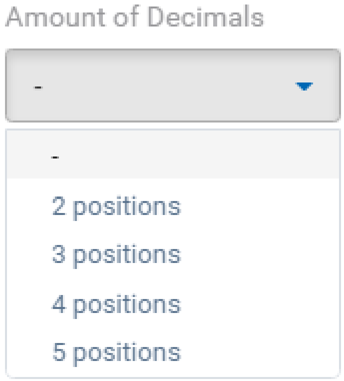
- Alfanumérico (Tipo predeterminado)
  Los valores se guardan respetando mayúsculas y minúsculas ingresadas.
- Alfanumérico Mayúscula
  Los valores se guardan en mayúscula.
- Alfanumérico Extenso
  Funciona como un alfanumérico predeterminado, con la salvedad que permite almacenar textos extensos (usualmente hasta 4GB).
- Texto Enriquecido
  Tiene las características del tipo alfanumérico. Presenta un editor extendido que permite formatear el texto aplicando distintos estilos, colores, tamaños, etc. Ver detalle del uso del control.

Número

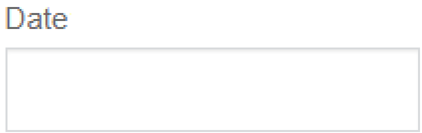


- Entero
  Puede contener valores enteros entre -2147483648 y 2147483647.
- Decimal

Si el tipo de dato es decimal, se habilita la selección de cantidad de posiciones decimales (2 a 5).

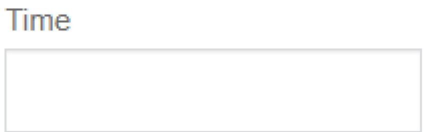


Fecha



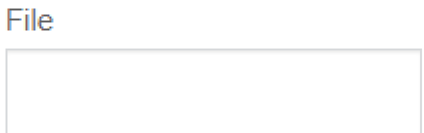
- Fecha
  Permite visualizar una fecha o ingresarla a partir de un selector. Ver detalle del uso del control.
- Fecha y Hora
  Permite visualizar una fecha y una hora o ingresarlas a partir de selectores. Ver detalle del uso del control.

Hora



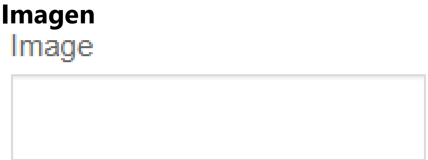
- Hora
  Permite visualizar una hora o ingresarla a partir de un selector. Ver detalle del uso del control.

Archivo



- Archivo en Base de Datos
  Permite utilizar como adjunto del formulario archivos del usuario. Ver detalle del uso del control.

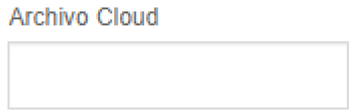
Imagen



- Imagen en Base de Datos

Permite utilizar como adjunto del formulario, archivos del usuario de tipo imagen. Las extensiones permitidas son jpg, png y gif.
Ver detalle del uso del control.

Google Docs



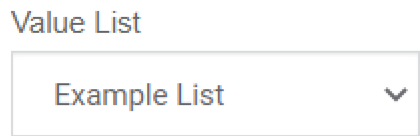
Permite modelar un campo que sirve para adjuntar archivos que serán alojados en Google Docs. Los archivos adjuntados se suben a la web relacionados a la cuenta Google configurada para la aplicación.

El formulario sirve como punto de acceso a los archivos en Docs, pero también puede ser accedido desde la web por todo usuario que tenga acceso a la cuenta google asociada.

CheckBox

Permite modelar campos representados por un control checkbox con valores del campo de tipo lógico, donde los valores posibles son “SI/NO”. Ver detalle del uso del control.

Lista de Valores



Permite modelar campos representados por un control de tipo lista de valores, cuyos valores posibles están predeterminados en base a una lista preexistente o bien se definen en el momento que se modela el campo, en la pestaña "Relación" de las propiedades del mismo. Ver detalle del uso del control.

Creación de Elementos Gráficos.

Al presionar este icono se despliega un subconjunto de elementos gráficos.

Título

Se utiliza para incluir un texto con un formato destacado.

Etiqueta

Se utiliza para incluir un texto libre y poder ubicarlo en cualquier sección.

Separador de Línea

Permite dividir secciones del formulario.

Espacio en Blanco
Se utiliza para incluir líneas en blanco.

Botón Múltiples Ocurrencias
Permite agregar y eliminar iterativos. Puede agregarse en cualquier sector del formulario, aunque solo tiene sentido que se encuentre dentro de contenedores iterativos.

Creación de Contenedores
Los contenedores son elementos gráficos que permiten agrupar otros elementos bajo ciertos criterios.

Para más detalles sobre su configuración y atributos, ver Propiedades de Contenedores.
Al presionar sobre este icono se despliega un subconjunto de elementos contenedores.

Filas
Son el agrupamiento general en el área de modelado gráfico. Dentro de una fila se puede poner una cantidad ilimitada de elementos, aunque se recomienda que no se exceda el ancho de la ventana ya que la fila se expande aumentando el ancho con respecto a las demás.

Las filas pueden ser desplazadas hacia arriba o hacia abajo moviendo todo su contenido.
Para mover una fila se debe mantener presionado el botón izquierdo del mouse con el cursor, haciendo foco sobre la fila que se desea mover y arrastrarla hacia arriba o abajo de otra.
Las filas solo pueden ser ordenadas dentro del contenedor donde se encuentran, ya sea el área general o un contenedor creado.

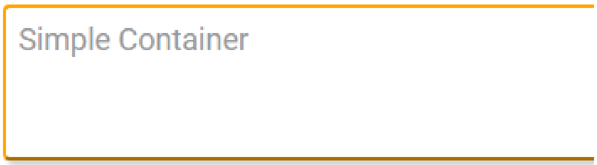
Para eliminar una fila se debe posicionar el mouse sobre la misma, donde se visualiza a la derecha la opción de eliminar .

Como mecanismo de prevención de errores, se muestra un aviso de confirmación y si se acepta se elimina la fila y todo su contenido, incluyendo campos.

Si el formulario ya contiene datos, no se permite eliminar filas que contengan campos.

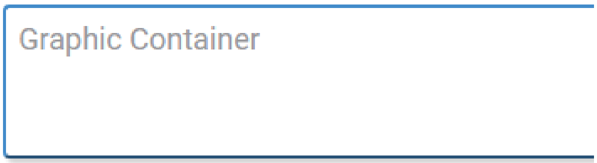
Contenedor Simple
Se visualiza un rectángulo a modo de caja, el cual puede contener cualquier elemento del formulario (campos, elementos gráficos e inclusive otros contenedores).

Para su distinción de los otros contenedores, su contorno es de color naranja.



Contenedor Gráfico
La diferencia con un contenedor simple es que todo lo que se encuentre dentro del contenedor gráfico se visualiza en modo de ejecución como dentro de un acordeón.
Se puede ver en la vista previa dicho contenedor transformado en acordeón.

Para su distinción de los otros contenedores, su contorno es de color azul.



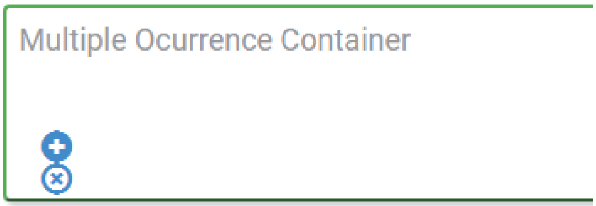
Contenedor de Múltiples Ocurrencias
Puede contener cualquier elemento del formulario (campos, elementos gráficos, e inclusive otros contenedores).

A diferencia de los demás contenedores, todos los campos que se incluyan dentro se definen como un conjunto de campos de múltiples ocurrencias. Un contenedor de múltiples ocurrencias sirve para agrupar secciones del formulario, al que se le agregan operaciones (ocultar, relacionar reglas, etc).

Su principal funcionalidad es que todo el contenido es definido como múltiple, es decir, se pueden ir generando copias y eliminarlas desde los íconos a la derecha del elemento. Este contenedor se crea por defecto con estos botones, pero se puede eliminar en caso de que no se requieran.

A diferencia de los otros tipos de contenedores, éste no puede contener otros contenedores iterativos dentro, ni tampoco contenedores básicos con la propiedad Grupo de Campos marcada. Ver [Propiedades de Contenedores](#).

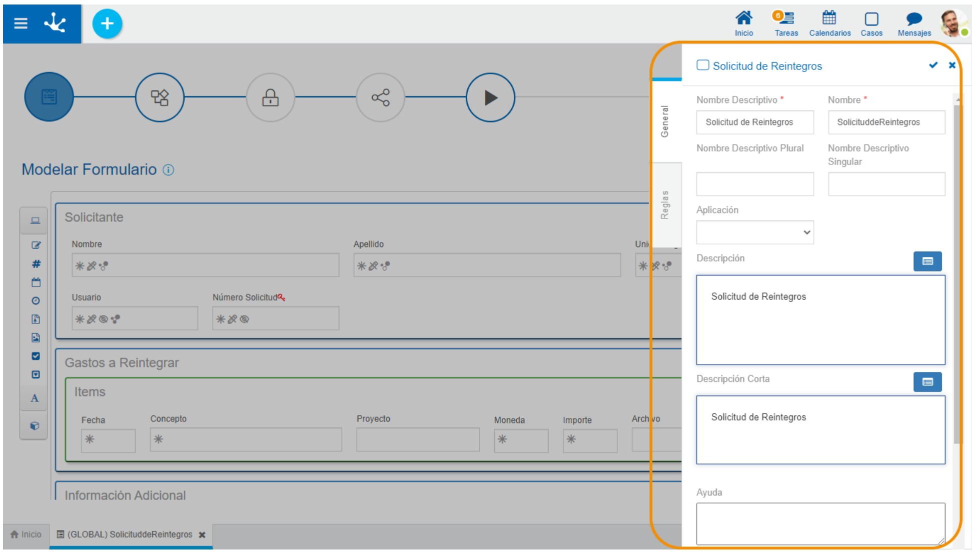
Para diferenciarlo de otros contenedores, su contorno es de color verde.



3.5.3.2. Propiedades de Formularios

Las propiedades de los formularios pueden ingresarse tanto en el momento de su creación, como en la modificación de uno existente.

El ingreso al panel de propiedades del formulario se realiza utilizando el ícono que se encuentra en la imagen que representa al formulario en el ángulo superior izquierdo.



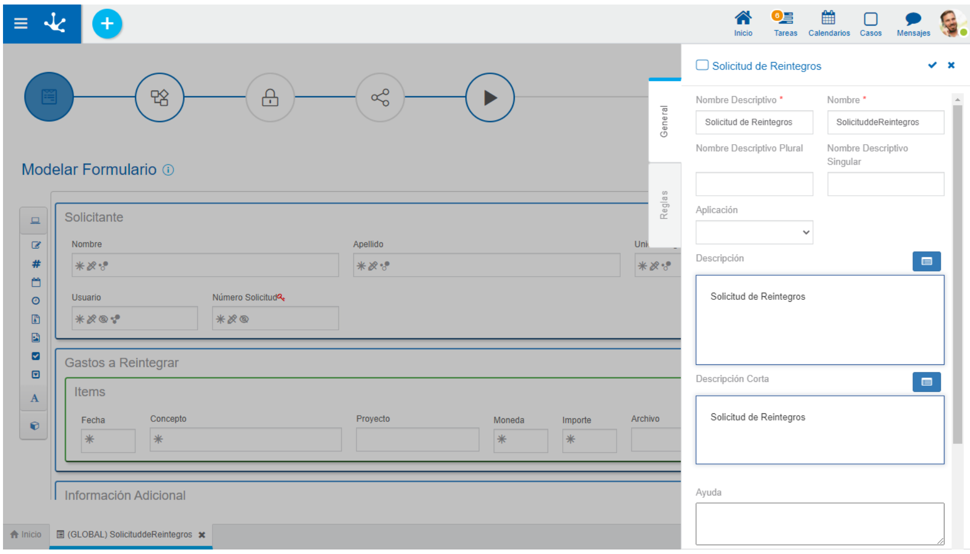
Pestañas

- [General](#)

- [Reglas]

3.5.3.2.1. General

El panel de propiedades se visualiza en la parte derecha del asistente de formularios, donde la primera pestaña corresponde a información general.



> *Un asterisco "*" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Nombre Descriptivo
Es el nombre que utiliza el usuario para referenciar el formulario, visualizarlo en la galería de formularios y en el árbol de objetos. Soporta multi-idioma.

Nombre
Se usa internamente para referenciar el formulario dentro de reglas o como parámetro. Soporta multi-idioma.

Nombre Descriptivo Plural
El texto ingresado en esta propiedad es utilizado como título en la [grilla de resultados] del formulario, mientras que si no se completa, se utiliza la propiedad Nombre Descriptivo.

Nombre Descriptivo Singular
El texto ingresado en esta propiedad es utilizado en la [lista de entidades relacionadas], mientras que si no se completa, se utiliza la propiedad Nombre Descriptivo.

Descripción
Texto que define al formulario describiendo su funcionalidad y opcionalmente su contenido. Soporta multi-idioma, y puede incluir valores de variables del mismo formulario que se incorporan mediante el uso del asistente de variables.

Descripción Corta
Versión resumida de la propiedad Descripción. Soporta multi-idioma y puede incluir valores de variables del mismo formulario, que se incorporan mediante el uso del asistente de variables. Puede ser utilizada a modo descriptivo al relacionar entidades.

Ayuda

Texto informativo que se visualiza en el portal, al presionar el ícono cuando se utiliza el formulario y el mismo no tiene proceso asociado. Soporta multi-idioma.

Imagen
Imagen que se visualiza en las grillas de Formularios y Tareas, Plantillas y en la barra superior al crear formularios. Se recomienda que esté relacionada con la funcionalidad o información que el formulario representa.
Informa sobre la utilidad de la imagen.
Permite elegir una imagen desde una ventana de selección de archivos.
Permite eliminar la imagen actual asociada al formulario.

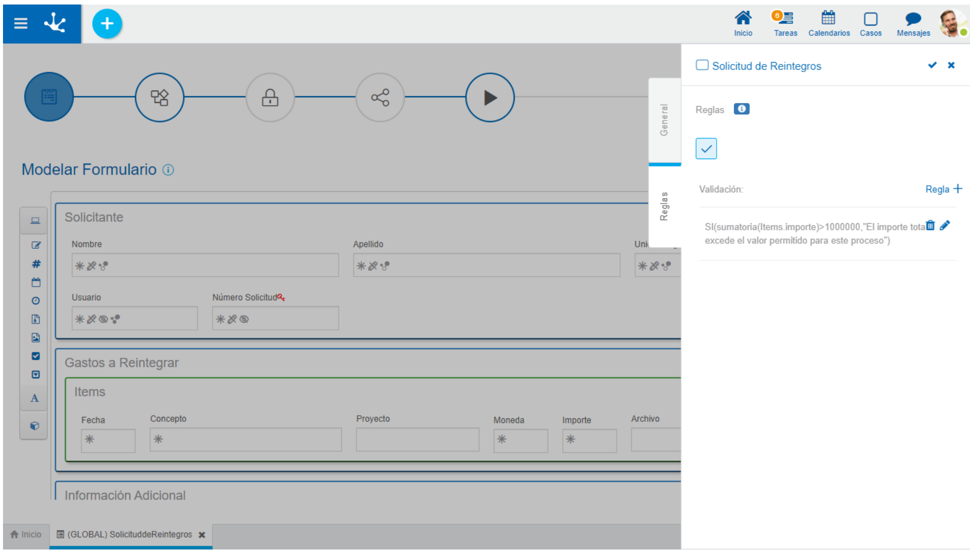
Actions

The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.5.3.2.2. Reglas

La última pestaña del panel lateral corresponde a las reglas de validación asociadas al formulario ágil.



Rules
It is possible to define validation rules associated with the form.

Validation

Rule + Opens an edit area where you can define the condition that determines if the form is correct or not. It is possible to define more than one rule. If rules are defined, the icon is displayed with light blue borders.

Shows syntax examples for writing the rules.

Operations

Saves the new or modified rule

Cancels the operation

Edits the existing rule

Deletes the rule

Validations with Advanced Rules

If a validation with an advanced rule needs to be incorporated, an existing rule must be selected from the drop-down list and press to add the rule to the grid. It can be selected using the options "Create", "Modify" and "Delete" when the validation is executed, either when creating a form instance, modifying it or deleting it. Through this icon you can unlink the rule from the grid.

3.5.3.3. Propiedades de Elementos

El ícono se hace visible al pasar el cursor sobre cada elemento del Area de Modelado Gráfico del formulario, permitiendo ingresar al panel lateral de propiedades que define a cada uno de los diferentes tipos de los elementos.

Tipos

- Gráficos
- Campos
- Contenedores

Panel Lateral

En el panel lateral se pueden visualizar y modificar las propiedades correspondientes a cada tipo de elemento. En la parte superior derecha del mismo se pueden seleccionar íconos para realizar las siguientes acciones:

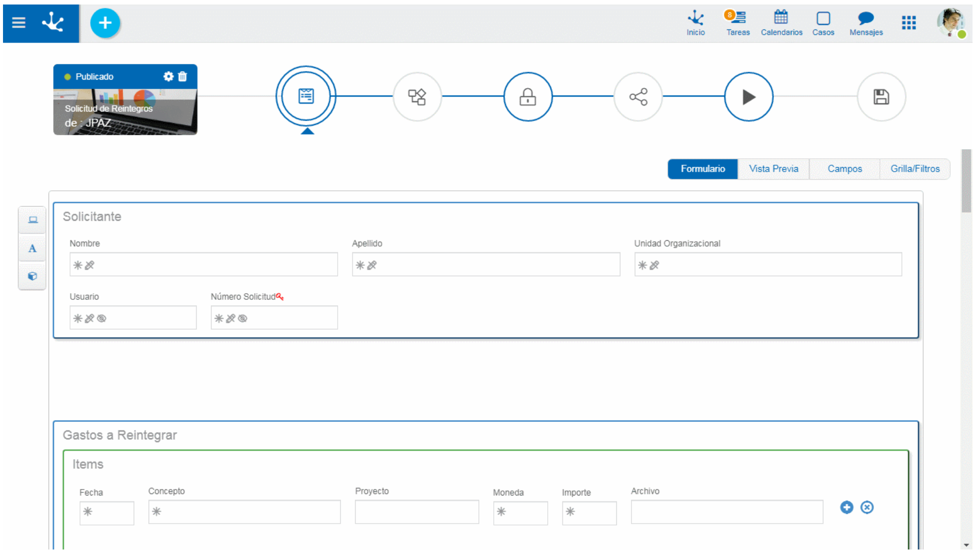
Aceptar: Confirma las modificaciones realizadas a las propiedades del elemento y cierra el panel.
Cerrar: Cierra el panel de propiedades sin guardar las modificaciones que se hayan realizado.

3.5.3.3.1. Propiedades de Elementos Gráficos

En esta sección se explican las propiedades de los distintos tipos de elementos gráficos presentes en el modelador de formularios.

De todos los elementos de este tipo, solo es posible editar los elementos "Título" y "Etiqueta", ya que el resto no tiene disponible el ícono .

Presionando el ícono sobre un elemento gráfico se abre el panel de propiedades.



Un asterisco "" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Texto

Texto del título o la etiqueta.

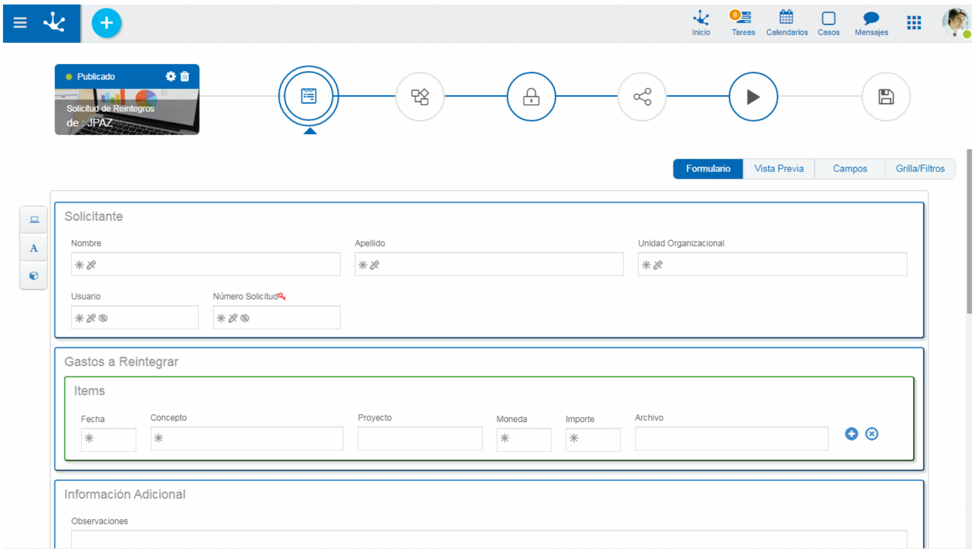
Ancho

Se utiliza para modificar el ancho que utiliza el campo en la fila, pudiendo seleccionar valores entre 1 y 12, siendo 12 el ancho total de la fila.

3.5.3.3.2. Propiedades de Campos

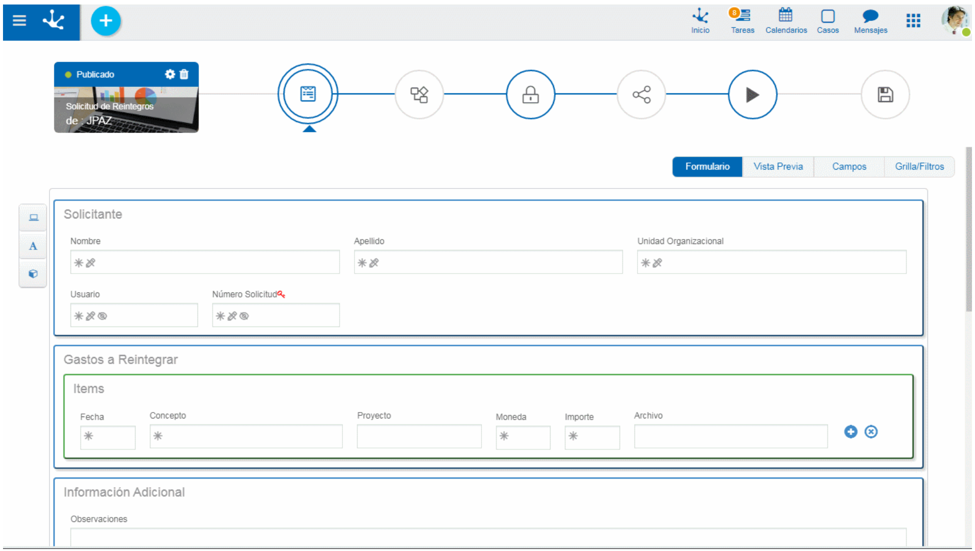
Presionando el ícono sobre el campo se abre el panel vertical de la derecha, que contiene las siguientes pestañas:

- General
- Avanzado
- Relación



3.5.3.3.2.1. General

El panel de propiedades se visualiza a la derecha del modelador de formularios, donde la primera pestaña corresponde a información general.



> *Un asterisco "*" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Etiqueta

Permite ingresar el texto que se visualiza sobre el campo. Actúa conjuntamente con el prefijo para referenciar al campo en los mensajes de validaciones y admite espacios en blanco.

Prefijo

Este indicador de prefijo se utiliza para la conformación de mensajes de error durante la carga de información. El mismo es de ingreso obligatorio. Permite seleccionar los valores: "El", "La", "Los", "Las".

Nombre

Es el nombre que se asigna para referenciar a un campo en el modelado, permitiendo identificar unívocamente el campo dentro del formulario. Se utiliza en los asistentes de reglas para referirse al campo dentro de las condiciones. Se genera automáticamente a partir de la propiedad Etiqueta, puede ser modificado por el usuario y no admite espacios ni caracteres especiales.

Identificador

Es el nombre que se asigna para referenciar a un campo en el código de programación, se utiliza para referirse al campo dentro del código Java en la pestaña "Código de Ejecución" de las reglas avanzadas y en el código JavaScript en la pestaña "Edición Avanzada" del modelador de formularios. Permite identificar unívocamente el campo dentro del formulario modelado. Puede ser modificado por el usuario, mientras no se hayan cargado datos al formulario y no admite espacios ni caracteres especiales.

Descripción

Texto que define al campo y opcionalmente su contenido. Soporta multi-idioma.

Reglas

Se pueden definir [reglas]() de comportamiento, validación y cálculo, asociadas a un campo.

Obligatorio

Indica si el campo debe informarse en forma obligatoria al crear una nueva instancia del formulario o al modificar una ya existente.

Obligatorio No obligatorio (predeterminado)

Rule + Abre un área de edición donde se puede definir una regla para determinar la condición de obligatoriedad, mediante el uso de un asistente<<al asisatente>> (ctrl + espacio). Si se define una regla, el ícono se visualiza con bordes color celeste.

Visible

Indica si el campo es visible. Si no se marca esta propiedad, el campo no se visualiza en las instancias del formulario.

Visible (predeterminado) No visible

Rule + Abre un área de edición donde se puede definir una regla para determinar la condición de visibilidad, mediante el uso de un asistente (ctrl + espacio). Si se define una regla, el ícono se visualiza con bordes color celeste.

Editable

Indica si el campo es editable. Si no se marca esta propiedad, el usuario no puede ingresar o modificar valores en el campo.

Editable (predeterminado) No editable

Rule + Abre un área de edición donde se puede definir una regla para determinar la condición de editabilidad, mediante el uso de un asistente (ctrl + espacio). Si se define una regla, el ícono se visualiza con bordes color celeste.

Válido

Rule + Abre un área de edición donde se puede definir la condición que determina si el valor del campo es correcto. Es posible definir más de una regla. Si se definen reglas, el ícono se visualiza con bordes color celeste.

Cálculo

Rule + Abre un área de edición donde se puede definir la expresión que debe ejecutarse para calcular el valor del campo. Si se define una regla, el ícono se visualiza con bordes color celeste.

Visualización en el Modelador

Obligatorio / Obligatorio con Regla

No visible / Visible con Regla

No editable / Editable con Regla

Valida con Regla

Calcula con Regla

Muestra ejemplos de sintaxis para escribir las reglas.

Operaciones

Guarda la regla nueva o modificada

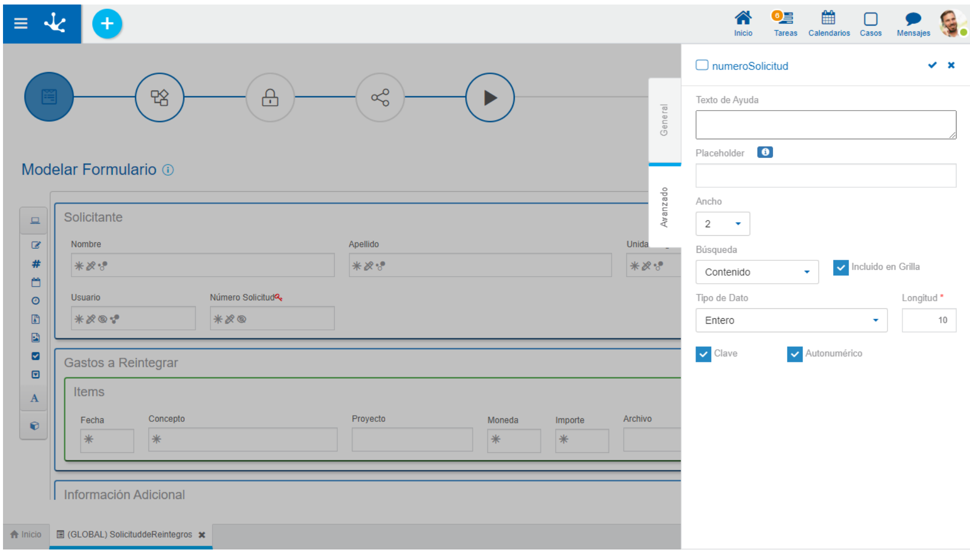
Cancela la operación

Edita la regla existente

Elimina la regla

3.5.3.3.2.2. Avanzado

La segunda pestaña del panel lateral corresponde a propiedades adicionales para definir el comportamiento y funcionalidad de un campo.



> *Un asterisco "*" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Texto de ayuda

Su función es orientar al usuario sobre el contenido a cargar en el campo. El texto ingresado como ayuda se muestra cuando el usuario posiciona el cursor sobre el campo.

Placeholder

Su función es orientar al usuario sobre el contenido a cargar en el campo. A diferencia de la propiedad Texto de Ayuda, el texto ingresado como placeholder se visualiza dentro del campo.

Ancho

Se utiliza para modificar el ancho que utiliza el campo en la fila, pudiendo seleccionar valores entre 1 y 12, siendo 12 el ancho total de la fila.

Multilínea

Esta propiedad determina si el campo se visualiza en modo de caja de texto al utilizar el formulario, permitiendo editar el texto en un área de mayor tamaño. Esta propiedad solamente está visible si el campo es de tipo texto.

Valor Predeterminado

Permite asignar el valor que el campo tiene en forma predeterminada al momento del primer ingreso de datos, agilizando la carga de valores. Los valores predeterminados se definen a partir de las funciones disponibles para el tipo de campo. Cada función retorna un valor al momento de utilizar el formulario y pueden combinarse resultados de más de una función con texto.

Búsqueda

Permite utilizar el campo como filtro en las búsquedas de instancias del formulario.

Incluido en Grilla

Determina si el campo se visualiza en la grilla de resultados donde se muestran las instancias del formulario.

Tipo de Dato

Determina el formato del dato que puede ingresarse en el campo. El conjunto de datos soportado varía, dependiendo del tipo de campo que se haya creado a partir de los elementos de la barra de herramientas lateral izquierda.

Longitud
Determina la longitud máxima del valor dependiendo del tipo de dato. Este atributo sólo está visible si el campo es de tipo texto o numérico.

Clave
Cada formulario requiere que al menos un campo sea definido como clave, la misma permite identificar unívocamente una instancia del formulario, es decir dicho valor no puede repetirse entre instancias del mismo formulario.

Clave Alternativa
Determina que el valor del campo es único entre instancias del mismo formulario pero no es utilizado como clave.

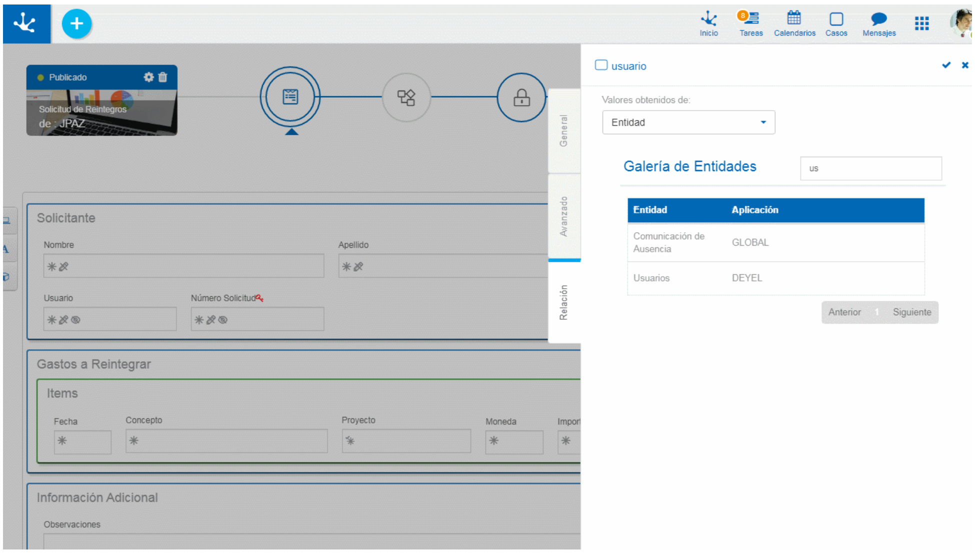
Autonumérico
Determina que el valor del campo es generado automáticamente al momento de crear la instancia del formulario. Con esta propiedad marcada, un número único es asignado a la instancia del formulario en forma automática. El campo no puede definirse con la propiedad Editable marcada,

3.5.3.3.2.3. Relación
Una relación permite obtener valores de diferentes orígenes para el campo que se está modelando. Se describen a continuación los diferentes tipos de orígenes.

- Entidades
- Lista de valores

Entidades

A través del modelador de formularios se modelan las entidades del negocio. Es posible además modelar relaciones entre entidades para representar lo interacción de las mismas.
Para definir una relación con una entidad, primero se debe seleccionar la entidad con la que se se quiere establecer una relación, para luego completar un conjunto de propiedades.



Un asterisco "" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Nombre Descriptivo de Relación

Nombre representativo de la relación, orientado al usuario con perfil de ejecución.

Nombre de Relación

Nombre de la relación entre las dos entidades, es un atributo orientado al modelado. No admite espacios y debe ser único por Formulario modelado.

Atributo Clave

Representa el atributo de valor único de la entidad con la que se quiere establecer una relación. La entidad que se está relacionando puede tener más de un atributo cuyo valor sea único, uno es su clave y en caso de poseerla su clave alternativa.

Permisos

Los permisos de la relación definen que funcionalidades se habilitan en el control de la relación.

Consulta

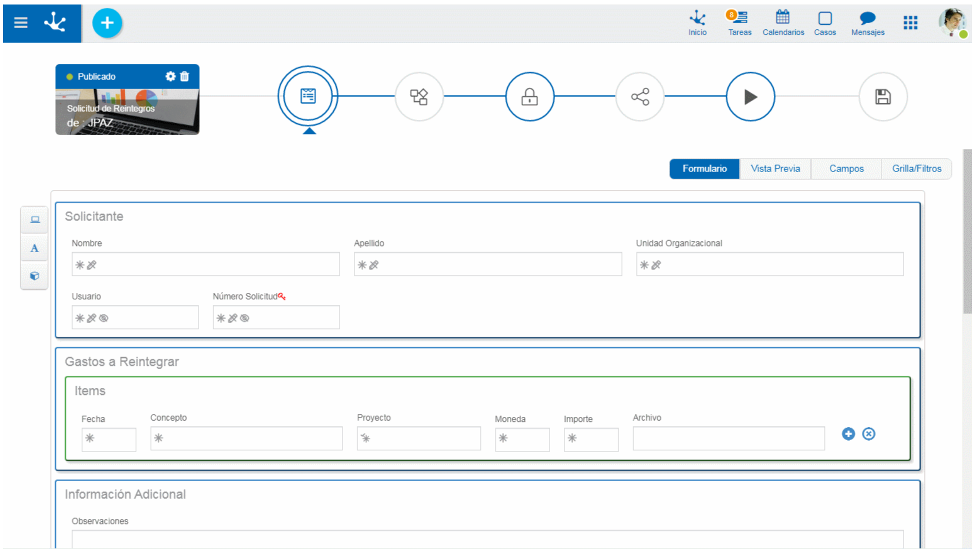
Al marcarse esta propiedad se le permite al usuario visualizar la instancia de entidad con la que se establece relación en el uso del formulario.

Búsqueda

Al marcarse esta propiedad se le permite al usuario acceder a la grilla de resultados para buscar la instancia de entidad con la que se quiere establecer relación en el uso del formulario.

Atributo Relacionado

Esta marca indica que el valor del campo se recupera a partir del valor de un atributo de otra entidad relacionada al crear o actualizar una instancia de formulario. Se debe seleccionar una de las relaciones definidas en el formulario y luego indicar a qué atributo de la entidad relacionada se vincula.



> *Un asterisco "*" en la etiqueta indica que la propiedad es obligatoria.*

Al marcar la propiedad Atributo relacionado, se habilitan las siguientes propiedades:

Nombre de la Relación
Se visualiza la lista de relaciones definidas en el formulario, permitiendo seleccionar una de ellas.

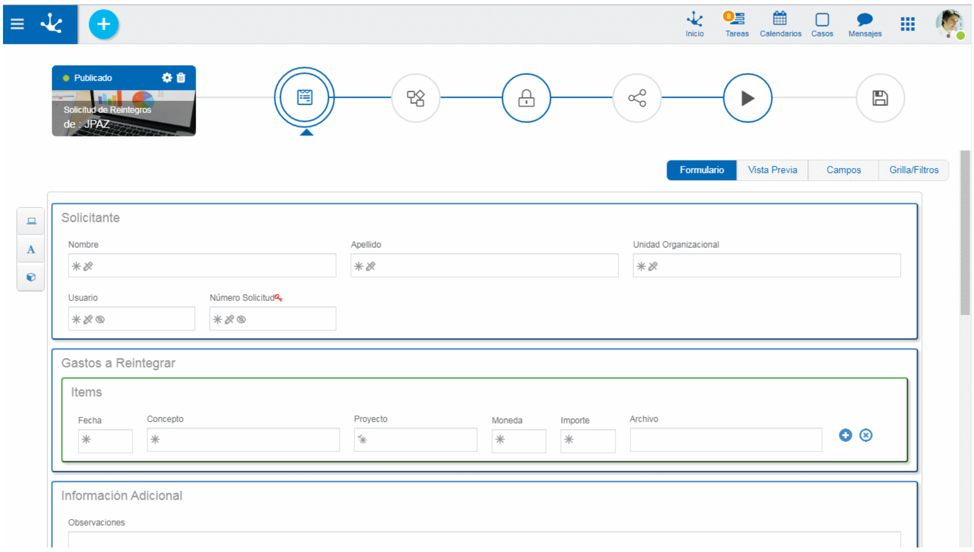
Atributo de la Entidad
Se visualiza la lista de atributos de la entidad seleccionada compatible con el tipo del campo.

Referencia
Esta propiedad sin marcar indica que una vez cargado el valor recuperado, no vuelve a modificarse automáticamente aunque el valor del atributo recuperado se modifique. Al estar marcada, el valor del campo siempre está sujeto al valor actual del atributo recuperado, es decir se visualiza automáticamente el valor actualizado.

Lista de Valores

Allows to define a set of values grouped under some criteria so that the application user knows the possible values a field can take.

New lists can be created from the modeler, then edit and relate them to form fields.



> *Un asterisco "*" en la etiqueta indica que la propiedad es obligatoria.*

To create a new list of values, click on the icon .
A panel opens to enter the name of the list, the application to which it belongs is selected, if alphabetical sorting is indicated, descending order can be selected. Pressing the "Accept" button creates the list of values, subsequently allowing the entry of new values.

The list of values can be used in any other field of the same or another form.

Properties

Select a list

Allows to select a particular list from the set of already existing lists, being able to filter such set by entering text into the search field that is above the list.

Allows empty

If this property is checked, the empty value is included as the first option in the list. Otherwise the first value in the list is displayed in the field.

Autocomplete

If this property is checked, predictive text functionality is presented to users. Based on the characters that the user types, a subset of values is proposed, which coincide with all or part of the text entered. This facility is called autocomplete.

Other Elements

Open in modeler

Allows using the list of values modeler for the definition, instead of the field properties panel.

Allows to filter values from the list based on the characters entered. If a list is very long it helps users to easily visualize the desired values.

Enables an option that allows to add the internal code to the list values.

Operations on Values

- Allows adding each entered value to the list of values.
- It is displayed if the list has the [Icons property](#) modeled. It allows to associate icons to the list values.

- Double click: Allows to modify a value in the list.
- Move: Allows to change the position of a value within the list by dragging the value with the mouse.

Hovering the cursor over each of the values entered, a set of icons is displayed and this allows to perform different operations.

- Allows to delete a value from the list of values. Once deleted, it is displayed in gray and crossed out.
- Allows to restore a previously deleted value.

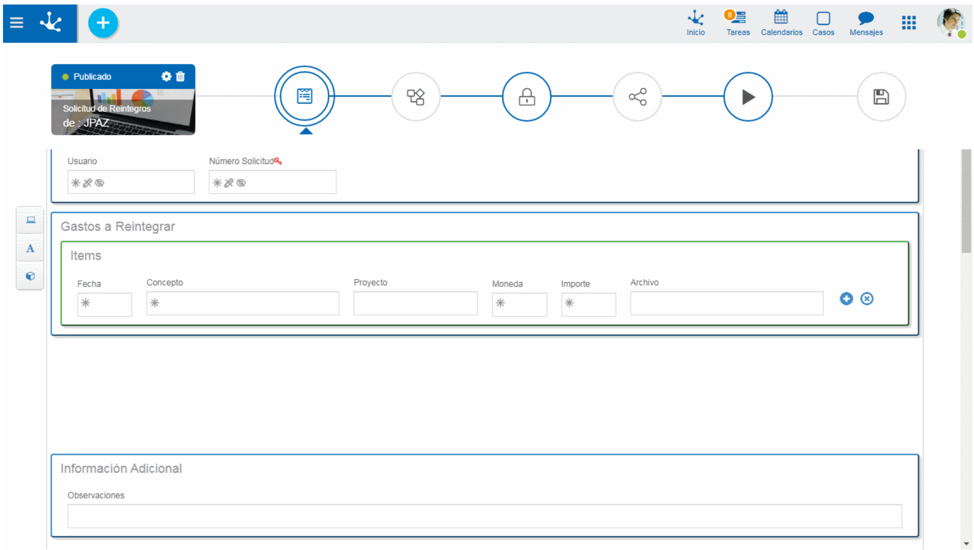
Display the Selected Line

- Hides the icons that are displayed.
- Shows hidden icons.

3.5.3.3.3. Propiedades de Contenedores

Las propiedades de los contenedores varían según el tipo.

- [Contenedor Simple](#)
- [Contenedor Gráfico](#)
- [Contenedor Múltiples Ocurrencias](#)



Un asterisco "" en la etiqueta indica que la propiedad es obligatoria.*

Propiedades

Nombre Descriptivo
Permite identificar al contenedor con un nombre orientado al usuario final. Se admiten espacios y caracteres especiales.

Nombre
Permite identificar al contenedor con un nombre orientado al usuario modelador. No admite espacios ni caracteres especiales.

Ancho
Se utiliza para modificar el ancho del contenedor, pudiendo seleccionar valores entre 1 y 12, siendo 12 el ancho total.

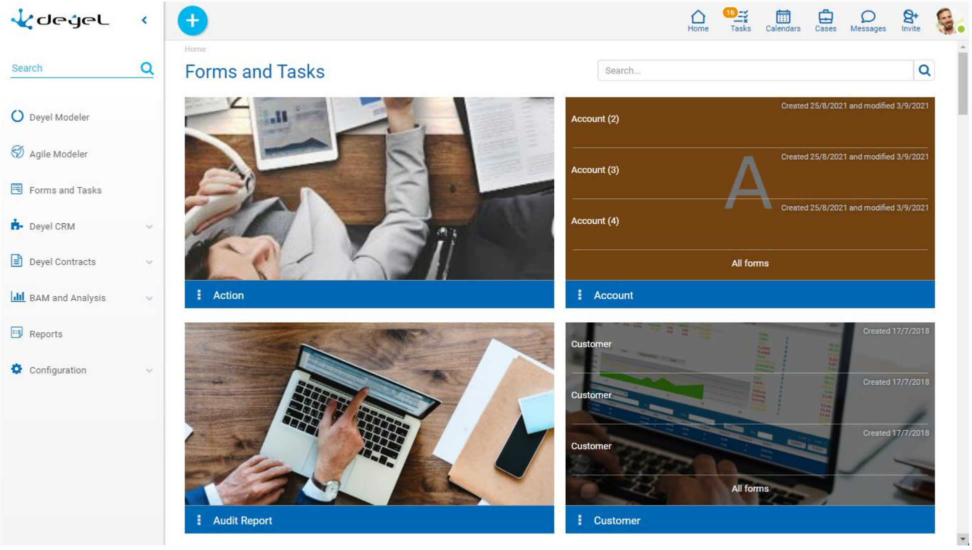
Desplegado
Indica si el contenedor se visualiza desplegado, mostrando su contenido, o cerrado al utilizar la instancia del formulario. Se utiliza solamente para contenedores de tipo gráfico.

Visible
Esta propiedad indica si el contenedor y su contenido son visibles al utilizar la instancia del formulario. Permite la definición de reglas de visibilidad asociadas al contenedor al igual que las definidas para los campos.

3.6. Modeler

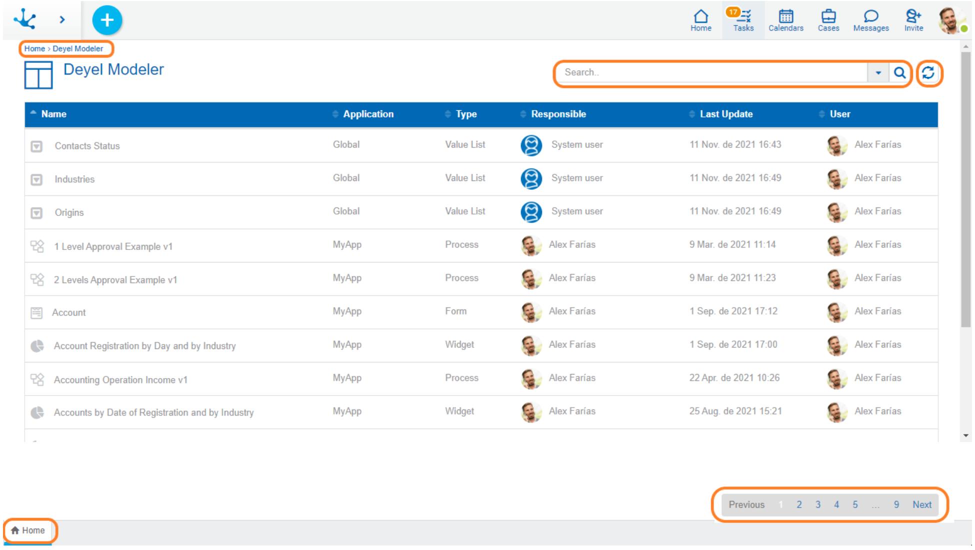
The menu option "Deyel Modeler" allows IT users to design and build low-code applications. Using a single interface, different **Deyel** objects can be created and maintained. For each of them, specific modeling tools are used in an intuitive and easy-to-use environment.

For each type of object, its modeler allows to use a set of development functions, such as graphic modeling areas, toolbars, properties panels, and design wizards, among others.



Sections

- Portal Top Toolbar
  - Context menu with the modeler's own functionality.
- Breadcrumb
- Objects Grid
- Search Bar
- Update Grid
- Ordering
- Pagination
- Start



3.6.1. Characteristics

Phase 2: Forms Modeling > Deyel Modeler

Modeler Context Menu

The context menu adopts the general characteristics of the portal, but adapted to the modeler's own functionalities.

Icons Menu

This menu is enabled by hovering over the icon and allows to create different types of objects and import them.

New Process

New Form

New Rule

New Adapter

New Application

New Dashboard

New Widget

New Value List

Import

Displayed Menu

This menu is displayed by pressing the icon , unfolding a vertical panel with the following sections:

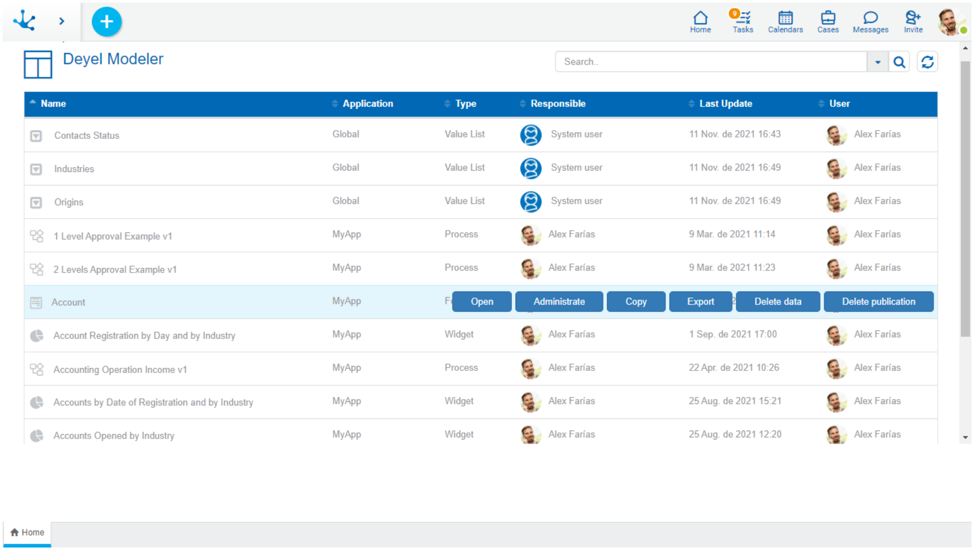
- Options associated with the modeler, in light blue.
  - Process
  - Form
  - Rule
  - Adapter
  - Application

- Dashboard
- Widget
- Value List
- Report
- Import

- Most used, in gray.
  - Forms and processes most used by the user.

Objects Grid

The objects grid allows to display all objects defined in **Deyel** and perform operations with each one of them.



Columns

Name

Name used in the interface to reference the object, corresponds to the Name property of each object.

Application

Application the object belongs to, corresponds to the Application property of each object.

Type

Identifies the type of object defined in **Deyel**.

Responsible User

The user that created the object.

Last Update

Date of last update made to the object.

User

Last user that modified the object.

Operations

The operation buttons are enabled when hovering over the row selected in the grid and they depend on the type of object selected.

Adapter

- Open
 Opens the selected adapter properties panel in a new tab, for modification.

- Delete
 Deletes the selected adapter, after confirmation.

Application

- Open
 Opens a reduced view of the objects grid, only with those that belong to the selected application.

- Modify
 Opens the selected application properties panel, for modification.

- Delete
 Deletes the selected application, if it is not associated with other objects of **Deyel**.

- Export
 Opens a panel for the user to select and confirm the application export.

Form

- Open
 Opens the form modeler in a new tab.

- Administrate
 Opens a panel with the results grid corresponding to the selected form.

- Copy
 Copies the selected form into a new modeler tab. Its properties must be modified to save it as a new form.

- Delete Data
 Deletes the existing instances of the selected form, after confirmation.

- Delete Publication
 Removes the existing instances of the selected form and its publication after confirmation, that is, it cannot be used from the portal.

- Export
  Opens a panel for the user to select and confirm the form export.

Agile Form

- Open
  Opens the agile forms modeler in a new tab.

Permissions

- Open
  Opens a panel to show the permission properties.

- Modify
  Opens a panel with the permission properties for modification.

- Delete
  Allows to delete the permission selected if not in use, otherwise the user receives a message.

- Export
  Opens a panel for the user to select and confirm the permission export.

Processes

- Open
  Opens the process modeler in a new tab.

- Tests Plan
  Opens a panel with the grid corresponding to the tests plan defined for the process.

- Delete
  Deletes the selected process, after confirmation.

- Export
  Opens a panel for the user to select and confirm the process export.

Rule

- Open
  Opens the rules modeler in a new tab.

- Delete
  Deletes the selected rule, after confirmation.

- Export
  Opens a panel for the user to select and confirm the rule export.

Roles

- Open
  Opens a panel to show the role properties.

- Modify
  Opens a panel with role properties for modification.

- Delete
  Allows to delete the role selected if not in use, otherwise the user receives a message.

- Export
  Opens a panel for the user to select and confirm the role export.

Dashboard

- Open
  Opens the dashboard modeler in a new tab.

- Delete
  Deletes the selected dashboard.

- Export
  Opens a panel for the user to select and confirm the dashboard export.

Widget

- Open
  Opens the widget modeler in a new tab.

- Delete
  Deletes the selected widget, after confirmation.

- Export
  Opens a panel for the user to select and confirm the widget export.

Value List

- Open
  Opens the value list modeler in a new tab.

- Delete
  Deletes the selected value list, after confirmation.

- Export
  Opens a panel for the user to select and confirm the value list export .

Search Bar and Filters

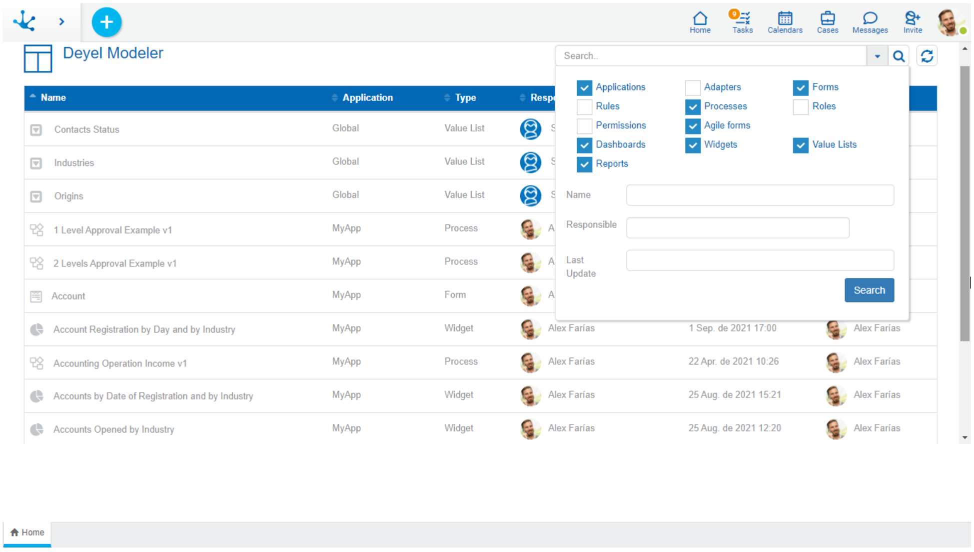
The search bar allows to see a reduced grid of objects, based on the definition of filters.

When entering a text in the bar and pressing the icon or the "Enter" key, all the objects that contain the text entered in the Name column are displayed in the grid.

Filters

The icon allows to display a panel with filters, they can be combined to define the selection criteria of the grid rows.

Filters can be combined by checking object types and values in the grid columns. Once the filter selection was made, press the "Search" button to apply them.



Filters for Object Types

- Applications
- Adapters
- Forms
- Agile Forms
- Rules
- Processes
- Roles
- Permissions
- Dashboards
- Widgets
- Value Lists
- Reports

Filters for Column values

- Name
- Responsible User
- Last Update

Update Grid

The icon allows to update the grid of objects to reflect recent changes.

Sorting

The icon is displayed in each column of the grid and allows to sort rows, ascending or descending, based on that column. Sorting can be done on a single column.

Paging

If the number of rows exceeds the maximum number to display on a page, the buttons at the bottom right of the grid can be used to move to the previous and next page, or to select a specific page.

Home

The tab with the icon corresponds to the modeler's grid. When opening other objects in different tabs, the home tab always allows to return to the modeler's grid.

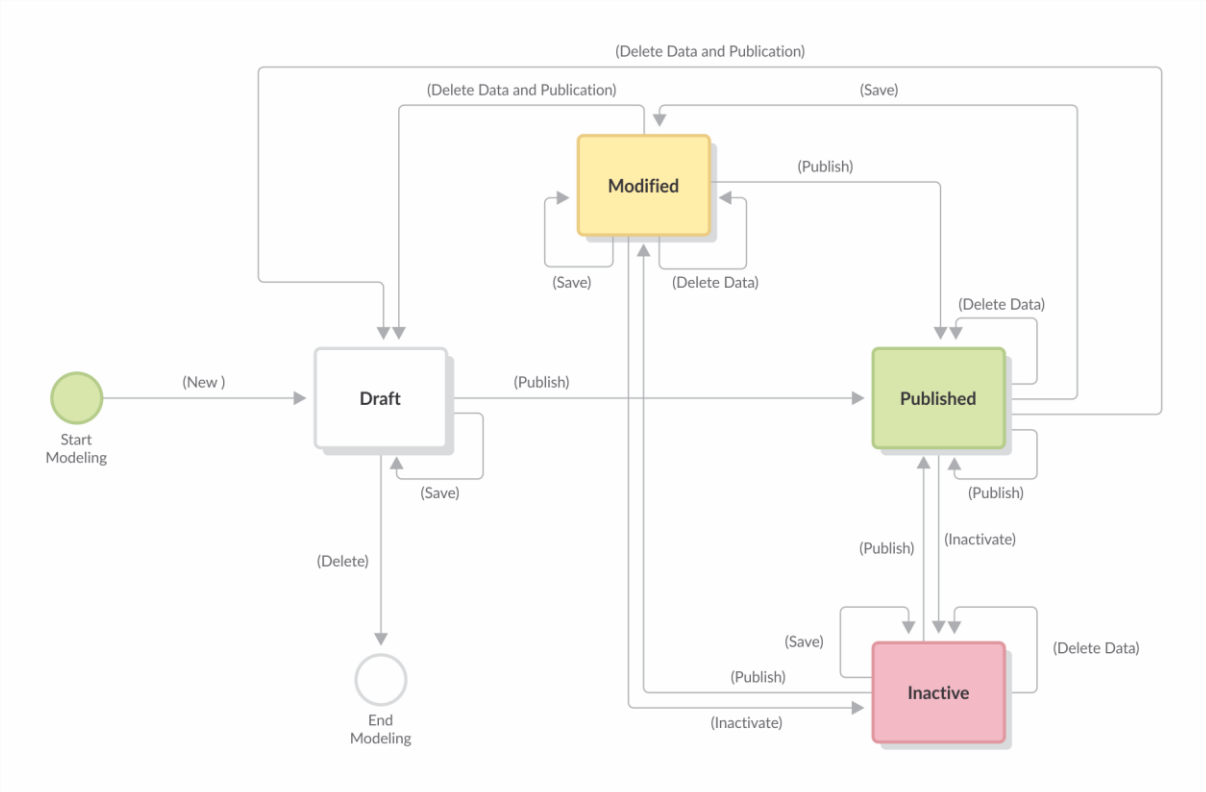
3.6.2. Object States

States indicate the stage of development in which **Deyel** objects are and if they are operational.

The following **Deyel** objects defined in applications have states:

- Form
- Agile Form
- Process
- Rule
- Dashboard
- Widget
- Value List
- Adapter
- Report

The possible states and the events that produce transitions among them are described below, ensuring the modelers of predictable behavior for each type of object.



Possible States

Draft
State corresponding to the beginning of the modeling or when it was saved but not published.

Published
State of the object once published, that is, it is available for use.

Modified
If an object is modified when it is in the "Published" state, it becomes "Modified".

Inactive
State corresponding to a published object for which only instances or cases can be shown.
As of processes, forms and agile forms, instances or cases of objects that are in this state cannot be created, delete or modified. On the other hand, rules can move to inactive state, if they are not being used in another object, that is, since they are inactive, they cannot be used in the modeling of another object.

> *Available in future versions ..*

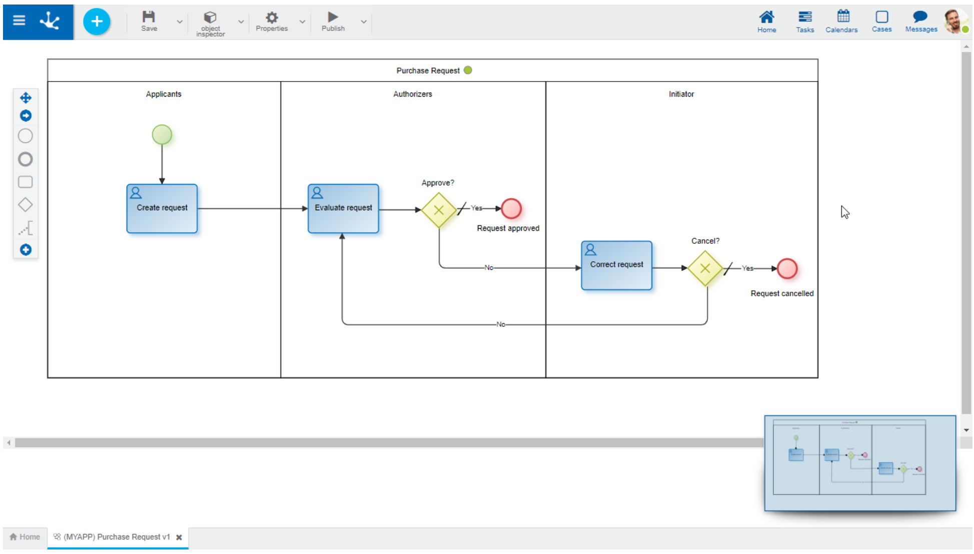
3.6.3. Processes Modeling

[Processes Modeling]

The process modeler from **Deyel** is a tool which allows IT modelers to design business processes in a collaborative work environment, using symbols from **BPMN 2.0** (Business Process Model and Notation)

By using this intuitive tool, the different business units can visualize the processes that are carried out within an organization and easily understand them.

When creating a [new process] or opening one already defined, it is allowed the access to a design space where the business process can be defined. Once it is finished, the process can be published and is available for use within the organization.



The general characteristics of the processes modeling environment and the main elements that compose it, are described in the topics:

- Modeling Facilities
- Graphic Elements

3.6.3.1. Modeling Facilities

Process Modeling> Introduction to process modeler

Process Modeling> Modeling a process from a template

New Process

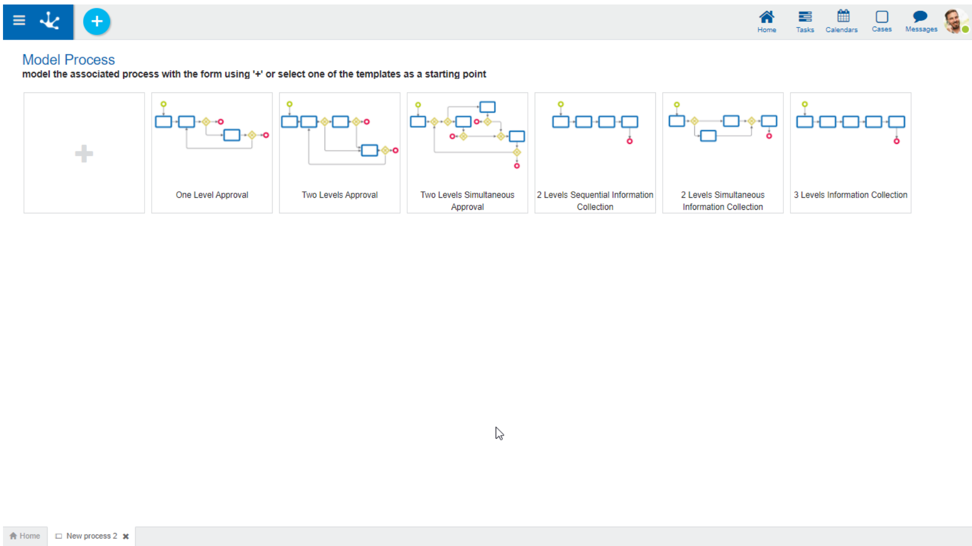
The modeler user from IT can design new processess which, after being defined and published, can be used in the portal of **Deyel**.

In the same work space and by using concepts from **BPMN 2.0** (Business Process Model and Notation), it can be simply modelated in an intuitive environment:

- The process diagram with its activities, interconnections, events, time, alerts and actors involved, in a way that allows interaction with the business user and that they easily understand the process scope.

- Business rules which define the behaviour of each of the diagram elements, as well as the validations, automatic actions for sending messages and integration with other applications.

Steps for Creating a New Process



Step 1: Open the Assistant with Templates

A new process can be created from the icon corresponding to the context menu.

- From the icon
- From the drop down menu with option "Process"

In both cases, an assistant is opened which allows to define the new process by selecting one of the predefined templates to take as a basis, or starting from an empty design area, represented by the first element on the grid.

Step 2: Enter the Templates Properties

The properties are grouped in containers.

Basic Information

Presents information common to all processes.

Name of the Process

The modelator should enter the name of the process they are creating.

Owner

User, organizational unit or role that is modelating the process, it is the responsible of the process maintenance. The predetermined owner is the logged in user.

Open panel of profile query.
Remove the selected participant.
Select an existing participant. This icon is enabled when removing a participant.

Initiator

The participant who can initiate the process, it can be a user, an organizational unit, a role or an agent. For a participant to start a process, it must be published. The predetermined initiator is the agent All users.
It is possible to invite an external user as initiator, informing their email. If more than one user is invited, the generation of a new role starts automatically.

Open a window "New Participant" to define a new role or invite an external user.
Open panel of profile query.
Remove the selected participant.
Select an existing participant. This icon is enabled when removing a participant.

Participants

This container is only visualized if the new process is defined from a predefined template. The participants in the container depend on the type of template that has been selected. If an authorization template is selected, authorizing users will be displayed, while if a data collection template is selected, participating areas will be displayed. The predetermined value for the participants is the logged in user.

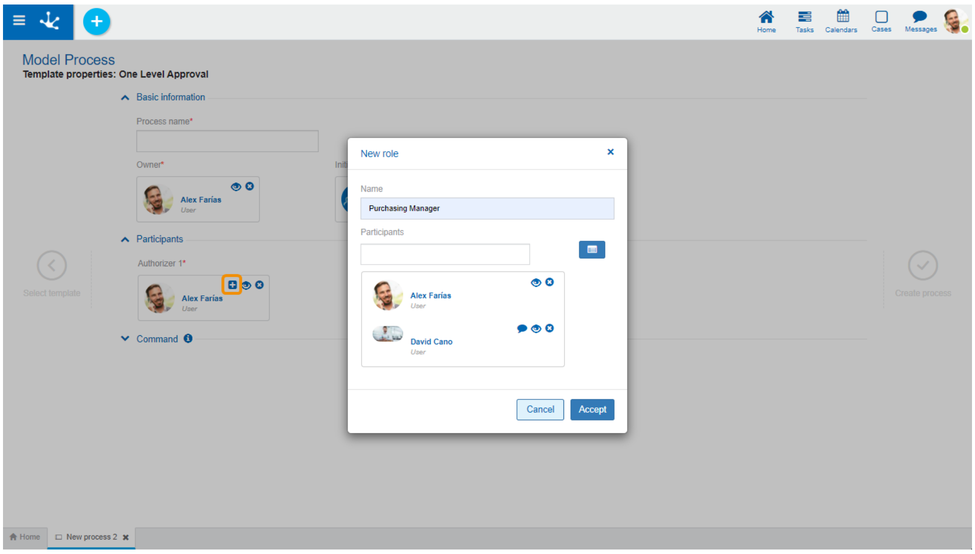
As many participants as there are actors in the selected template are defined. For each of the participants, a particular user can be selected, as well as an organizational unit, a role or an agent.

Open a window to define a new role or invite an external user.
Open panel of profile query.
Remove the selected participant.
Select an existing participant. This icon is enabled when removing a participant.

New Participant

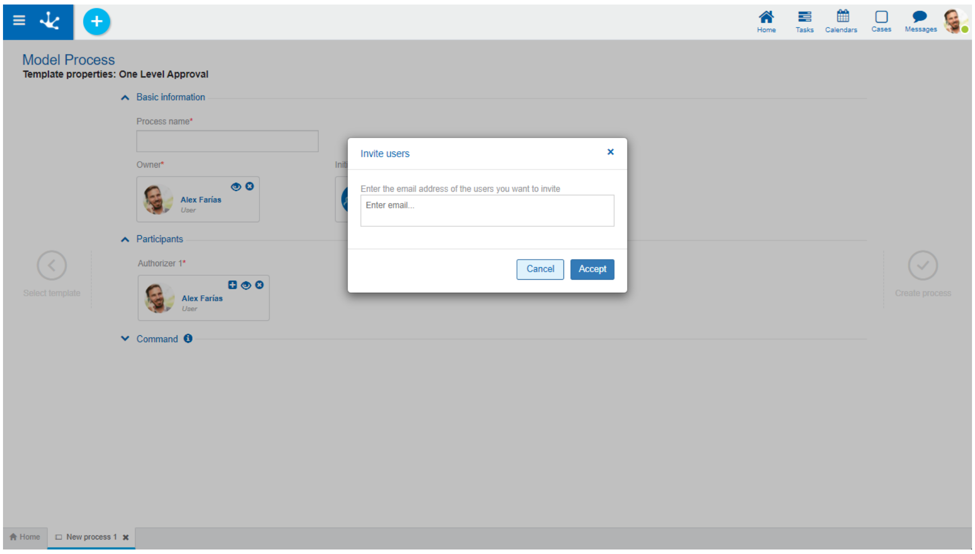
New Role

Allows to enter the name of the new role and the users that make it up.



Invite User

Allows to enter the mail of the external user who is invited. If more than one user is invited, the generation of a new role starts automatically.



Commands

A process can be used as a command, in which case the following properties must be completed.

Start from Chat

Indicates if a user can initiate th process from a conversation.

Command Name

Allows to enter the command name with which the process can be initiated from a conversation.

Define New Assistant

Indicates if a new chatbot is defined or if an existing one is selected.

Assistant Bot Name

If you mark the property Define New Assistant, the name of it must be indicated.

Select Assistant Bot

If you do not mark the property Define New Assistant, you must select which chatbot has the command.

Step 3: Close Properties Panel

Select Template

You can return to the templates assistant to select a new one.

Create Process

You move on to the process workspace and depending on the option selected in the assistant, the graphic modeling area is visualized with a different content:

- With the process diagram corresponding to the selected template.
- With the minimal figures so that a process can be saved, if none of the predefined templates has been selected.

Workspace Sections

- Top Toolbar
- Graphic Modeling Area
- Side Toolbar

3.6.3.1.1. Predefined Templates

Deyel provides a collection of standard process templates applicable to any organization. The modeler user of **Deyel** can select the template that best suits their needs to start modeling a new process immediately.

Besides, modifications deemed necessary to the process generated from the selected template can be added, as well as the definition of participants of each activity and the conditions that determine the data flow and its visibility.

According to the characteristics of the process they model, templates can be classified into groups.

Approval Process Templates

They model conditional branching situations, such as requests that are approved or sent for correction by the requestor.

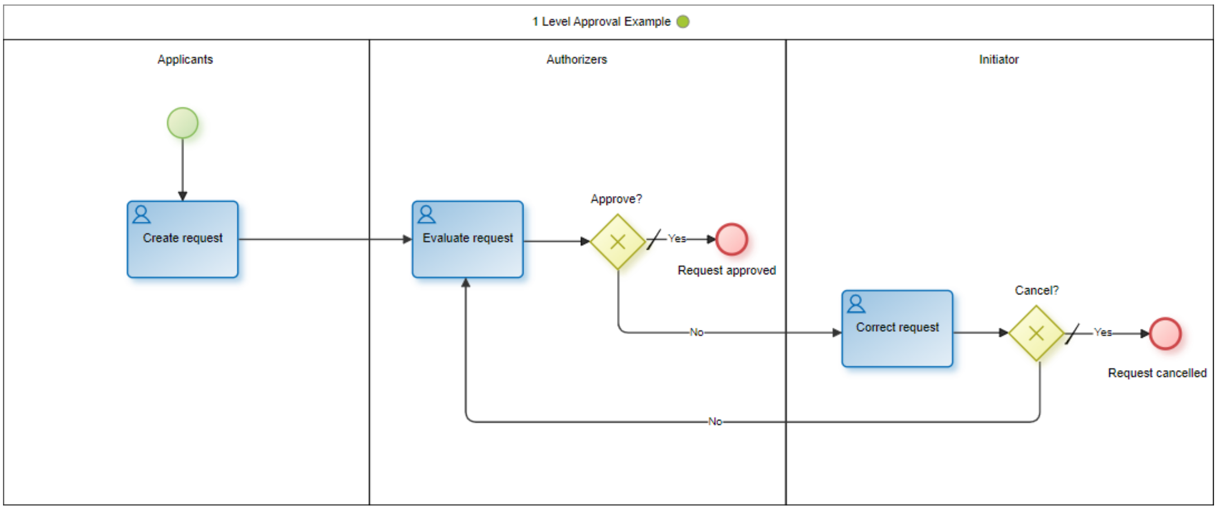
These templates are suitable for defining vacation request processes, expense reimbursement requests or absence from work notice, among others.

When executing the process, business users display the buttons corresponding to the available actions in each activity, such as “Approve”, “Correct”, “Deny” or “Cancel”.

1 Level Approval

This template is used to implement processes that consider a single approval activity.

It allows users or organization areas, called “Applicants”, to enter a request and send it for evaluation to other users or areas called “Authorizers”. If the form is approved, the process ends, otherwise the form is sent back to the person who started the process to correct it and send it again for re-evaluation, or to cancel it outright.

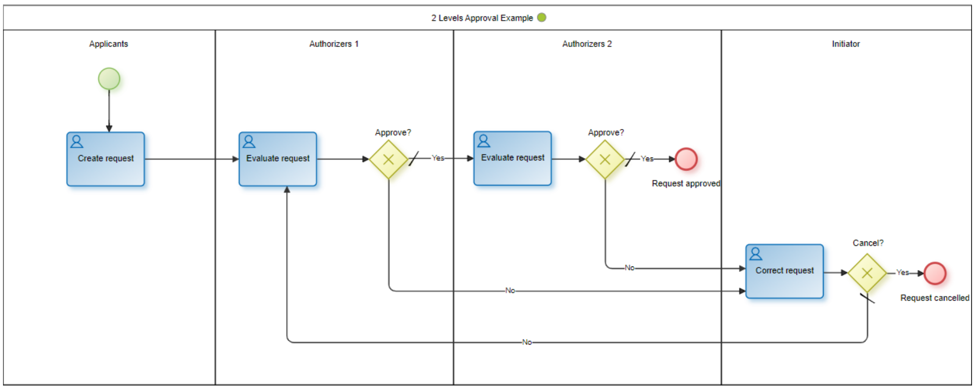


2 Levels Approval

This template is used to define processes with 2 sequential approval activities.

Adds an approval level to the template explained in "1 Level Approval ", that is, after the application is approved by the "Authorizers 1" level, it goes to the "Authorizers 2" level for evaluation. If the form is not approved in any of the authorization levels, it is sent back to the person who started the process to correct it and send it again for re-evaluation, or to cancel it outright.

These templates can be used to define authorization processes in organizations with different responsible persons for each approval level.

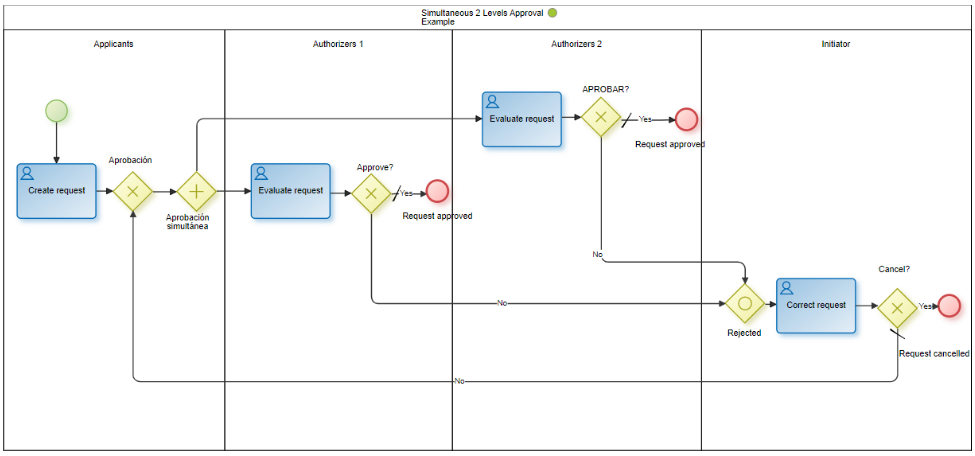


Simultaneous 2 Levels Approval

This template is used to define processes with 2 parallel approval activities.

It has two levels of approval as well as the template explained in “2 Levels Approval”. Once the application is created it must be evaluated by the "Authorizers 1" level and the "Authorizers 2" level for approval, regardless of the order in which it is authorized. The case is finished only after having both approvals. If the form is not approved in any of the authorization levels, it is sent back to the person who started the process to correct it and send it again for re-evaluation, or to cancel it outright.

These templates can be used to define authorization processes in organizations with different responsible persons for each approval level and where the approval sequence is not relevant .



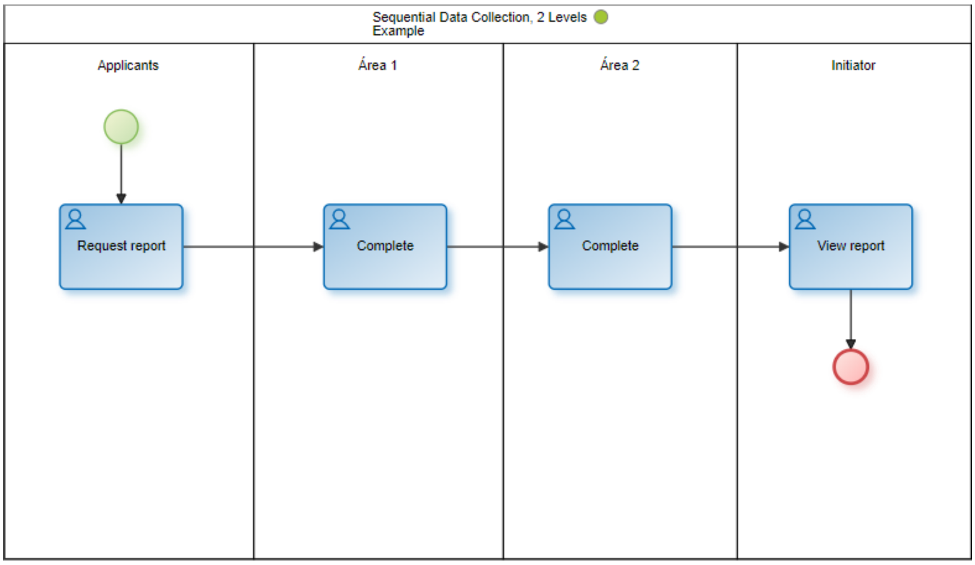
Data Collection Process Templates

They model processes where different business or office users, or the same but at different times, update the information of a case.

These templates can be used to define processes for hiring requirements, password generation, quote requirements, content publication, among others.

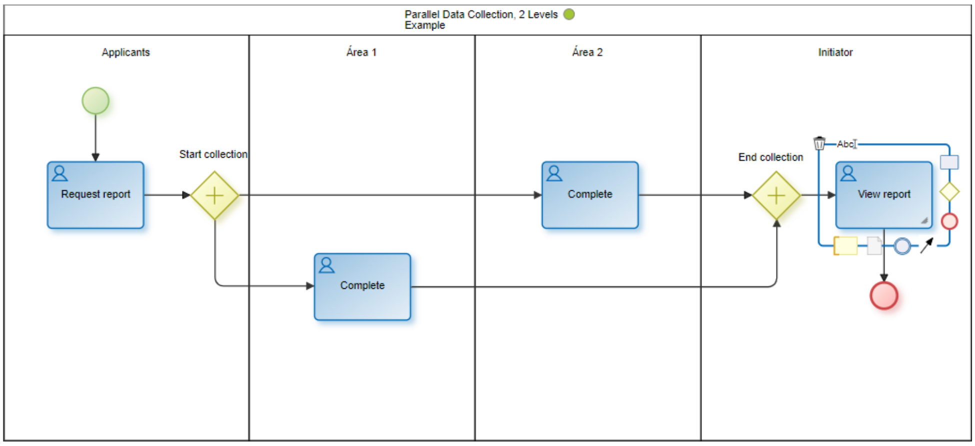
Sequential Data Collection, 2 Levels

This template is used to define processes that collect data in 2 different stages. It can involve more than one business or office user and the request is ultimately forwarded to whoever started the process.



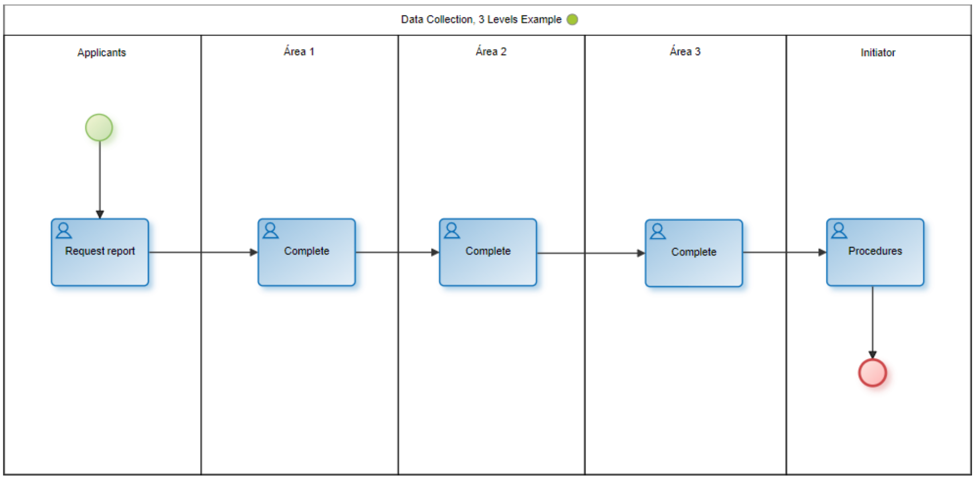
Parallel Data Collection, 2 Levels

This template is used to define processes that collect data in 2 different areas, regardless of the order in which they are performed. It can involve more than one business or office user and the request is ultimately forwarded to whoever started the process.



Data Collection, 3 Levels

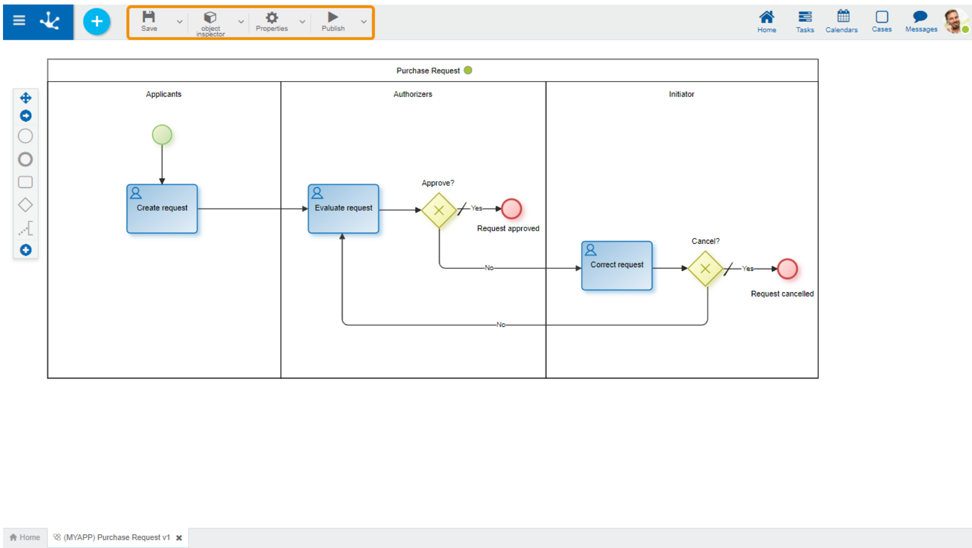
This template is used to define processes that collect data in 3 different stages. It can involve more than one business or office user and the request is ultimately forwarded to whoever started the process.



3.6.3.1.2. Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its [state](), some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The object´s application must exist.
- The name must be unique in the application.

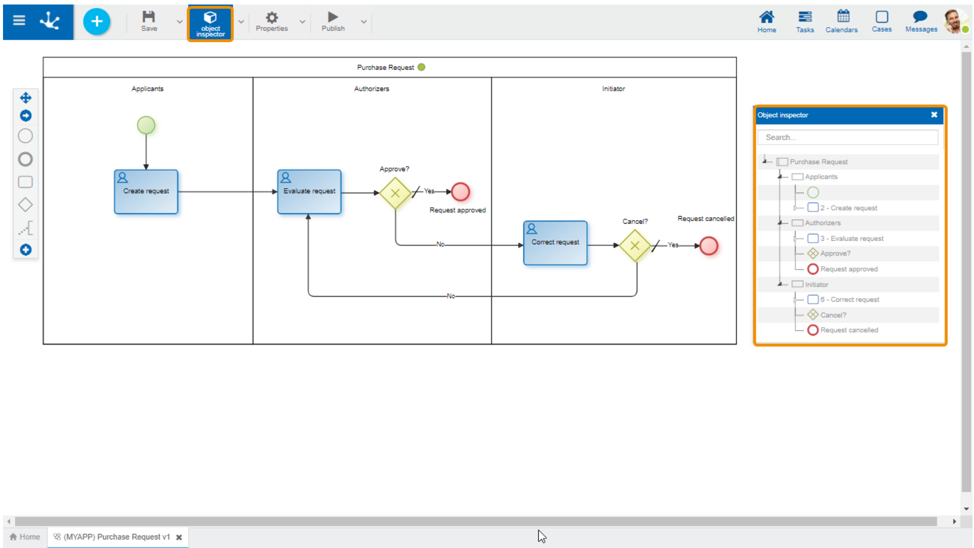
- The object must not be locked by other user.

To the right of the icon it is displayed the option of opening the submenu.

Object Inspector

When pressing this icon, a panel is displayed in which all the elements of the process with tree structure are shown.

This vision facilitates the analysis and development tasks, especially in complex diagrams.

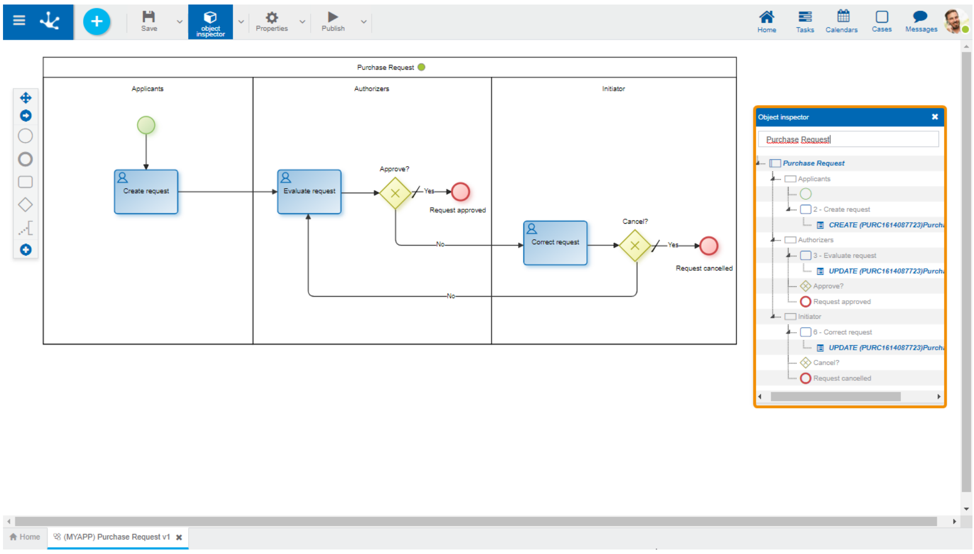


A search field is found on the top of the inspector which allows to search for elements by their names, identification codes, behaviour referred to the execution of an activity, or automatic actions already defined. Once the text has been introduced in the search field, the inspector shows the elements highlighted of the process that coincide with the inserted text.

From the object inspector, the properties panel of each element can be opened by double clicking on the name of said element.

To the right of the icon it is displayed the option of opening the submenu.

Usage Example
Identify in a process all of the activities which have the form named Expenses attached to them. When introducing such text in the search area, the inspector shows the references to the form in all of the activities that use it.



Properties

Open panel of [process properties](#).

To the right of the icon it is displayed the option of opening the [submenu](#).

Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.

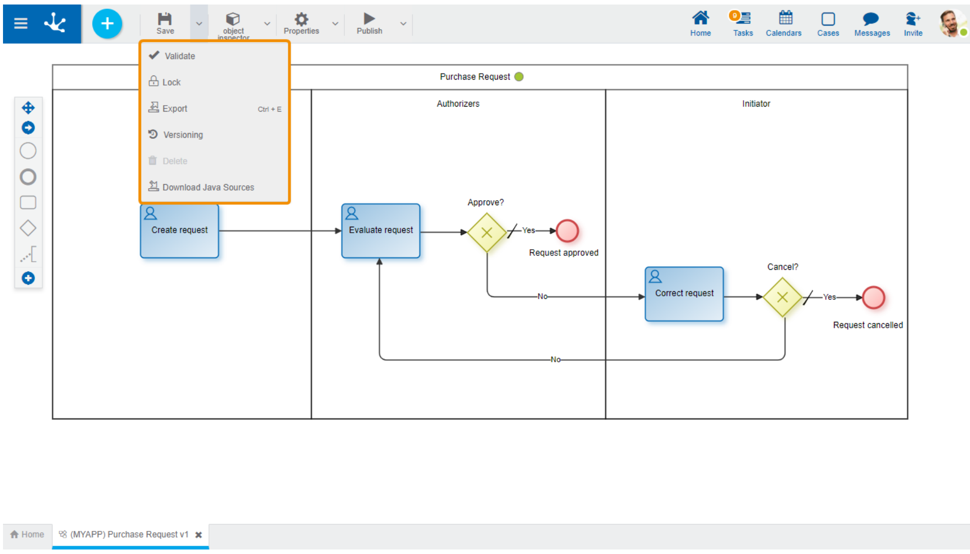
Main Conditions

- The process must contain at least one lane with an activity and a participant.
- Send task properties must contain valid values for its type.
- Maximum duration must be modeled to define alerts.
- If there are initiated cases, activities must not be deleted.
- Activities cannot have more than one output.
- Outputs of the inclusive and exclusive gateways must have condition or button.
- In tasks, subprocesses and processes the name is required.
- In tasks as “User” or “Not defined”, “Execution” tab must be defined.
- For subprocesses, a subprocess should be selected.
- For processes, the modeling participant is required.
- If an executing agent from a given activity is chosen in the lane, an activity must be defined for the participant.
- If an agent is chosen based on the form field in the lane, a form field must be defined for the participant.

To the right of the icon it is displayed the option of opening the [submenu](#).

3.6.3.1.2.1. Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".



Validate

This icon validates if the form is ready to be published, that is, validations performed at the moment of [publication](#) are applied and the their result is reported.

/ Lock/Unlock

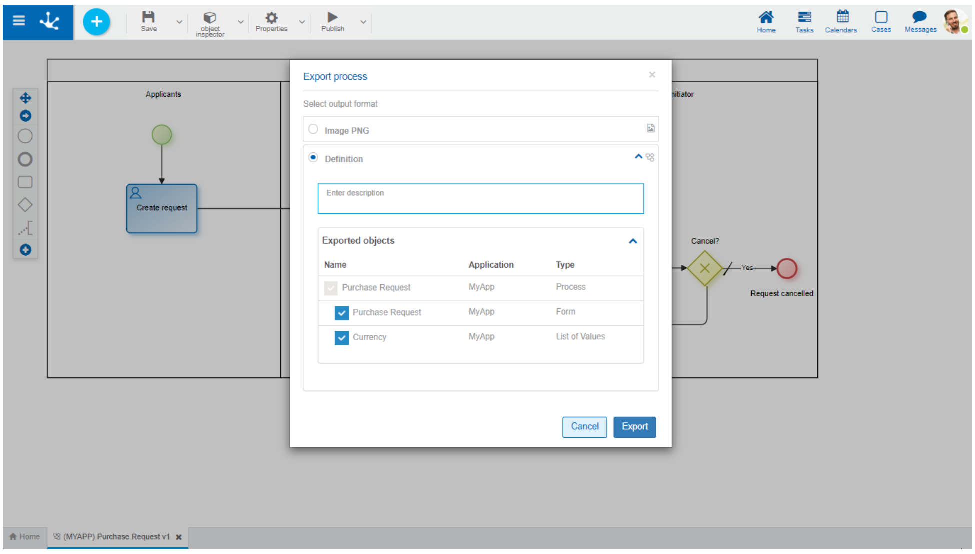
A process diagram can only be modified by users, organizational units or roles defined as owner in the [process properties](#).

- Allows blocking a process diagram to ensure that no one can modify it until the person who is using it unlocks it, that is, releases it.

- Allows to unlock a process so that another user, organizational unit or role, defined as owner can modify it.

Export

This icon opens a window for the user to select and confirm the export of the object and the related objects included in it.



Export Formats

PNG Image
A file with a png extension is generated, with the image of the process selected area.

Definition
It is the default export format for all objects.

Description
In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the export record.

Exported Objects
Expanding the container, name, application and type of the objects related to the export process are displayed. Objects not meant to be exported are unchecked.

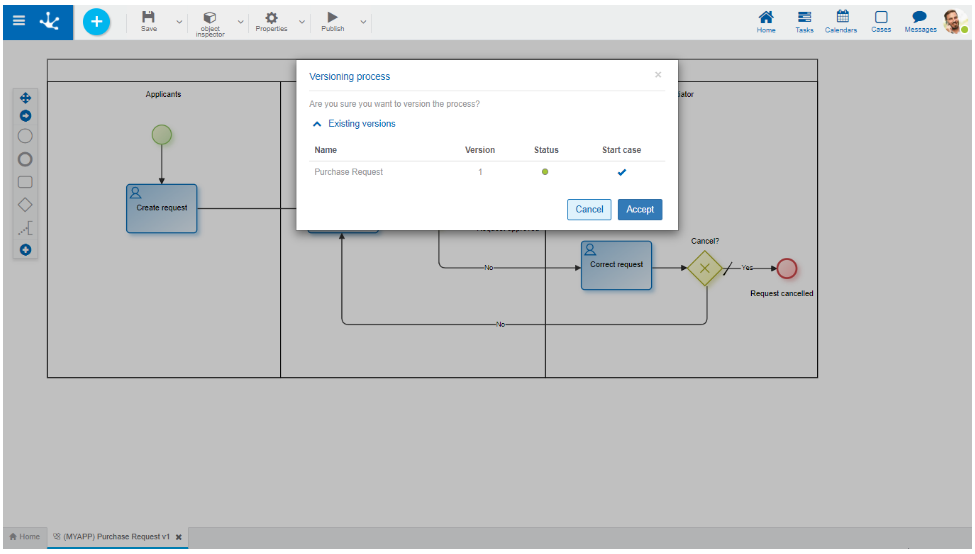
- Forms related to the process. If there are value lists associated with fields, their definitions are also included.
- Advanced rules used in automatic actions, in fields, from the "Relation" tab of the field properties or included in embedded rules.

> *Forms representing related entities are not included.*

Press the "Cancel" button to undo export or the "Export" button to finish.

Version

Allows the user to version the process, display the previous versions and show them. By hovering over each previous version, an "Open" button is available to open that version.



Existing Versions

Name
Name of the process being modeled.

Version
Number of each existing version.

States
State of each existing version.

Starts Case
Indicates the version to start cases. Only cases of a single version of the same process can start; being this the latest version that is in the "Published" or "Modified" state.
Press the "Cancel" button to cancel this versioning or press the "Accept" button to generate a new version from the previous one, that is, to generate a process whose version number immediately follows the current version.

Delete

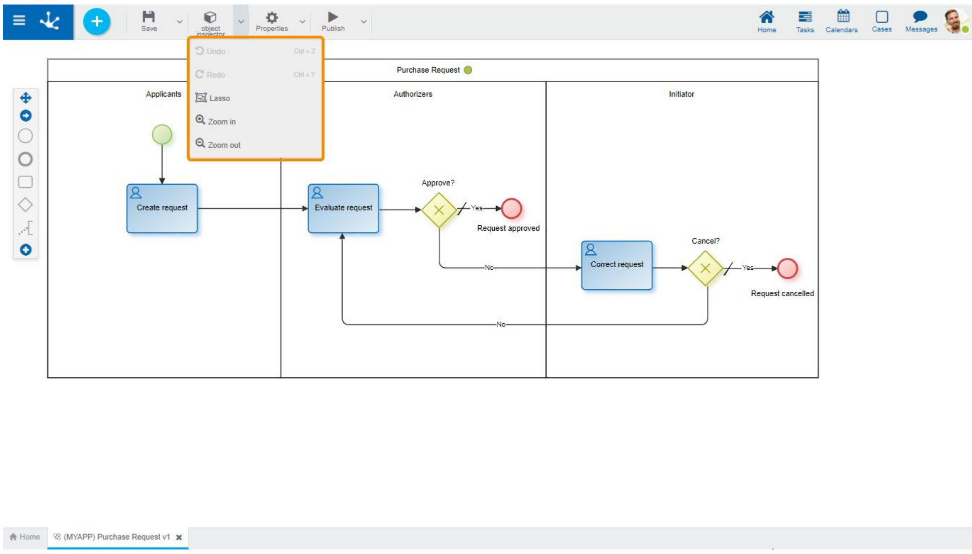
Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid.

Download Java Fonts

This icon allows to download the Java files that represent the object's model and service, so that it can be used in advanced rules.
Pressing the icon displays a message to confirm file download.

3.6.3.1.2.2. Object Inspector Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Object Inspector".



Undo

Returns the last modification made to the diagram. The same behavior is obtained with the keyboard combination ctrl + z.

Redo

Redoes the action on the diagram that was eliminated with the "Undo" option. The same behavior is obtained with the keyboard combination ctrl + z.

Link

Allows to select the graphic elements that are linked by pressing the right mouse button on a point in the diagram and dragging to another end without releasing. Linked figures are temporarily marked with a border and can be moved using the cursor or deleted altogether.

Increase Zoom

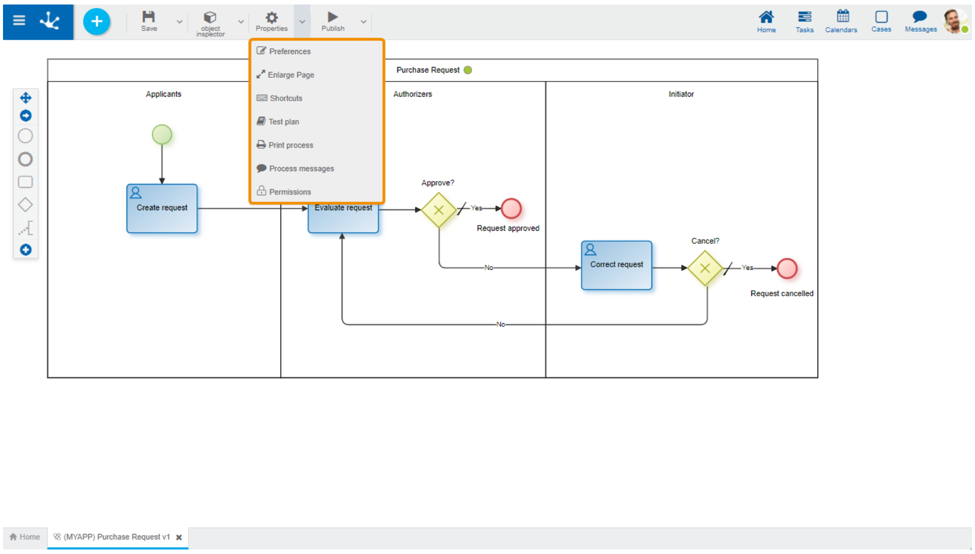
Increases the display size of the diagram.

Decrease Zoom

Decreases the display size of the diagram.

3.6.3.1.2.3. Properties Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Properties".



Preferences

Defines the display preferences for process modeling.

- Show symbol identifiers
  Indicates whether the internal identifiers of symbols are shown in the diagram. The default value is "No".

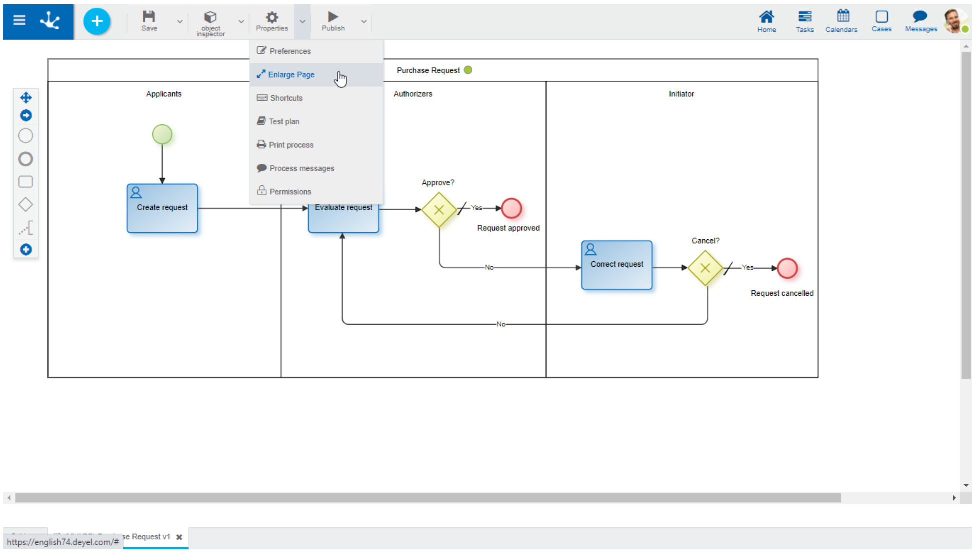
- Grid size
  Define the number of pixels used when moving symbols in the diagram, when dragging them with the mouse. The default value is “1”, although “10” or “20” can be selected for larger movements of the symbols with the mouse.

- Display Minimap
  Indicates whether the thumbnail view is displayed in the lower right corner. This view consists of a small panel where the complete process is displayed.

- Display validations on shapes
  Indicates whether the exclamation mark is displayed on shapes with validation errors.

Enlarge Sheet

Increases the modeling area, which makes scroll bars to be displayed and the area of the diagram that is visible in the window is shaded in the thumbnail view. As scroll bars move, the shaded area scrolls in the thumbnail view.



Shortcuts

Opens a panel with all available keyboard shortcuts to use in process modeling.

Test Plan

In a new tab, it opens a panel with the grid corresponding to the test plans defined for the process. Operation buttons are available for each line of the grid. This option is enabled only when the process was saved.

Print Processes

Allows to print the process design. Opens a panel with the printing functionality for the process in a new tab. This option is enabled only when the process was saved.

Process Messages

Opens the case modelers chat window.

Permissions

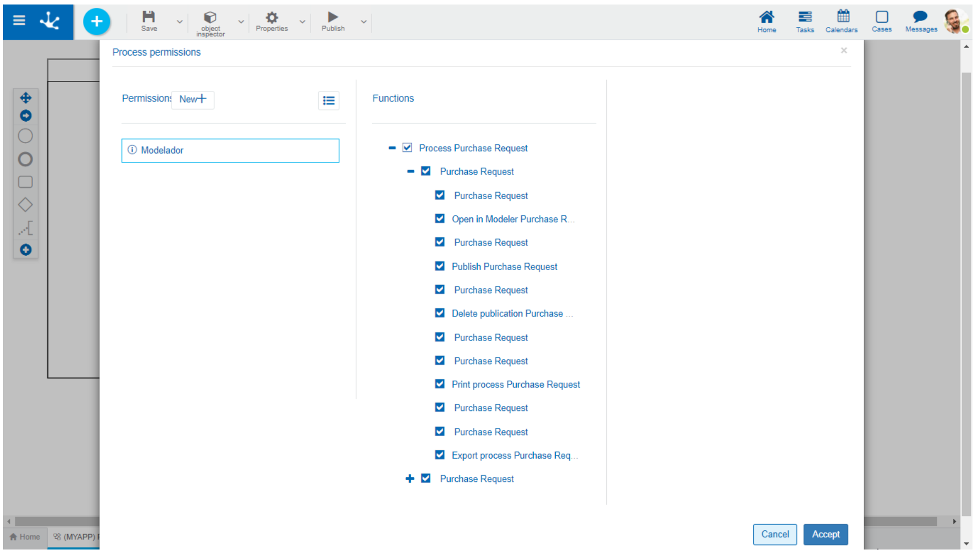
Allows to assign the [security functions] for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the [permission] settings option from the menu.

Sections

- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission [Modeler].

Users who are assigned the permissions have access to the functions included in it.



New+ Opens a panel to create a new permission and once created, the security functions included in it must be selected .

Search permissions... Allows to select a permission from a list and enables the input of characters to filter the values in the list.

Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon ✖. If there are functions selected for that permission, they must be unchecked in order to delete it.

Modeling Security Functions

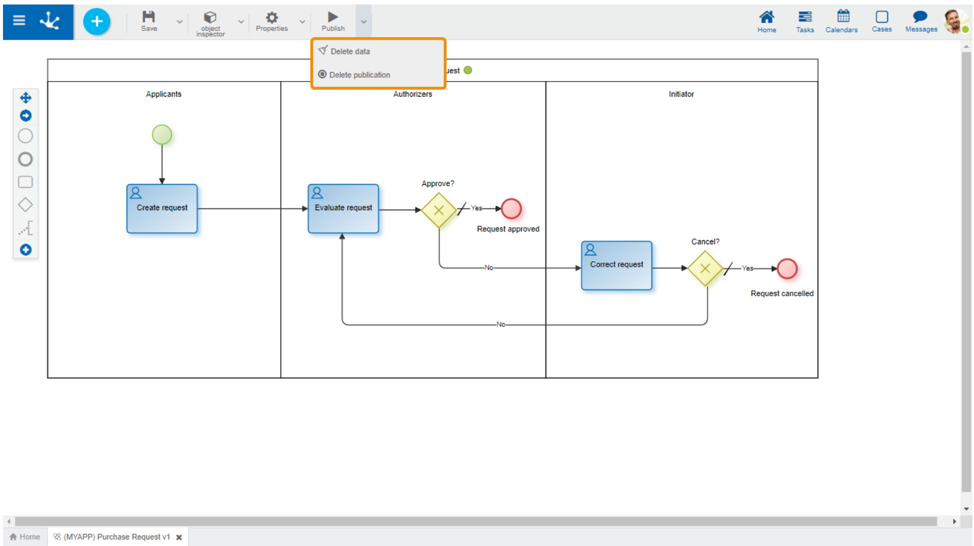
- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Save changes: Enables the operation of saving modifications made to the object.
- Publish: Enables the operation of publishing the object leaving its state as "Published".
- Deletes cases: Enables the delete data operation.
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete draft definition: Enables the operation of deleting the object.
- Block process: Enables the Lock/Unlock operation, only the user who locks it can modify it.
- Print Process: Enables the process print operation.
- Scenarios: Enables the operation of creating different testing scenarios.
- Test plan: Enables the operation of creating a test plan and adding scenarios to it.
- Export: Enables the operation to export the object from the save submenu of the top toolbar.

Security Functions of Use

- Start by agent: Allows to start a process if "Initiator Restricted by Function" was defined in the first lane as a participant.

3.6.3.1.2.4. Publish Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".



 Delete Data

All cases are deleted from the process. If each case had an associated form instance, it would also be deleted.

Delete Publication

Allows to delete the use process, returning it to the "Draft" state, in addition to deleting the process cases and the associated form instances, if any.

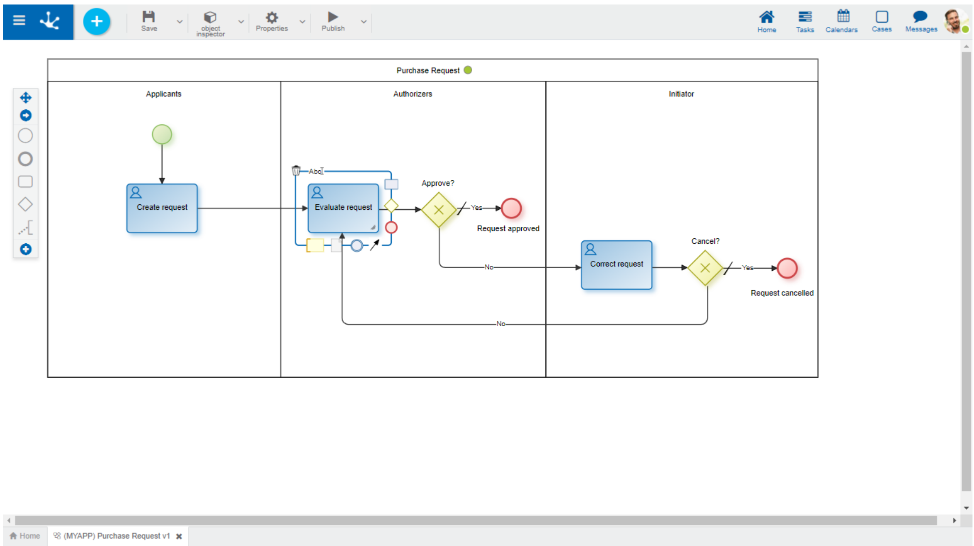
3.6.3.1.3. Graphic Modeling Area

Processes Modeling > Graphic Modeling Area

Graphic modeling area is where processes are designed by using graphic elements from **BPMN 2.0** (Business Process Model and Notation)

Pie Menu

Circular menu which is displayed by making click on each modeled graphic element in the design area, showing the different symbols with which the selected object can connect to.



To incorporate a new connected symbol, pie menu of the graphic element selected must be opened, drag and drop the symbol to be connected on the modeling area.

Common Options

Allows to delete the symbol

Abc Allows to edit the name of the symbol for its modification

Context Menu

On clicking on the selected graphic element with the right mouse button, it opens a vertical menu with its options grouped as own of the object and common to all objects, besides from an option to open the properties.

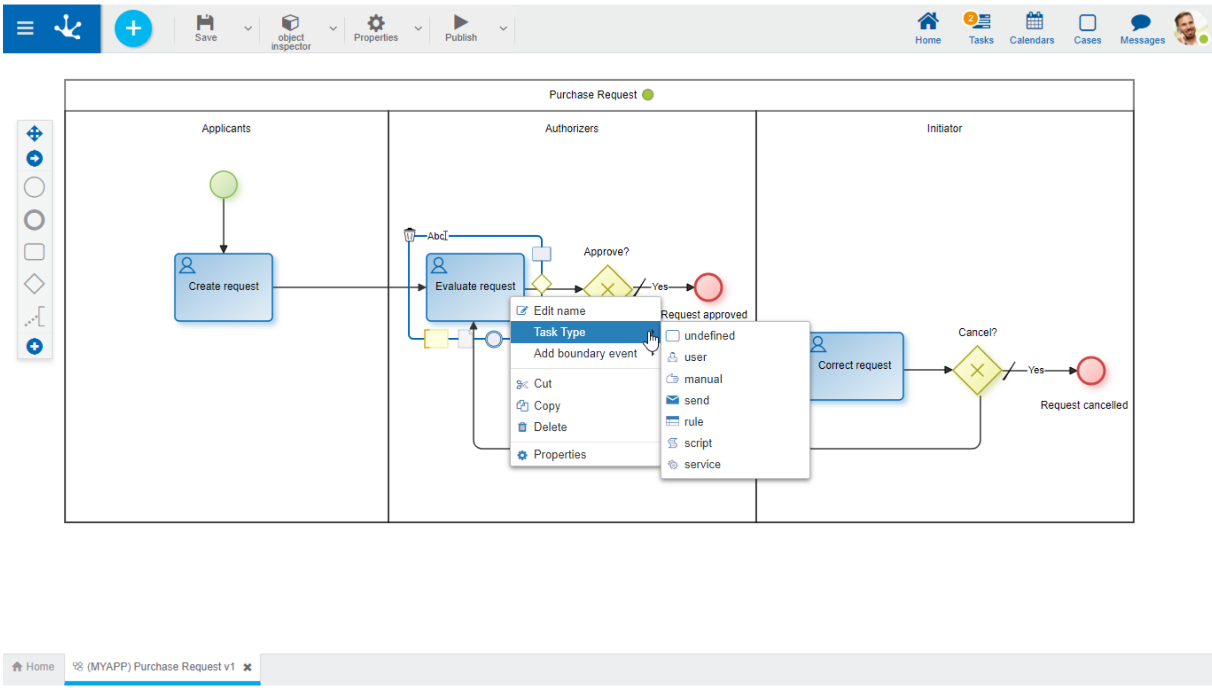
Options

- Own of the Object
  - Edit name
  - Available types according to the object
  - Other own actions of each object

- Common to All Objects
  - Cut
  - Copy
  - Delete

- Properties

  Opens the properties panel of the graphic element, it is the same panel that is displayed by double clicking on the symbol.



Thumbnail View

Complete image of the process which is visualized on the lower right corner of the graphic modeling area, the active work area is reflected in such image. It is visualized whenever you activate the option [Thumbnail View](#) of the option Preferences in the top toolbar.

Scrolling in the Modeling Area

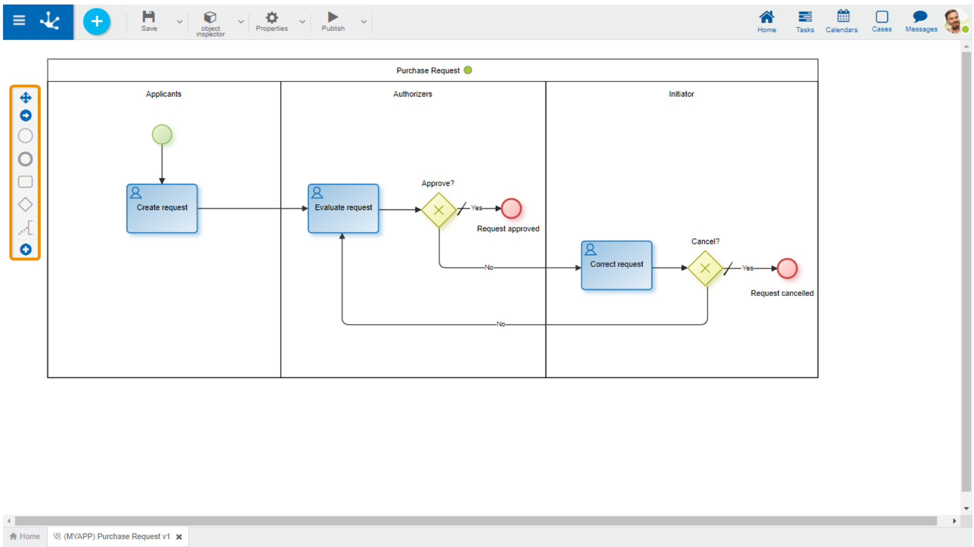
The vertical and horizontal scroll bars are used to slide the graphic modeling area, in order to allow the complete edition of the process. They are automatically activated when the diagram exceeds the size of the work window.

The modeling area can be enlarged by using the option Enlarge Page on the top toolbar.

3.6.3.1.4. Side Toolbar

Process Modeling > Graphic modeling area

It is the toolbar that contains the graphic elements corresponding to the different types of symbols that can be defined in the process diagram, based on **BPMN2.0** (Business Process Model and Notation).



Bar Elements

Scroll Bar

Allows to move the icon bar to any position in the graphic modeling area.

/ Show/Hide Names

Either displays a panel to the right of the bar with the names of icons, or closes it.

Start Event

A start event Indicates the beginning of a process, so they have no input flow but may have a trigger event.

Types

- Standard
- File
- Command
- Rule
- Email
- Signal
- Timer

End Event

An end event Indicates the end of a process, so it has no output flows.

Types

- Standard
- Signal
- Terminal

Task

A task represents a work unit that is carried out as part of a process execution.

Gateway

An gateway represents a branch point. Gateways can be of different types.

- Exclusive without marker
- Exclusive with marker
- Inclusive
- Parallel

Annotation

An annotation allows the process modeler to add additional data, intended for the diagram reader.

/ Show/Hide more Shapes

Allows to display the sidebar in full or reduced form.

Subprocess

A subprocess is an activity that refers to another independently defined process.

Intermediate Event

An intermediate event indicates where events may occur between the beginning and the end of a process. They affect the process flow, but they will not start nor end a process directly.

Types

- Capture link
- Catch signal
- Throw link
- Throw signal
- Timer

Data Object

A data object represents information that flows through the process such as documents or emails.

Group

A group allows to group symbols visually.

3.6.3.2. Graphic Elements

The graphical elements of **Deyel** process modeler are based on **BPMN 2.0** (Business Process Model and Notation).

BPMN 2.0 is a standardized graphical notation that allows to model business processes in a workflow format. It provides an easy and understandable notation for all those involved in the business, whether they are business analysts (who define the processes), technical developers (responsible for implementing them) or business managers (who monitor and manage them).

BPMN 2.0 is intended to be the common language to reduce the communication gap that frequently occurs between the business process design and its implementation.

To model processes, elements must be dragged from the left palette to the selected position in the graphic modeling area and the properties of each element must be entered.

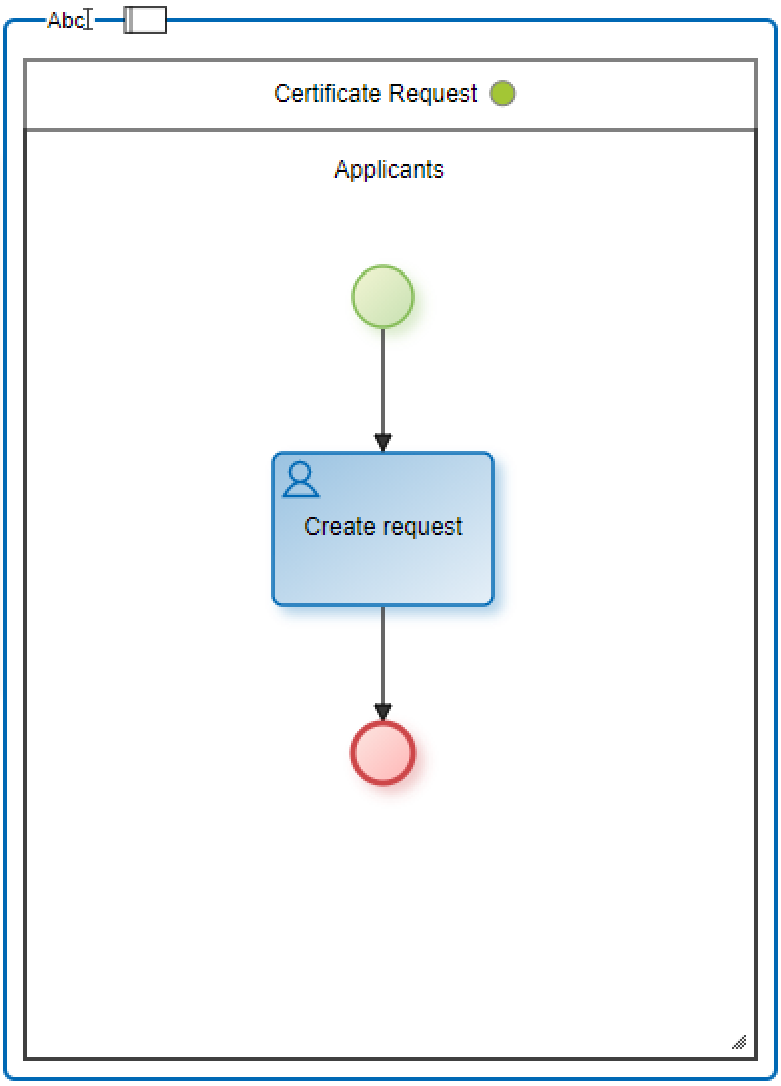
- Pool
- Lane
- Activity
- Flow
- Event
- Gateway
- Artifact

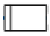
3.6.3.2.1. Pool

The pool is a graphical representation of a business process (Business Process).

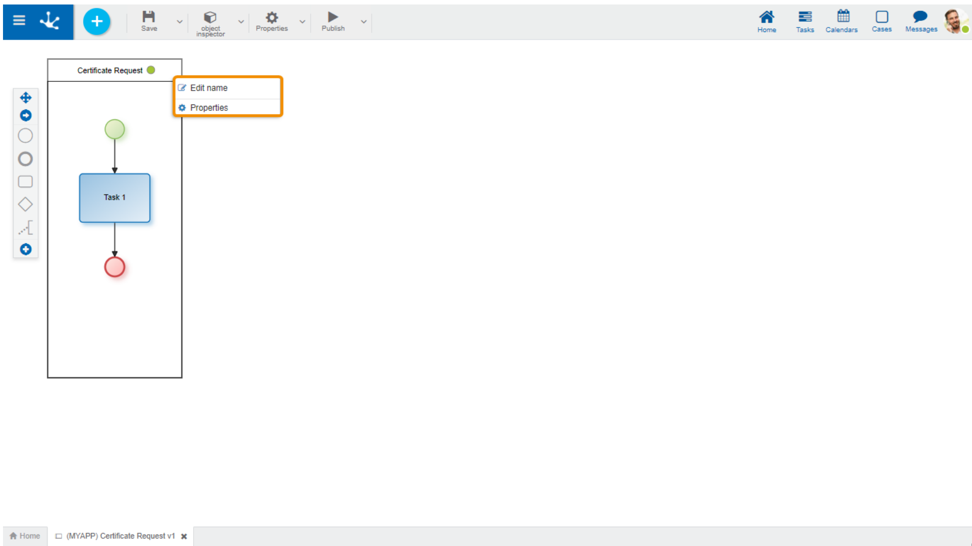
"It is a set of one or more activities whose performance allows meeting a business objective, normally within an organizational structure context, which defines functional roles and relationships among them." [Workflow Management Coalition]

Pie Chart Menu



	Opens an area for editing the name.
	Adds a lane. Clicking on this icon adds a lane to the right inside the pool. Every pool must have at least one lane. When you create a process without a template, a lane is automatically generated.

Context Menu



- Edit name: Allows to edit the name. Same functionality as the icon AbcI
- Properties: Opens the properties panel to show and/or modify.

3.6.3.2.2. Lane

Lanes allow organizing the activities of a process. Each lane represents one participant.

“The lane is a partition that is used to organize and categorize activities within a pool. It is generally used to represent internal roles (for example managers), systems (e.g. business application) or internal departments (e.g. finance)." [Workflow Management Coalition]

Types of Participants

User
The activities included in the lane are executed by a specific user or by their delegated users, if any.

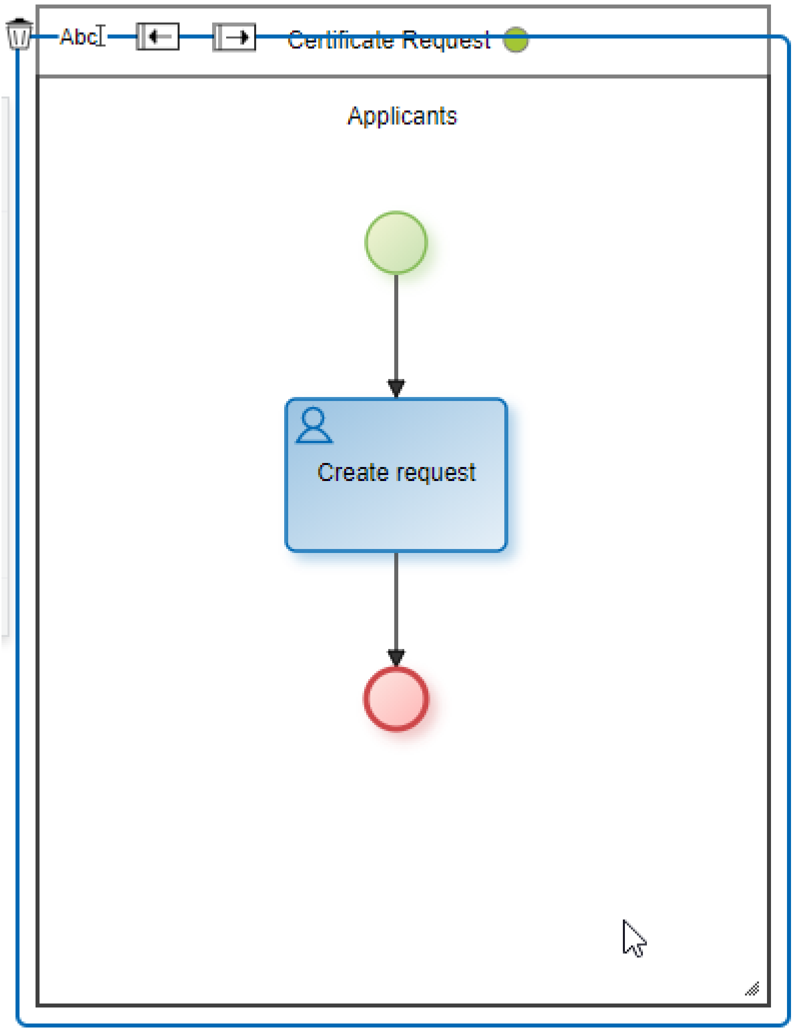
Organizational Unit
The activities included in the lane are executed by every user that belongs to the organizational unit informed.

Role
The activities included in the lane are executed by the actors defined within the role.

Agent
The activities included in the lane are executed by a participant who is dynamically identified when the activity is executed.
A predefined agent can be assigned as lane manager or else, define a new agent.

Lanes without Participants
If at the time of modeling a process, the persons responsible for each activity are not known, the lane may be left without an assigned participant as long as the process state is "Draft" or "Modified".

Pie Chart Menu



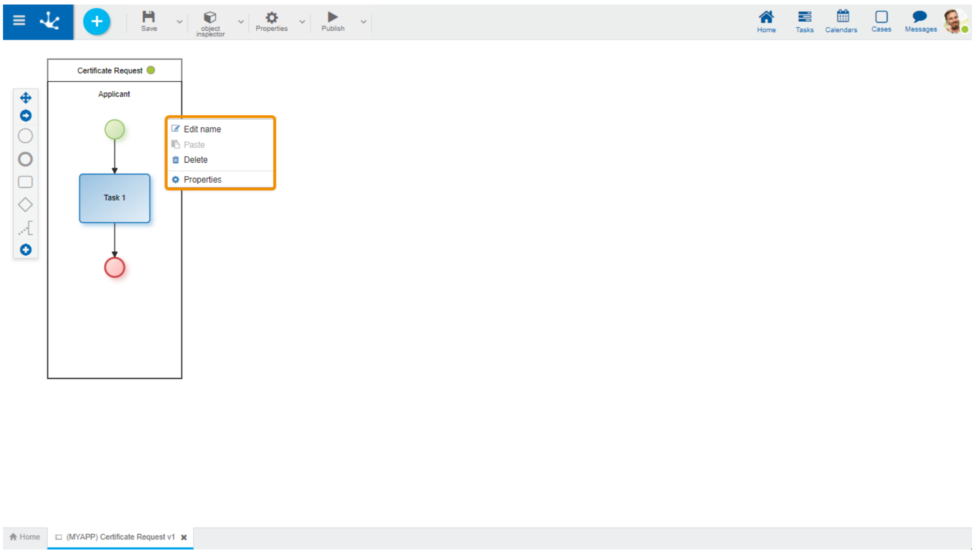
AbcI Opens an area for editing the name.

Deletes the lane.

Add a lane to the left.

Add a lane to the right.

Context Menu



- Edit name: Allows to edit the name. Same functionality as the icon AbcI.
- Paste: Allows to paste a previously copied graphic element into the lane.
- Delete: Allows to delete the lane. Same functionality as the icon .
- Properties: Opens the properties panel to show and/or modify.

Lane extension
When more space is required to incorporate elements into the lane, either horizontally or vertically, click on the icon and drag the cursor until the required lane size is achieved.

3.6.3.2.3. Activity

An activity can be understood as the representation of a work unit that is carried out as part of a process execution.

"An activity is the description of a task that is a logical step within a process." [Workflow Management Coalition]

The graphic representation of this element is a rectangular image with rounded corners that contains a label with the name of the task inside it, identifying the types of activities with different icons inside.

Types

- Tasks

- Subprocess

3.6.3.2.3.1. Task

A standard activity or task is an indivisible work unit performed as part of the execution of a process.

Types

The **BPMN 2.0** notation (Business Process Model and Notation) allows to typify standard activities or tasks in such a way that the graphic element used indicates the task type it represents.
The task type definition is made in different ways:

- From the task context menu, selecting the option "Task type".
- From the task property panel.

Undefined Task
Task without type.

User Task
Task that needs human intervention to be performed. When an activity modeled as a user task must be executed, it is informed to the participants of the process in My Tasks, in the top toolbar It is recommended to use this notation to model all the activities in which the user has to create, modify or show a form.

Manual Task
Represents a task to be performed by the user without any application support. Only moves on to the next activity.
It is recommended to use this notation to model activities such as making a telephone call to the customer, paying a visit or installing audio equipment, among others.

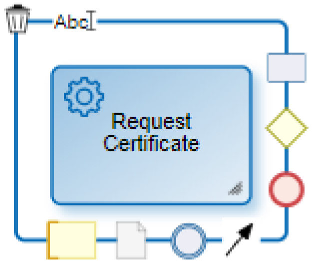
Send Task
It is used to send a message to an external participant regarding the process. When the message has been sent, the task ends.
This task type is used to model automatic mailing tasks. They do not define user participation.

Business Rule Task
Represents a call to an advanced rule, being able to exchange parameters between the task and the rule. They do not define user participation.

Script Task
This task type only performs automatic actions. They do not define user participation.

Service Task
Represents the execution of a service, automatically and without user intervention, which is carried out through the adapters. This notation is recommended to model the use of a web service, an automated software component or an integration rule. They do not define user participation.

Pie Chart Menu



Abc Opens an area to edit the name.

Deletes the task.

Adds an activity.

Adds a gateway.

Adds an end event.

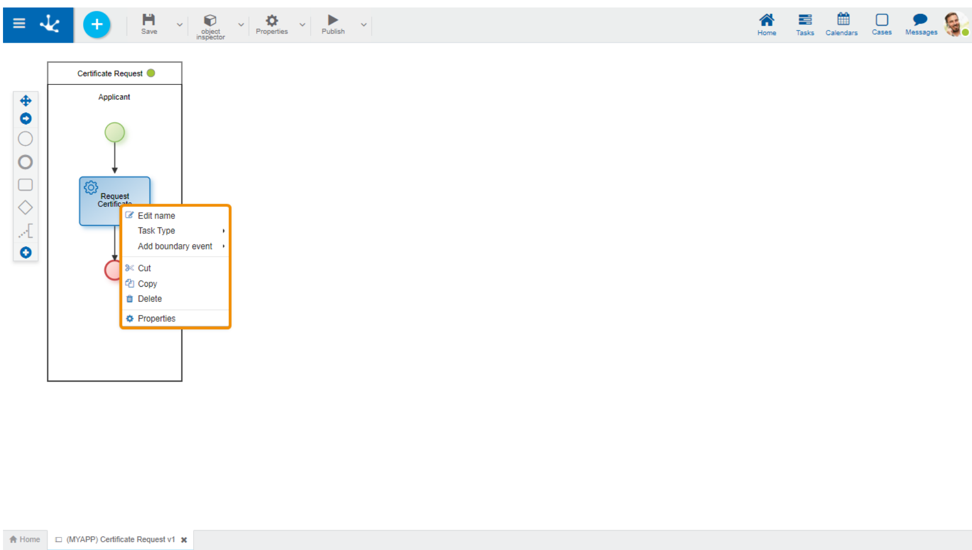
Adds a flow.

Adds an intermediate event.

Adds a data object.

Adds a comment.

Context Menu



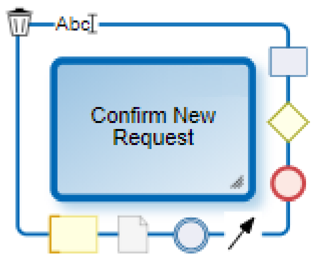
- Edit name: Edits the name inside the rectangle that represents the activity. Same functionality as the icon Abc.
- Task type: Defines the type of task.
- Add border event: Incorporates an border event to the task.
- Cut: Deletes the selected task. It can be pasted in another process location.
- Copy: Copies the selected task. It can be pasted in another process location.
- Delete: Deletes the selected task.

- Properties: Opens the property panel to show and/or modify.

3.6.3.2.3.2. Subprocess

It is an abstract activity that represents an independently defined process. It is used to hide levels of detail in processes and allows to reuse modeled processes. For example, if different processes have a common part, it can be defined only once and be reused in each process.

Pie Chart Menu



Abc Opens an area for editing the name.

Deletes the subprocess.

Adds an activity.

Adds a gateway.

Add an end event.

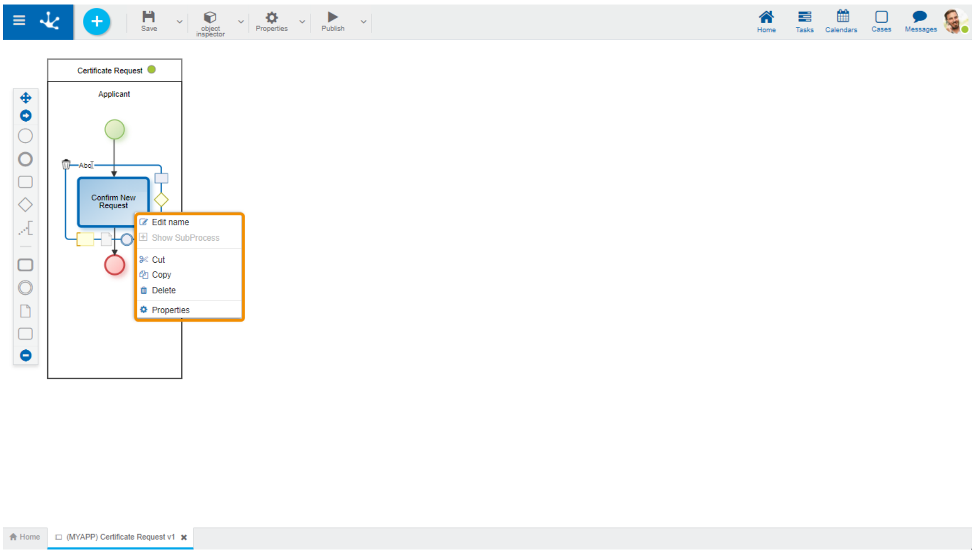
Adds a flow.

Adds an intermediate event.

Adds a data object.

Adds a comment.

Context Menu



- Edit name: Edits the name inside the rectangle that represents the activity. Same functionality as the icon Abc.
- See subprocess: Opens the subprocess in a new modeler tab.
- Cut: Deletes the selected subprocess. It can be pasted in another location.
- Copy: Copies the selected subprocess. It can be pasted in another location.
- Delete: Deletes the selected subprocess.
- Properties: Opens the properties panel to show and/or modify.

3.6.3.2.4. Flow

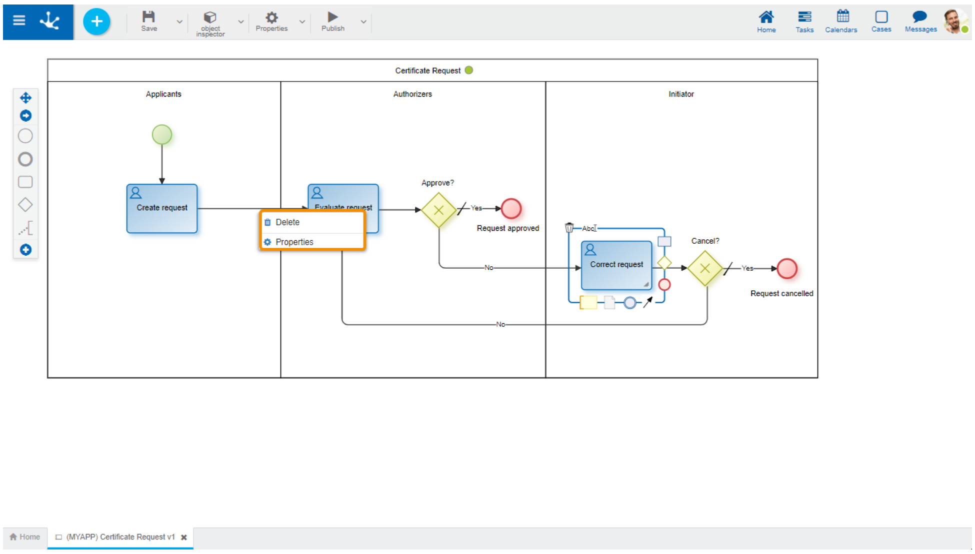
A flow represents the connection between an activity and its subsequent activities. Flows are used to establish the sequence in which defined activities are executed.

“Sequence flows are used to show the order in which activities are carried out within a process.” [Workflow Management Coalition]

Normal flow
A flow can determine a required path, that is, the process has no option not to execute it nor an optional path, in which case, the subsequent activity may or may not be executed.

Default Flow
The exclusive and inclusive gateways must have a defined predetermined flow so that the process can execute its path in case none of the conditions for the output flows of the aforementioned gateways are met.

Context Menu



- Delete: Allows to eliminate the flow.
- Properties: Opens the properties panel to show and/or modify.

3.6.3.2.5. Event

An event is an fact or incident that occurs during the execution of a business process. In general, they require an action and allow a reaction.
Represents situations such as start of activities, end of activities, document change of state, message arrivals, among others.

"An event is something that happens during the course of a process. They generally have a cause and an impact." [Workflow Management Coalition]

Start events
They indicate the way in which a process is started. They have no input flow.


Standard
It does not have a trigger event, therefore it indicates that the process does not start automatically.


Command
Indicates that the process starts by executing a command from a chat window of the instant messaging of **Deyel**.
These events are used to model processes that are executed from a chat window, by means of actionable messages if data entry or decision making is required.


Email
Indicates that the process starts when an email arrives to a certain email account, which may come from another participant, another process or other application. They are detected by scheduled tasks called EMAIL-type Event Generators.


Timer
Indicates that the process starts after a certain time cycle or on a specific date.


File
Indicates that the process starts when a new file is detected in a certain folder.

Rule
Indicates that the process starts from the execution of a certain business rule.

Signal
Indicates that the process starts each time it catches the indicated signal. The current process may not be the only receiver of the transmitted signal.

End events
Indicate the completion of the process. They have no outflow.

Standard
Indicates the completion of the process without adding any behavior.

Signal
Indicates the end of a process and sends a signal to other processes that are waiting to catch it.

Terminal
Indicates that all process activities are immediately finished when the process comes to an end. When any of the paths reaches this event, the entire process is finished.

Intermediate events
Indicate possible event occurrences that take place between the beginning and the end of a process.

Throw Link and Catch Link
These events facilitate the use of diagrams. They represent the connection of two sections of the same process distantly located in the process diagram.

Throw Signal
Used to send a signal that is received by signal catching events, whether they are initial, intermediate or final indistinctly, of the current process or of another process.

Catch Signal
Indicates that the process is waiting for the reception of a signal sent by the same process or another, in order to advance.

Timer
Acts as a mechanism that waits until a certain date or during a specified cycle.

Border event
They are intermediate events that are directly associated with an activity.
These events can be triggered only when the activity to which they are associated is being executed.
The output flows of border events are called exception flows, as they are executed only if the border event is activated.
They are used in particular for managing exceptions and waiting periods with certain deadlines.

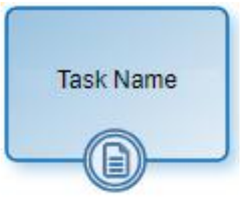
- Interrupting events
  When the border event is activated, the execution of the current activity is interrupted and the process continues through the output flow of the activated border event.
  They are represented by a solid line.
- Non-interrupting events
  When the border event is activated, the process starts a path to treat the exception, in parallel with the normal process.
  They are represented by a dashed line.

[Signal](#)
This event is waiting for the reception of a signal that can be emitted by this or another process.

[Timer](#)
This event is activated at a specified moment or at certain time intervals.

[Rule](#)
These type of events represent the execution of a business rule. They are detected by scheduled tasks called "Component-type Event Generators".

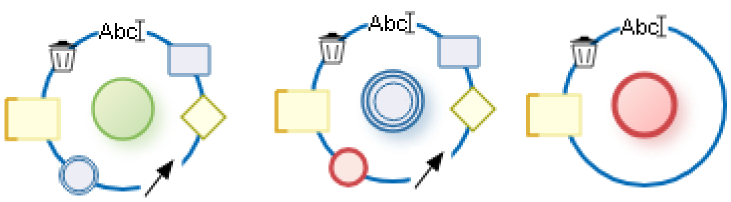
[Email](#)
These type of events represent the arrival of an email to a certain email account. They are detected by scheduled tasks called EMAIL-type Event Generators.



[File](#)
These type of events represent the appearance of a new file in a certain folder. They are detected by scheduled tasks called "FILE-type Event Generators".

Pie Chart Menu

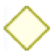
The options presented in the pie chart menu vary depending on whether it is a start, intermediate or end event.



 Opens an area to edit the name.

 Deletes the event.

 Adds an activity.

 Adds a gateway.

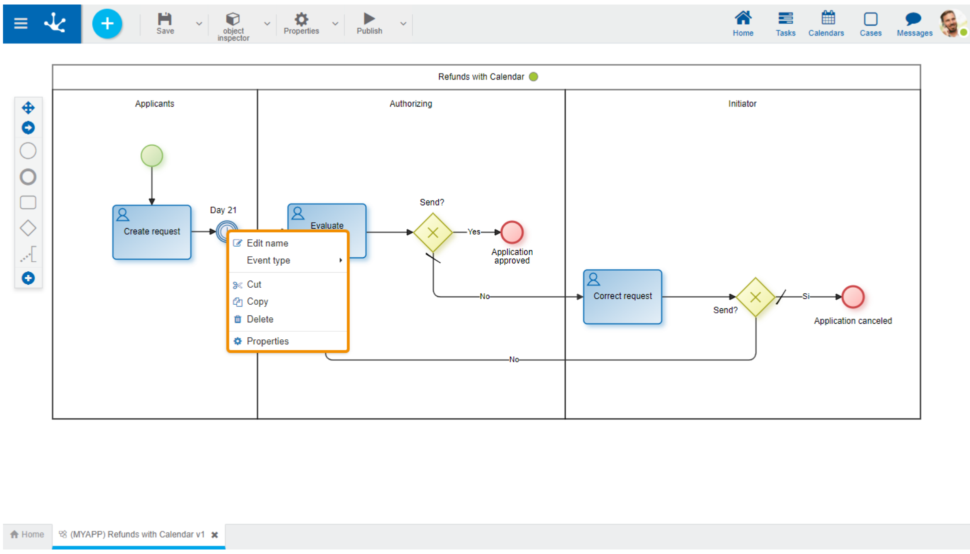
 Adds an end event.

Adds a flow.

Adds an intermediate event.

Adds a comment.

Context Menu



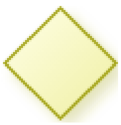
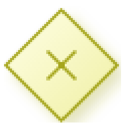
- Edit name: Allows to edit the event name. Same functionality as the icon Abc.
- Event type: Allows to define the type of event. Its options vary depending on whether it is a start, intermediate or end event.
- Cut: Deletes the selected event. It can be pasted in another process location.
- Copy: Copies the selected event. It can be pasted in another process location.
- Delete: Deletes the selected event.
- Properties: Opens the properties panel to show and/or modify.

3.6.3.2.6. Gateway

A gateway is incorporated into the model to determine whether the data flow routes within a process branch or merge depending on the definition of conditions.

"Gateways are used to control how sequence flows interact as they converge and diverge within a process." [Workflow Management Coalition]

Types

  Exclusive Gateway

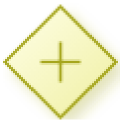
An exclusive gateway is where only one of the exit paths continues with the task sequence. Gateways have two representations, although both have the same behavior. By convention, the same representation must be used for the entire definition of a process.

- Exclusive gateway without marker.
- Exclusive gateway with marker.

The possible exit paths of the gateway are set by selecting one of the following options:

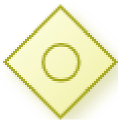
- **Definition of conditions**
  It is necessary to define conditions for gateway output flows, which are evaluated sequentially. When a condition is met, the process continues along this path, without evaluating the remaining conditions.
- **Button definition**
  It is necessary to define buttons for gateway output flows. When users press a button, the process continues along that path.

The exclusive gateway must have an output flow defined as default so that the process can continue when no conditions are met.



Parallel Gateway

It is used to create parallel paths and synchronize activities. All exit paths are activated without evaluating the conditions.
Parallel gateways can be defined in pairs, one as a divergence element to activate several parallel paths simultaneously and the other as a convergence element to synchronize previously activated paths. In the latter case, when the gateway is used for synchronization, the output is activated when the input paths are completed, that is, all activities preceding such point have ended.
The output flows of a parallel gateway do not require definition of conditions, since all exit paths must be completed.



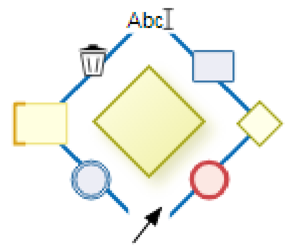
Inclusive Gateway

It is used to activate one or more paths and synchronize activities. All output flow conditions are evaluated.
Inclusive gateways can be defined in pairs, one as a divergence element to generate parallel activities and the other as a convergence element to synchronize previously activated paths. For divergence, at least one exit path must be activated, while for convergence, all activated paths must be completed.

- **Definition of conditions**
  It is necessary to define conditions for inclusive gateway output flows. All conditions are evaluated and the process takes all the paths where conditions are met.
- **Button definition**
  It is necessary to define buttons for gateway output flows. When users press a button, the process continues along that path.The same button can be defined for more than one flow.

An inclusive gateway should have an output flow defined as default, in order to prevent execution errors, when no flow condition is met.

Pie Chart Menu



AbcI Opens an area for editing the name.

Deletes the gateway.

Adds an activity.

Adds a gateway.

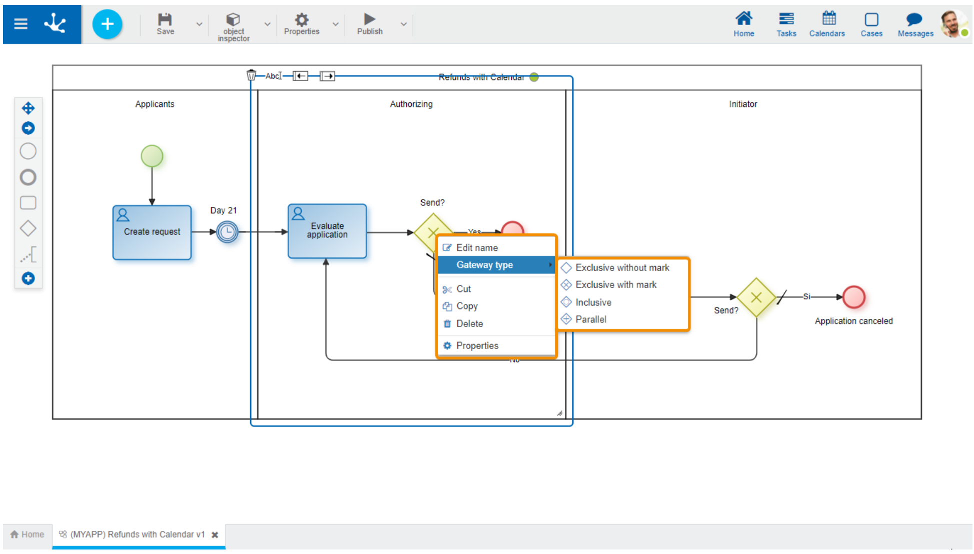
Adds an end event.

Adds a flow.

Adds an intermediate event.

Adds a comment.

Context Menu



- Edit name: Opens an area for editing the name. Same functionality as the icon AbcI.
- Gateway Type: Defines the type of gateway.
- Cut: Deletes the selected gateway. It can be pasted in another process location.
- Copy: Copies the selected gateway. It can be pasted in another process location.
- Delete: Deletes the selected gateway.
- Properties: Opens the property panel to show and/or modify.

3.6.3.2.7. Artifact

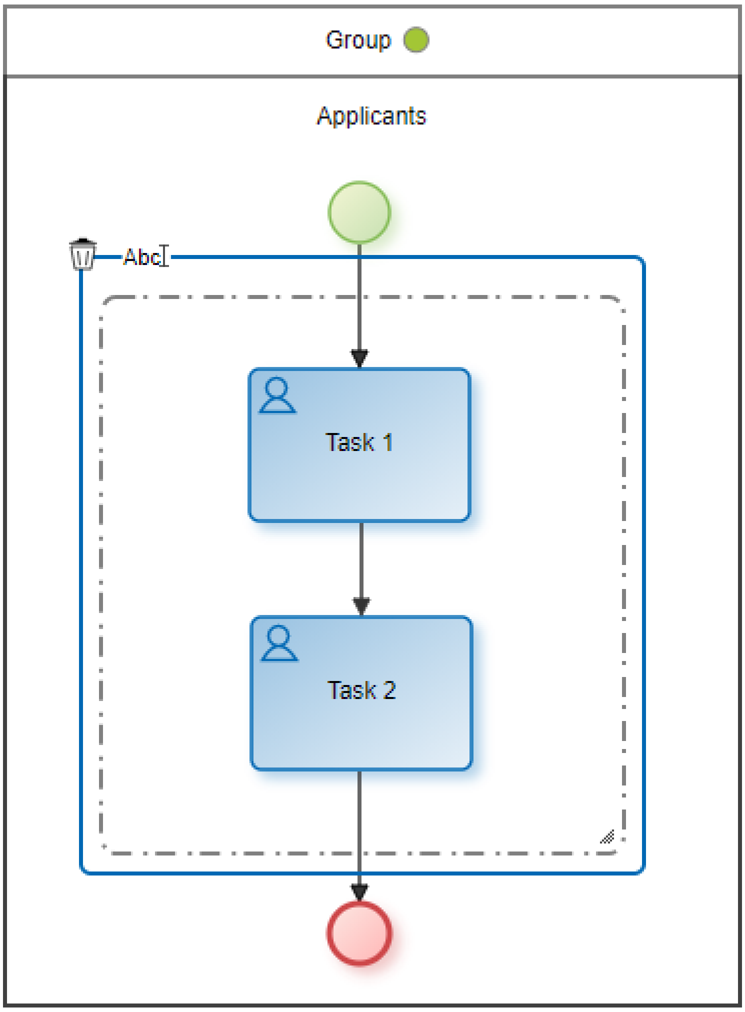
They are shapes that improve the expressiveness of diagrams, representing data related to the process but with no influence on performance.

"Artifacts are used to provide additional information about the process."[Workflow Management Coalition]

Group

Visually groups shapes in the diagram.

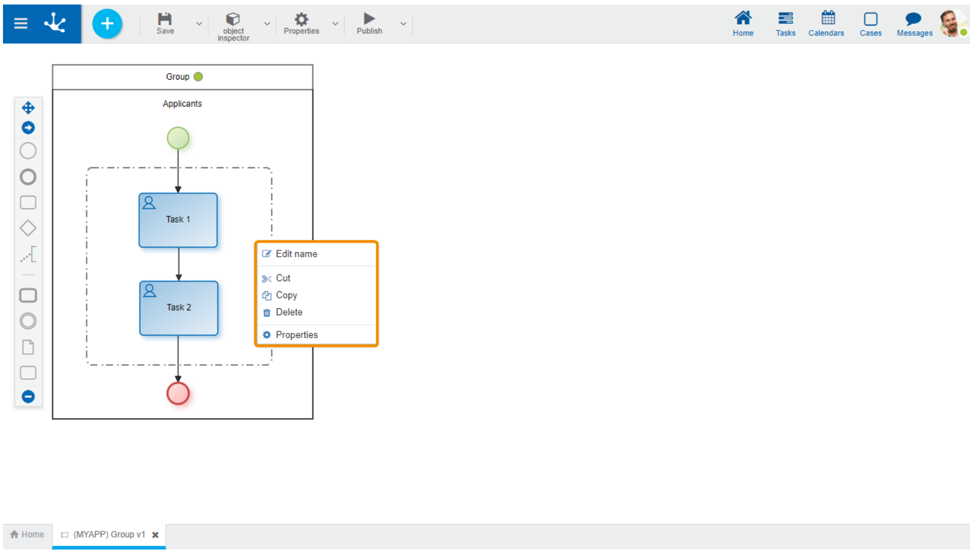
Pie Chart Menu



Abc Opens an area for editing the name.

Deletes the group.

Context Menu

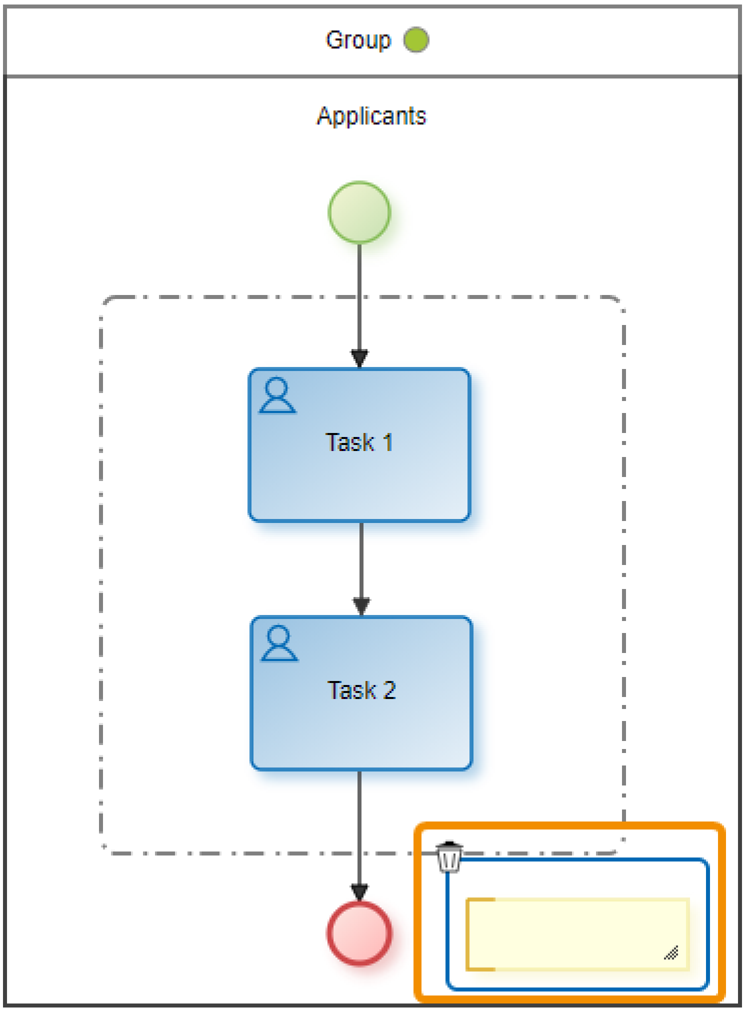


- Edit name: Edits the group name. Same functionality as the icon AbcI.
- Cut: Deletes the selected group keeping the shapes it groups. It can be pasted in another process location.
- Copy: Copies the selected group. It can be pasted in another process location. It does not copy the elements it groups.
- Delete: Deletes the selected group keeping the shapes it groups. Same functionality as the icon .
- Properties: Opens the properties panel to show and/or modify.

Annotation

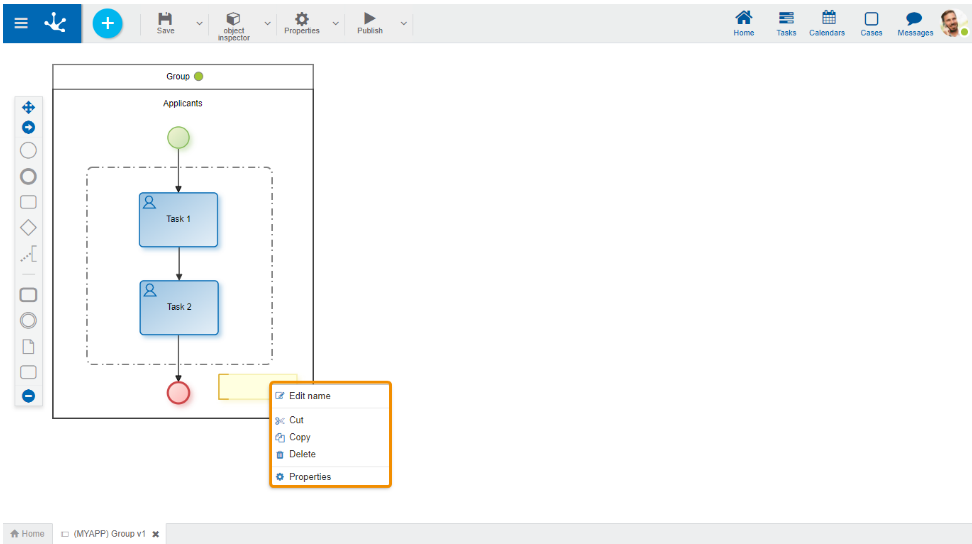
Area where the modeler can write explanatory texts.

Pie Chart Menu



Deletes the selected annotation.

Context Menu

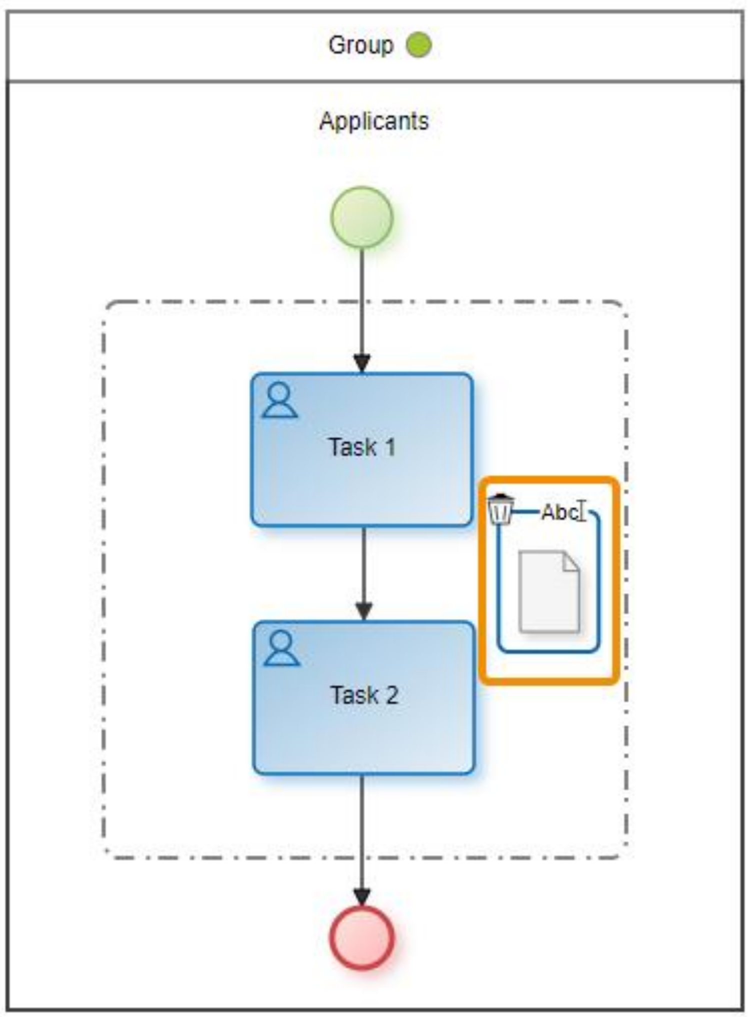


- Edit name: Allows to edit the annotation text.
- Cut: Deletes the selected annotation. It can be pasted in another process location.
- Copy: Copies the selected annotation. It can be pasted in another process location.
- Delete: Deletes the selected annotation. Same functionality as the icon.
- Properties: Opens the properties panel to show and/or modify.

Data Object

Represents the information that accompanies the process circuit or is generated during it, such as documents or notifications.

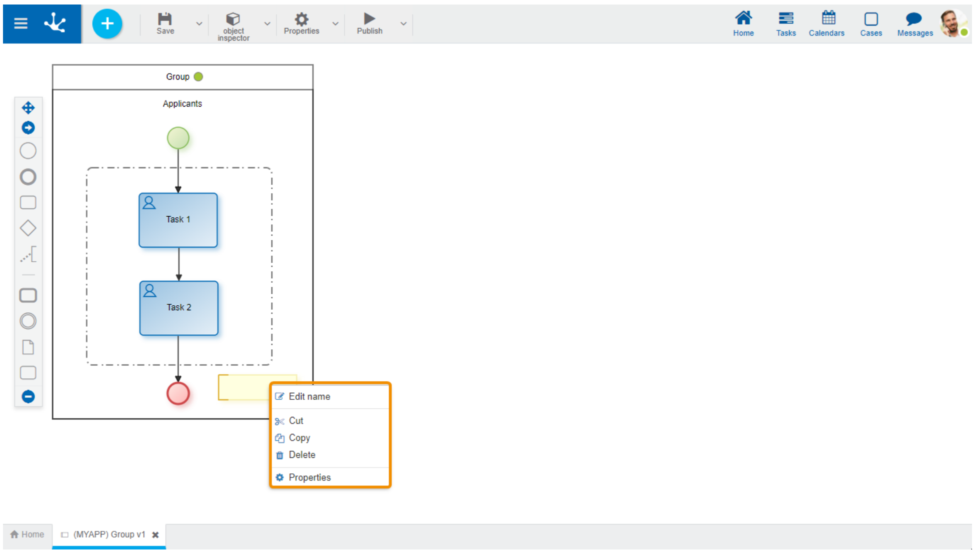
Pie Chart Menu



Abc Opens an area for editing the name.

Deletes the selected data object.

Context Menu

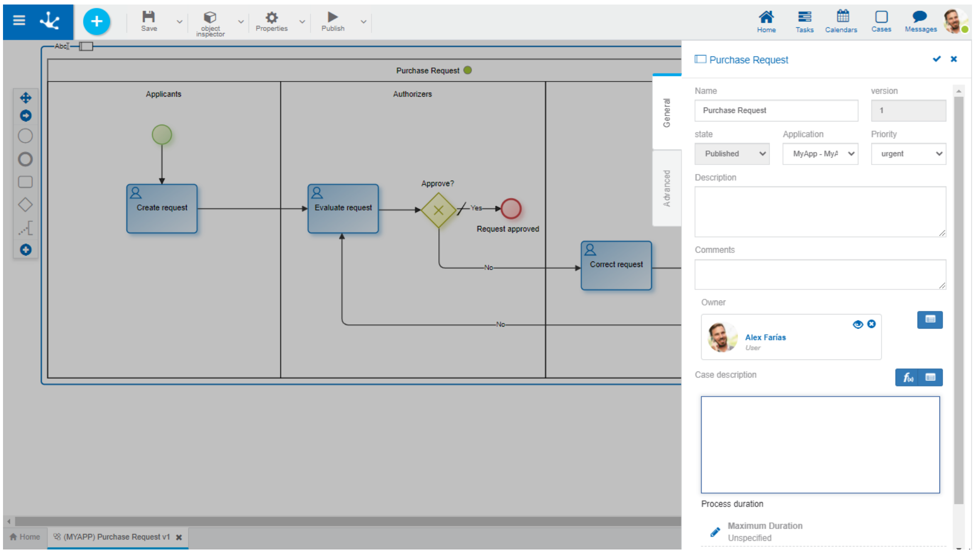


- Edit name: Edits the name of the data object. Same functionality as the icon AbcI.
- Cut: Deletes the selected data object. It can be pasted in another process location.
- Copy: Copies the selected data object. It can be pasted in another process location.
-Delete: Deletes the selected data object. Same functionality as the icon 🗑.
- Properties: Opens the properties panel to show and/or modify.

3.6.3.3. Process Properties

There are different ways to enter a process properties panel:

- Press the icon ⚙ from the top toolbar.
- Double click on the graphic element corresponding to pool.
- Access the context menu of the pool graphic element.

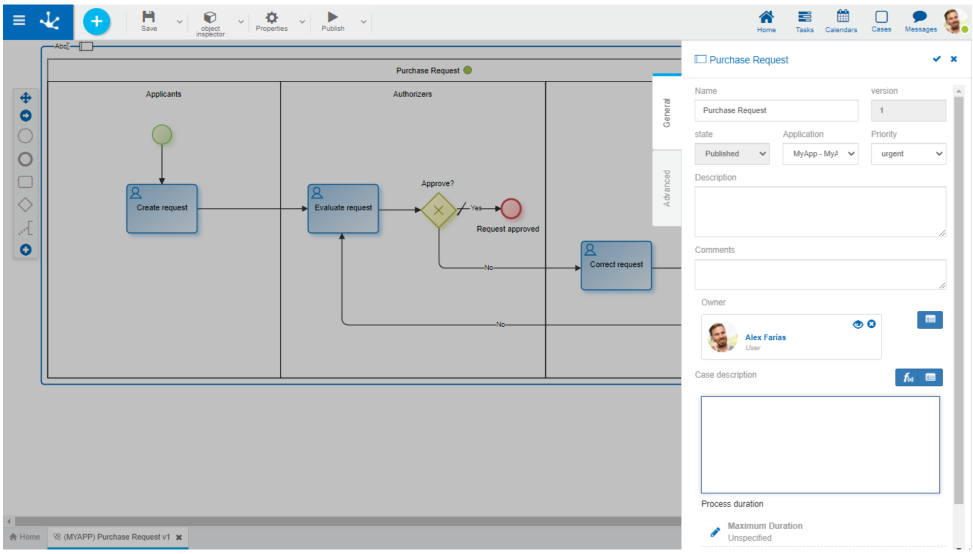


Tabs

- General
- Advanced

3.6.3.3.1. General

The properties panel is displayed on the right side of the process modeler, where the first tab corresponds to general information.



Properties

Name

It is the name used at the modeling level to refer to the process, for example, in the modeler's grid and in the object inspector. Supports multi-language.

Version

Process version number. Along with the Identifier property, they form the unique identification of the process.
This attribute allows to incorporate modifications in the process design without impacting executions that are still active (unfinished cases).
It is a non-modifiable attribute. The modeler user can version the process from the top toolbar.

State

Indicates the current state of the process. It is automatically updated when start, modify, save, publish and inactivate operations are executed.
The state of the process determines the level of validations that are carried out on it and the possibility of being used.

Application

Allows to define the application to which the process belongs. If no application is reported, the process is assigned to the GLOBAL application.

Priority

Indicates the priority assigned to the process activities, when they do not have an expressly defined priority. Possible values are URGENT, HIGH, MEDIUM, LOW.

Description

Text that defines the process describing its functionality. Supports multi-language.

Comments

Observations on the process.

Owner

Indicates the person who has control and vision of the process from start to finish. The owner can be a user, an organizational unit, a role, or an agent.
It is, by default, the logged in user.

Opens the profile show property.

Deletes the informed owner

Allows to select an existing owner

You can also use the autocomplete function. As characters are entered into this field, the first five matches dynamically appear to select one of them.

Case Description

It is a description that represents each one of the process executions.

Allows to select functions from a list to incorporate dynamic information into the case description.

Allows incorporating attributes of the entities that are used in the execution of the process to the case description. For example, in the "Refund Request" process, the request date can be incorporated, which is a form variable used in such process.

The description entered is displayed in:

- The last tasks, by pressing the Tasks icon on the top toolbar.
- The task execution panel, below the activity name.
- The Description column in the tasks grid.
- The last tasks, on the element that represents the form in the grid of "Forms and Tasks".

Process Duration

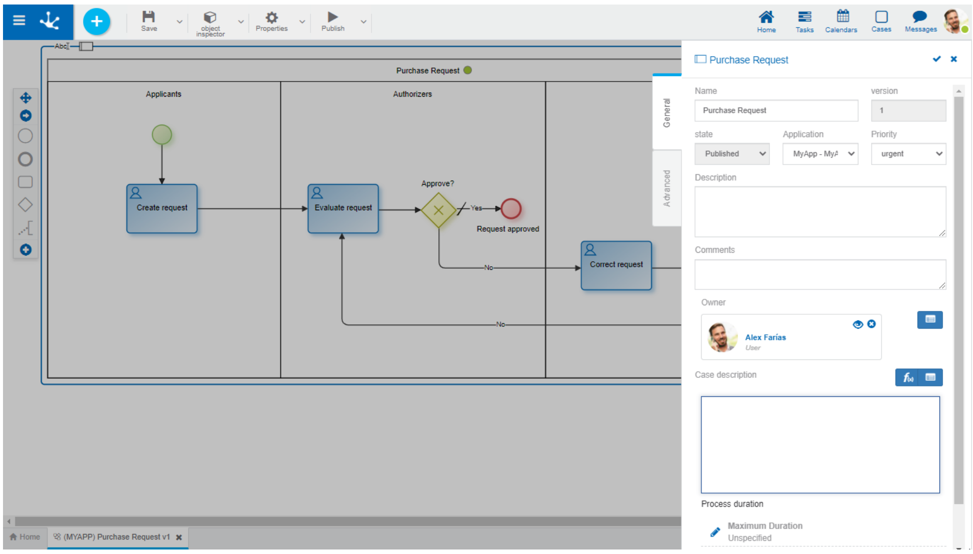
Allows to set the Maximum duration and Average duration to carry out the process.

Allows to edit the maximum and average duration.

- By duration
  A deadline in days, hours, minutes and seconds is reported.
- By due date
  A date-type variable is selected, from a form associated with the process, using the icon
  In the process execution, the value of such variable is used as due date. If the value of the variable used to define the due date is modified, process duration is automatically updated.

Saves changes made to duration.

Cancels changes made to duration.



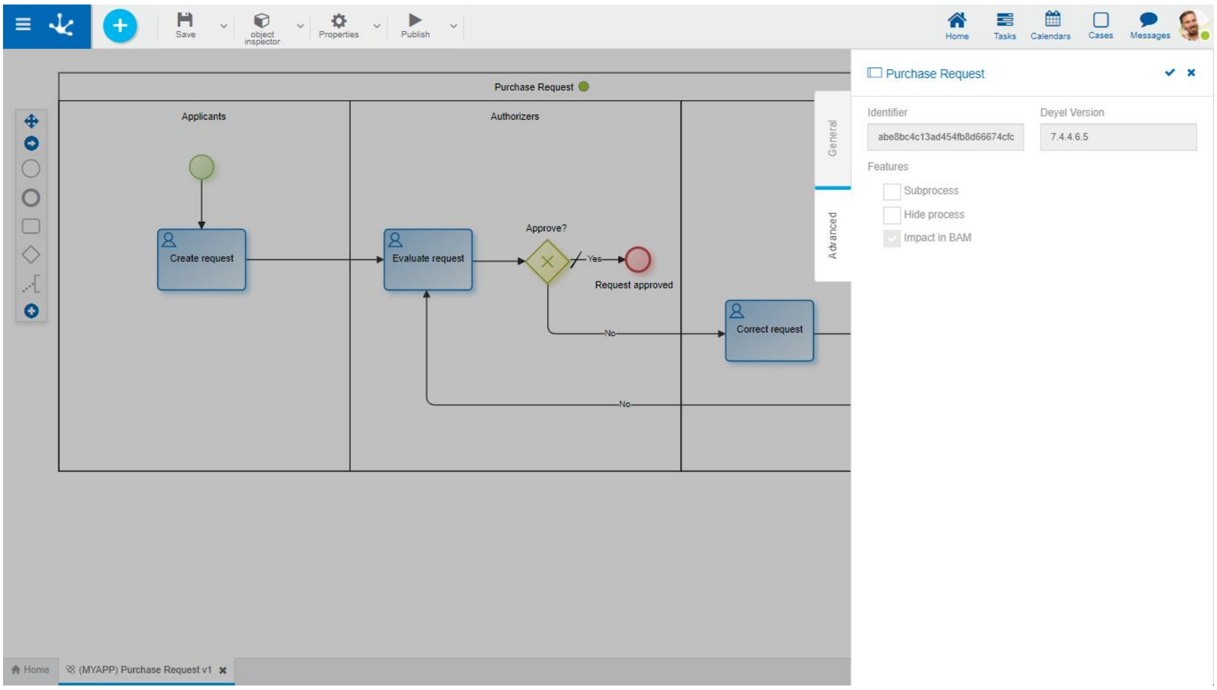
Actions

The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.3.2. Advanced

The second tab of the side panel corresponds to advanced properties of the process.



Properties

Identifier
Alphanumeric code that is automatically assigned to the process. Users cannot modify it. Along with the Version property, they form the unique identification of the process.

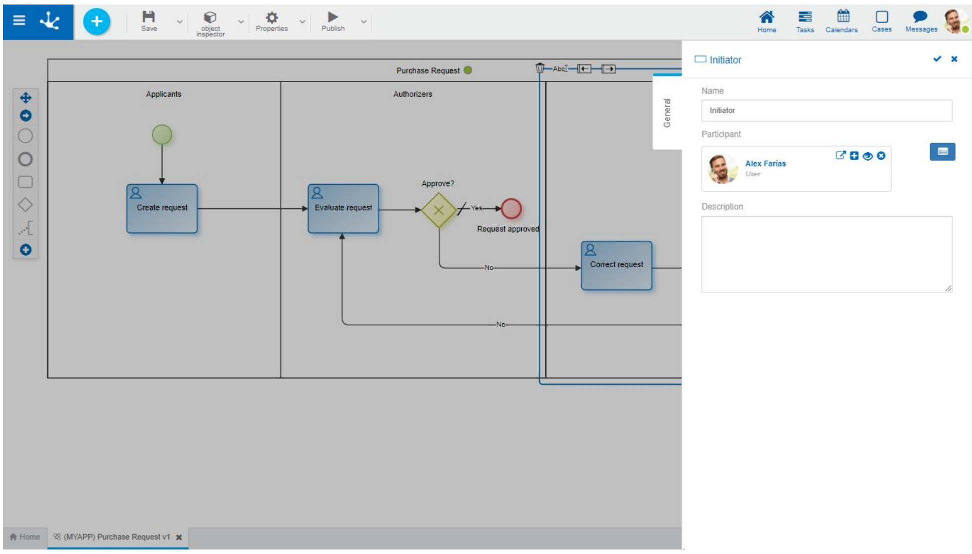
Deyel Version
Indicates a version by **Deyel** with which the process was last saved or published.

Characteristics
One of the following options can be indicated:
- Subprocess: Indicates that a process is defined to be used exclusively as a subprocess of others. It can only be started when it is invoked from another process in a Subprocess activity. It cannot be started by a user manually from the functionality "Start Cases".
- Hide process: Indicates if a process remains visible in the Context Menu and from Forms and Tasks so that users can start it.
- Impacts on BAM: Indicates if process data are taken into account in BAM reports.

3.6.3.4. Lane Properties

There are different ways to enter the properties panel of a lane:

- Double click on the graphic element corresponding to the lane.
- Access the context menu of the lane graphic element.



General Tab

Properties

Name
Lane name. It must clearly represent those who perform the tasks within the lane.

Participant

It is the participant in charge of executing the activities included in the lane.

Allows to select an existing participant, which can be a user, an organizational unit, a role, or an agent. You can also use the autocomplete formula. As characters are entered into this field, the first five matches dynamically appear to select one of them.

Allows to display a window with complete information on the participant, if he is defined as a user, organizational unit or role.

Opens a window to define a new role or invite an external user.

Opens the profile show panel only if it is a user.

Deletes the informed participant.

External users can be invited to participate by providing their email. If more than one user is invited, the generation of a new role starts automatically.

Description

Conceptual description of who executes the tasks within the lane.

Actions

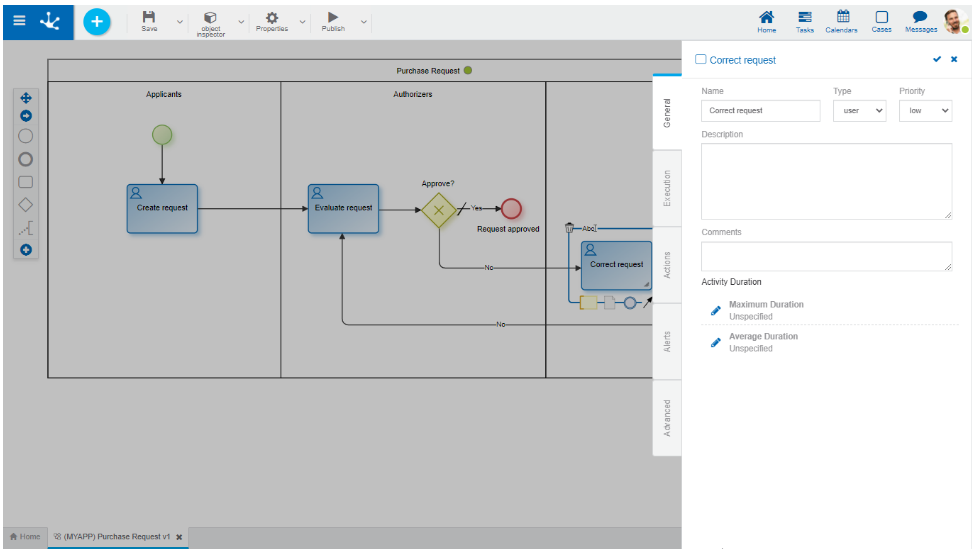
The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.5. Activity Properties

There are different ways to enter the properties panel of an activity:

- Double click on the graphic element corresponding to the standard activity or task.
- Access the context menu of the activity.



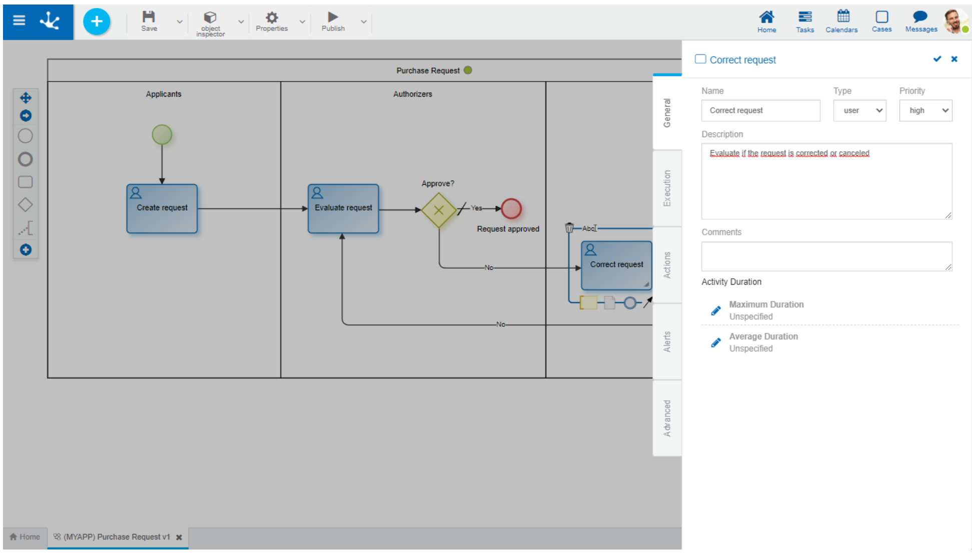
Tabs

- General
- Execution
- Actions
- Alerts
- Advanced

The business modeler user can have access to all tabs except for "Advanced". The IT modeling user can access all of them.
For each of the "General", "Execution", "Actions" and "Alerts" tabs, access permissions are defined from the security module. Users can see only the tabs they are allowed to access.

3.6.3.5.1. General

The properties panel is displayed on the right side of the activities modeler, where the first tab corresponds to general information.



Properties

Name
Activity name. It refers to the action performed by the activity.

Type
Defines the type of activity.

Priority
Indicates the activity priority. Possible values are URGENT, HIGH, MEDIUM, LOW.
The user can display this property in the to-do list and use it as a sort criteria, according to their preference.

Description

Description of the activity that can be used as an online manual.

The user who executes the activity can see it by clicking on the icon .

Comment

In this field, the designer can document in detail what the task consists of.

Activity Duration

Allows to set the Maximum Duration and the Average Duration of the activity.

When the execution of the activities begins, these durations are transformed into a maximum due date and an expected expiration date, respectively. The activity due date calculation is made in different ways, depending on whether the definition of maximum duration is made according to duration or due date.

In the case show or in the tasks show, the due date and time of the task are displayed and in addition, on these durations, alerts can be set.

Edits the maximum and average duration.

- By duration
  A deadline in days, hours, minutes and seconds is reported.
- By due date
  A date type variable is selected from a form associated with the process, using the wizard icon .

In the activity execution, such variable value is used as due date. If this variable value is modified, the due date of the activity is automatically modified.

Actions

The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.5.1.1. Activity Due Date Calculation

The activity due date is calculated in different ways, depending on whether the maximum duration was modeled from a duration or by selecting a form field related to the process.

> *The calculation detail is made for the due date but it is also valid for the average date, depending on the modeling of the average duration of the activity.*

Due Date Based on a Duration

Elements involved in the calculation:

- Activity start date and time.
- Activity maximum duration.
- Calendar of the participant who executes the activity.

- Configuration of holidays and special dates.

Calendar of the Participant Who Executes the Activity

When the participant is a user:

- The calendar established in the user's profile is considered.
- If not indicated, the calendar established in the user's organizational unit is considered.
- If the unit does not indicate a calendar, it moves up in the hierarchy, searching for a higher unit to establish a calendar.
- If no higher unit indicates a calendar, the standard calendar is considered.

When the activity is executed in an organizational unit:

- The calendar established in the organizational unit is considered.
- If the unit does not indicate a calendar, it moves up in the organizational structure, searching for a higher unit to establish a calendar.
- If no higher unit indicates a calendar, the standard calendar is considered.

When the activity is assigned to a generic role:

- The standard calendar is considered.
- When role players assign themselves an activity, the due date is recalculated considering the calendar of the executing participants.

Steps for Activity Due Date Calculation

Step 1: The maximum duration of the activity is calculated, expressed in seconds.

The number of days, hours, minutes and seconds, indicated in the activity definition, is considered.

The number of hours and minutes of a working day is retrieved from the executing participant's calendar.

The maximum duration of the activity is calculated as:

Maximum Duration in Seconds =
Activity.Days * (Calendar.Hours * 3600 + Calendars.Minutes * 60) +
Activity.Hours * 3600 +
Activity.Minutes * 60 + Activity.Seconds

Step 2: The user's working times are defined, through the executing participant's calendar, together with the definition of general holidays and specific dates.

Each of the work bands is perfectly defined by the calendar, and has a start date and time and an end date and time, therefore, this specification can be converted to a number of work seconds.

The definition of "Holidays" means that certain periods are considered non-working days.

The definition of "Specific Date" allows to establish specific working times for a specific date.

The definition of specific dates that is performed at the calendar level takes precedence over the general specific dates.

Step 3: Express the Start Date and Time of the activity, in the time zone of the executing participant's calendar.

Based on that date, working times are assigned until all the seconds that correspond to the activity duration are assigned.

In this way, the activity due date is calculated, according to the user's working times.

Due Date Based on a Form Field

The due date takes the value of a form field.

If the field data type is Date or Local Date, if the value entered is MM/DD/YYYY, the due date is MM/DD/YYYY at 23:59:59.999

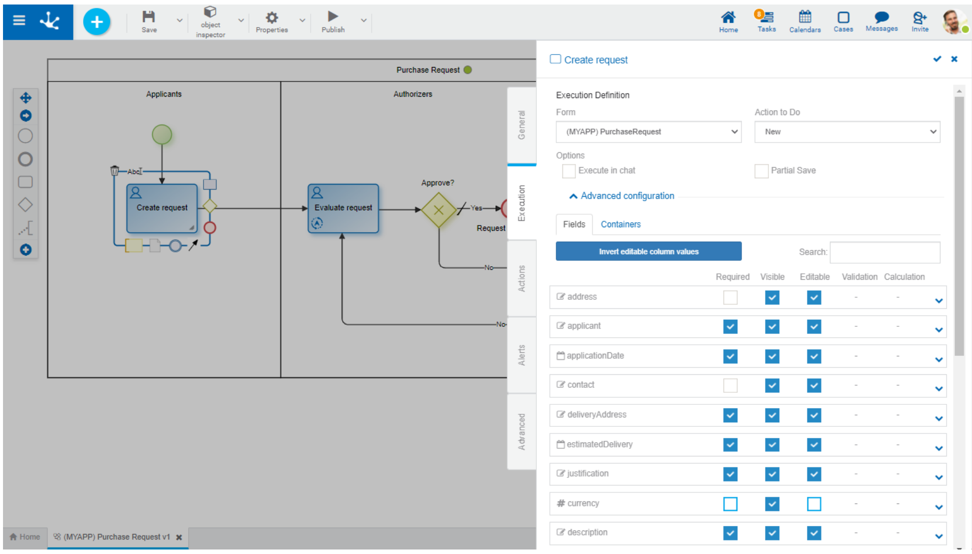
If the field data type is Date and Time, the DD/MM/YYYY HH:MM:SS value is considered as the due date.

If the field type is Local Date and Time, the DD/MM/YYYY HH:MM:SS value is transformed to the standard calendar time zone and is considered as the due date.

3.6.3.5.2. Execution

Process modeling > Modeling the execution of a process

The second side panel tab of an activity corresponds to execution information and it is displayed only for manual, user or undefined activities.
Allows modeling users to define behaviors of the activity and form fields, according to the action performed. There must be at least one form previously associated with the process.



Execution Definition

In this section, the general properties of the activity execution are defined.

Form

Displays the name of the form related to the process used in the activity.

Action to Do

Action performed on the form in this activity.

- **Open**
  Displays the form instance in show mode. Fields cannot be edited.
- **Create**
  Creates a new form instance that is related to the case. When there is an instance already created, it works like a "Modify" action.
- **Modify**
  Displays the existing form instance and allows to modify the fields defined as editable.

Execute on Chat

This option allows the task to be executed not only from the task icon on the top toolbar, but also from the **Deyel** chat.
Selecting this check expands the properties panel to set the actionable message.

- **Who will send the message?**
  Indicates a **Deyel** user that sends the message. Allows to use the autocomplete function to select it.
- **Message content**
  The text that makes up the body of the message is reported, this text can contain variables and functions. To select them you can use their wizards, of variables and of functions .
- **What fields can the user complete?**
  Using the "Drag and Drop" function, fields are moved from the form fields area to the fields to complete area.
  The fields to be completed must be entered by the user in the chat.

Save Partially

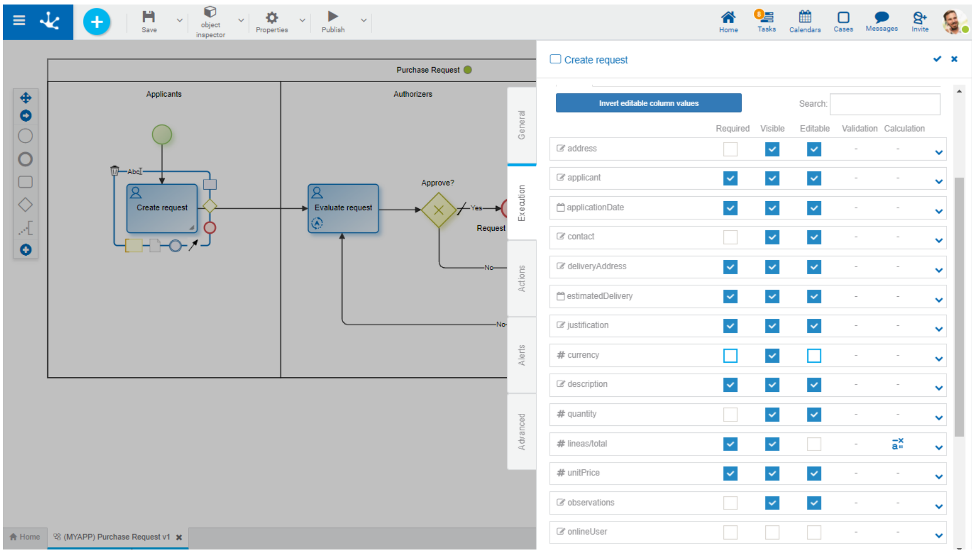
This option indicates that when executing the activity, the "Save" button is added, which allows to keep the values entered by the user, with no need to execute the activity.

Advanced Settings

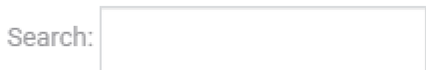
To show this section, an action to do must have been previously defined.

Fields

In this tab, a grid with the form fields is displayed. The properties of these fields can be redefined for the execution of each activity.



Inverts the values of the Editable property, for all the fields displayed in the grid. If it is narrowed by search filter, the modification affects only the filtered fields.



As characters are entered to the search field, it dynamically filters the fields whose Label or Name properties, indistinctly, match the text being entered.

Fields Grid

It is made up of form fields according to the filter applied. Each field is identified by its property Name
.

The grid columns correspond to the modeled behavior properties, whether they have been defined from the form modeler, or from the activity itself.

Properties are updated simply by checking or unchecking them and if they have embedded rules defined, they are displayed by icons. Checks and icons are displayed in blue if properties or rules were modeled in the form, while they are in light blue if they were modeled in the activity.

If there are properties or rules modeled from the form and any of them are modified from the activity, these modifications overwrite the definitions of the form only for the task execution.

> *If any property or rule of the form is overwritten from an activity, subsequent modifications made from the form have no impact on the behavior already defined in the activity.*

> *If a field is added to the form, it is added to the activities that use the form, as non-required and non-editable, regardless of how it has been modeled on the form.*

Required

Indicates if the field is required during the activity execution and if any required rule is defined, it displays the icon .

Visible

Indicates if the field remains visible in the activity and if any visibility rule is defined, it displays the icon .

Editable

Indicates if the field is editable for the activity and if any editability rule is defined, it displays the icon .

Validation

Indicates if there is a validation rule for the field with the icon .

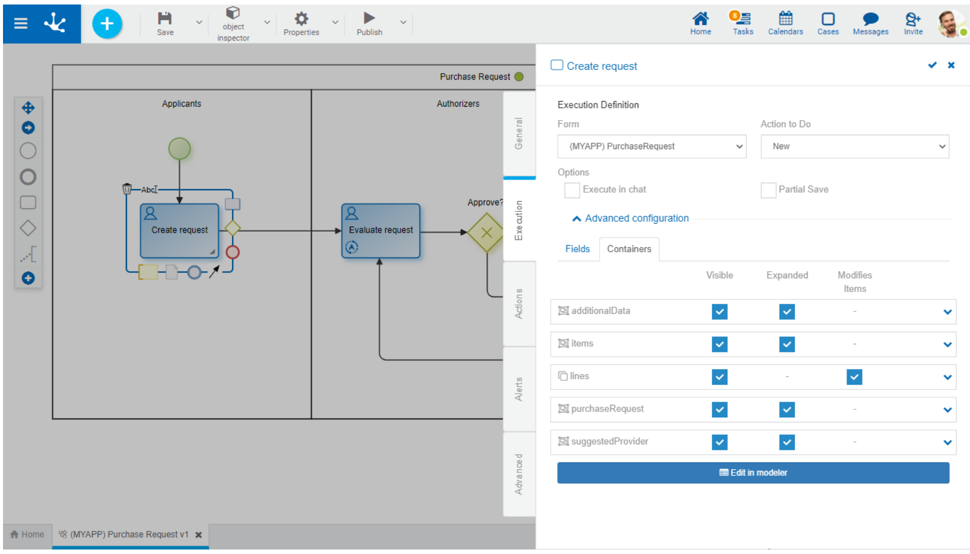
Calculation

Indicates if there is a calculation rule for the field with the icon .

> *Pressing the icon expands the area of [values and rules modeling](#) of each field.*

Containers

In this tab, a grid with the form containers is displayed. The properties of these containers can be redefined for the execution of each activity.



The grid columns correspond to the properties of containers.

Visible

This check indicates that the container remains visible when executing the activity. If it has associated visibility rules, it is represented by the icon .

Expanded

This check indicates that the container is displayed when executing the activity.

Modifies Item

Only for iterative containers. This check indicates if iterative occurrences can be added or deleted. This property is displayed by default as checked, however if an iterative container is added to the form in this tab, this property is unchecked.

> *Pressing the icon the embedded rules modeling area is expanded for each container.*

Edit in Modeler

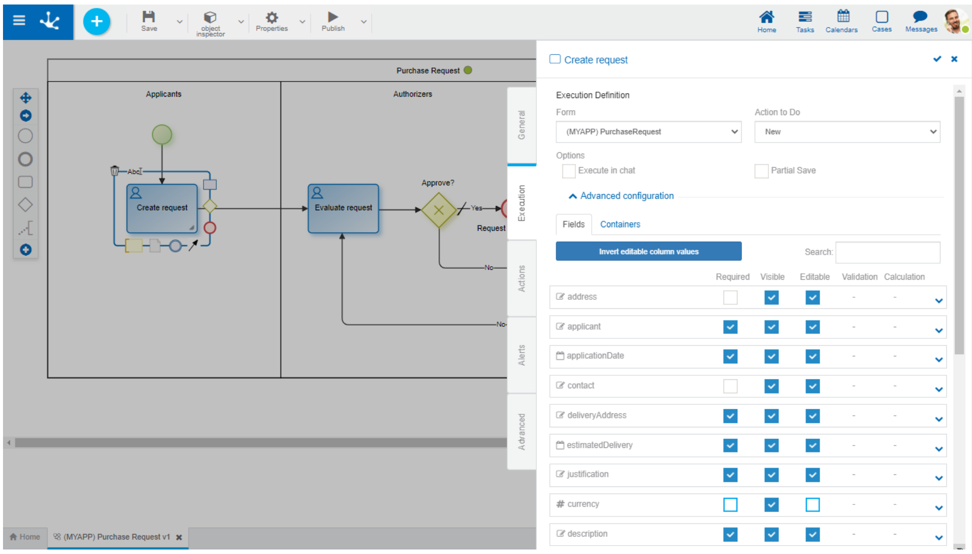
Pressing this button Edit in modeler the form associated with the activity is opened in another tab of the modeler, where the properties panel of each form element can be opened.

> *Pressing the icon* go back *of the top toolbar, returns to the activity execution tab.*

3.6.3.5.2.1. Values and Rules Modeling Area

From this area, behavior, validation and calculation rules are defined and default values of the fields are established.
Properties and rules that are defined in the activity overwrite those that were defined in the form fields.

Field Properties Panel



Properties

Rules

It is possible to define rules of behavior, validation and calculation, associated with a field for the activity.

Required

Indicates whether the field is required during the execution of the activity.

Required   Not required (default)

Rule + Opens an editing area where a rule to determine the required condition can be defined by using the wizard (ctrl + space). If a rule is defined, the icon is displayed with light blue borders.

Visible

Indicates whether the field is visible. If this property is not selected, the field is not displayed during the execution of the activity.

Visible (default)   Not visible

Rule + Opens an editing area where a rule to determine the visibility condition can be defined by using the wizard (ctrl + space). If a rule is defined, the icon is displayed with light blue borders.

Editable

Indicates if the field is editable. If this property is not selected, the user cannot enter or modify values in the field during the execution of the activity.

Editable (default)   Not editable

Rule + Opens an editing area where a rule to determine the editability condition can be defined by using the wizard (ctrl + space). If a rule is defined, the icon is displayed with light blue borders.

Validation
Rule + Opens an editing area where the condition that determines if the field value is correct can be defined. It is possible to define more than one rule. If rules are defined, the icon is displayed with light blue borders.

Calculation
Rule + Opens an editing area where the expression to be executed to calculate the field value can be defined. If a rule is defined, the icon is displayed with light blue borders.

Persists
Indicates whether the information entered in the field is kept in an activity. This property is only available to IT modeler users.
Persists (default) Does not persist
The value of this property is presented as Does not persist when the field meets all the conditions mentioned below:

- It is not editable and has no associated editability rule
- It has no default value property defined
- It has no associated calculation rules
- It has no relation defined

If the IT modeler user needs to use scripting to update the field content in the activity, they must indicate this property value as Persists. In this way, the field value updated by scripting is not lost when the case moves on to the next activity.

> *If form rules or properties are overwritten from an activity, subsequent modifications from the form for the* **overwritten properties**, *have no impact on the behavior already defined in the activity.*

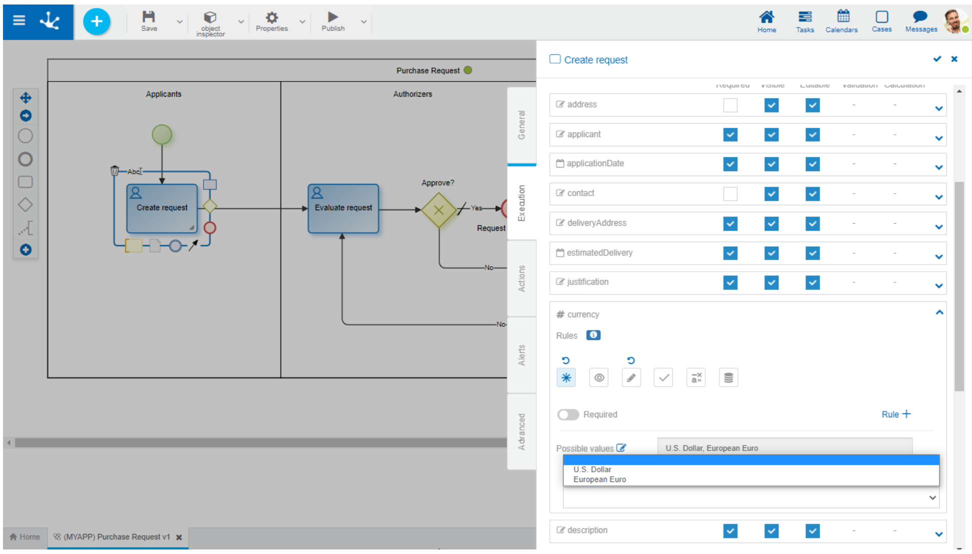
Undo changes
Allows to delete rules or behavior properties modeled from the activity. In this way, behavior properties and rules applicable in the execution of the activity are again those originally defined in the form.

Shows syntax examples to write rules.

Default Value

It is an area to define the field default value.
Allows to select functions from a list to incorporate dynamic information into the field.
Allows to incorporate information of entities that participate in the process execution to the field content. For example, in the Refund Request process, the request date can be incorporated, this data is available in the date field of the Refund Request form.

Field Properties Panel with Relation



If the form field has a relation the possible values and the default value of the field in the activity are displayed.

Possible Values

Clicking on the icon enables a panel to filter data from the list in the activity.

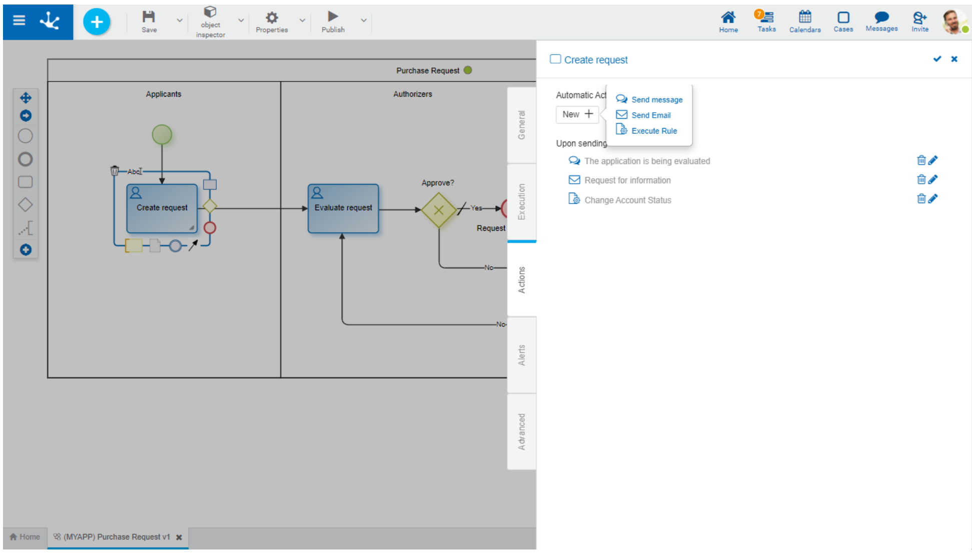
Invert Selection Inverts the selected values.

Select all Selects all values.

Exclude Values: Allows to exclude the selected values from the selection.

3.6.3.5.3. Automatic Actions

In the "Actions" tab, automatic actions executed in the activity are defined.



New +

Pressing this button you can create new automatic actions of different types.

Types

Send message

Send Email

Execute rule

For existing actions, the icon allows editing a previously defined automatic action and the icon deletes it.

Properties

The different types of automatic actions share properties and have other specific ones.

Name

Name that identifies the automatic action in the activity and is used in the description of the activity execution in the graphic show of a case.

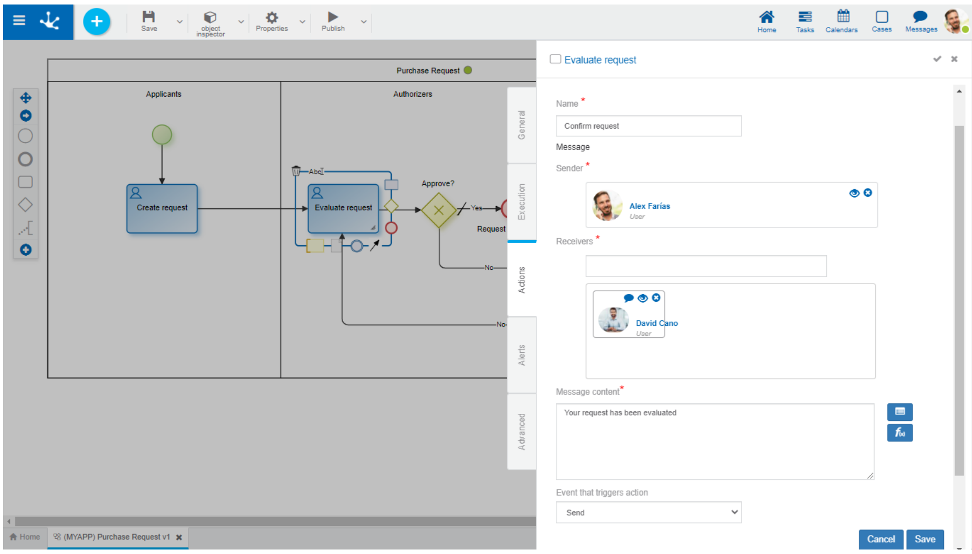
Event that triggers the action

Moment when the automatic action is executed, defined by one of the following events:

- Send: Indicates that the action is executed when the task execution finishes.
- Receive: Indicates that the action is executed when the task execution starts.
- Disabled: Execution of the action is disabled.

3.6.3.5.3.1. Send Message

Allows to define the sending of a message via the chat of **Deyel**. The message may include process-related form variables and functions that allow to incorporate links to case shows, to do lists, forms, application access links, among others.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

In addition to the [properties shared]() with email sending and execution of rules, message sending actions have specific properties.

Sender

Indicates a **Deyel** user that sends the message. Allows to use the [autocomplete]() function to select it.

Receivers

Indicates **Deyel** users that will receive the message. It is possible to select users or agents that return users at the time of execution. In both cases the [autocomplete]() facility can be used to select them.

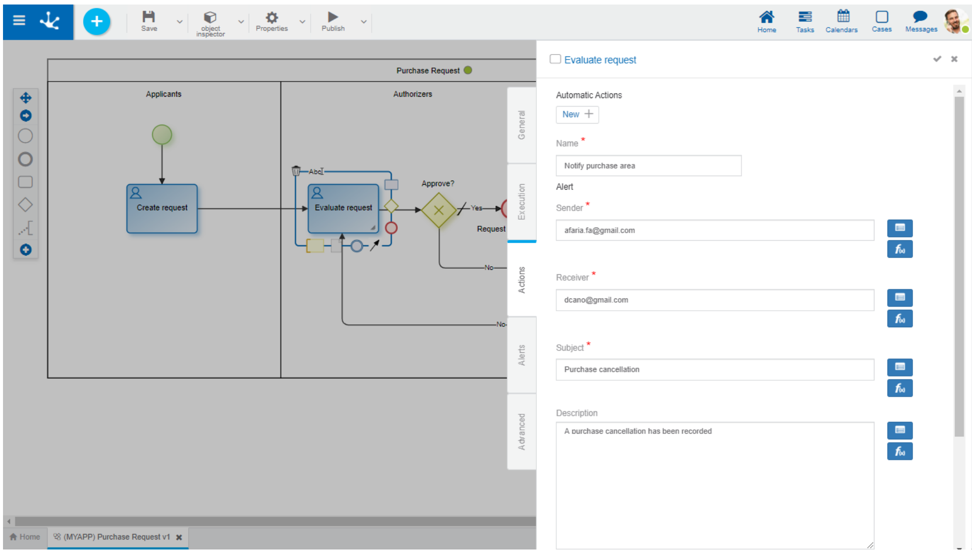
Message content

The text that makes up the body of the message is reported, this text can contain variables and functions. To select them, use their wizards of variables and functions.

> *For both senders and receivers, once the user has been selected, the chat facility can be used if the user is different from the one that is connected and the facility to display the user's profile* .

3.6.3.5.3.2. Send Email

Allows to define email sending. They can include process variables and [functions]() that allow to incorporate links to case shows, to do lists, forms, application access links, among others.



An asterisk "" on the label indicates that the property is required.*

Properties

In addition to the [properties shared]() with email sending and execution of rules, message sending actions have specific properties.

In all properties, text can be combined with values obtained through the variables wizard or the function wizard of **Deyel**.

Sender

Indicates the email address from which the message is sent. If the email server is Google or Microsoft, it is not necessary to complete this property and the account entered in the environment property [User or account to establish connection]() will become the sender.

Receiver

Indicates the email address to whom the message is sent. More than one address can be informed separated by ";".

Subject

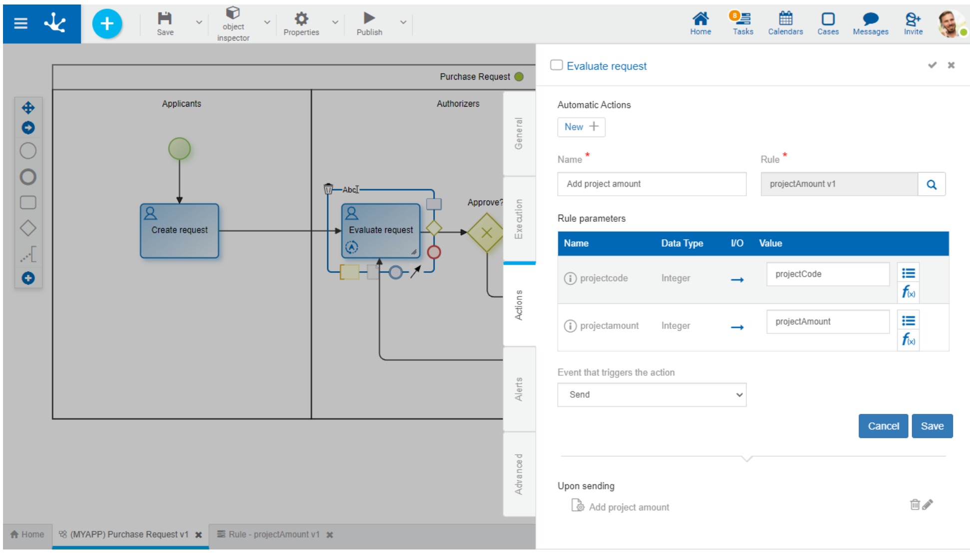
Contains the subject of the email that is being sent.

Description

The text that makes up the body of the email is reported. Html tags can be included to format the message.

3.6.3.5.3.3. Execute Rule

Allows to define the execution of an advanced rule of **Deyel**.



An asterisk "" on the label indicates that the property is required.*

Properties

In addition to the properties shared with message sending and email sending, rule execution actions have specific properties.

Rule

Name of the advanced rule assigned to the automatic action. When creating the action, the rule is selected from a grid that contains the previously published rules.

Rule parameters

Depending on the selected advanced rule, a grid with its modeled parameters is enabled. For each parameter, report the properties:

Name

Parameter name as defined when modeling the advanced rule.

Data Type

Indicates the data type with which the parameter was defined. It can be any type of Java object allowed in **Deyel**. The Java object type can be displayed in full form, as a help, by placing the mouse over the data type in each grid element.

I/O

Specifies whether the parameter is input or output.

Value

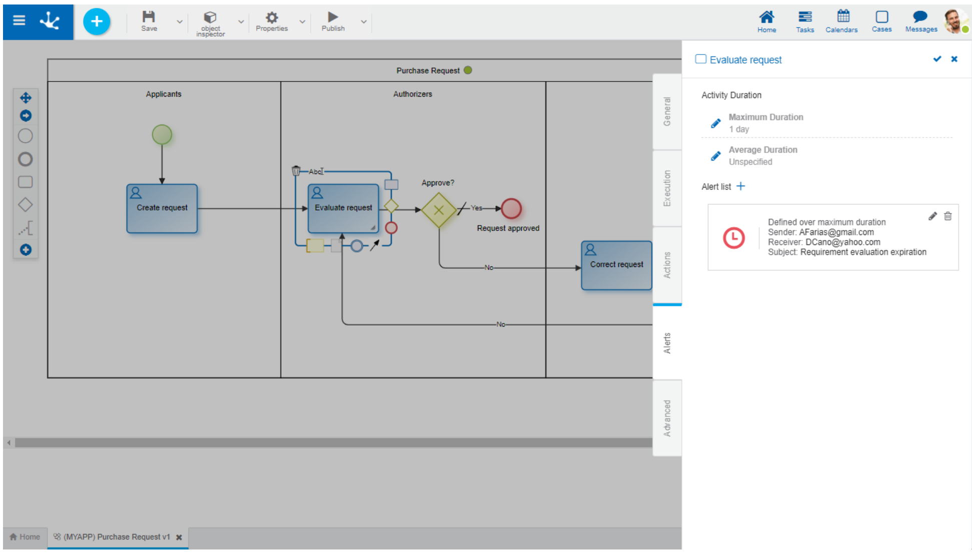
If the parameter is input, it corresponds to the initial value taken by the parameter, by entering a fixed value or selecting it from the wizard of variables or functions. This value must match the one defined for the parameter.

If the parameter is output, it corresponds to the form field that will contain the value returned by the rule and can be selected by using the wizard of variables or functions.

The parameter show is available from the "i" icon.

3.6.3.5.4. Alerts

For each standard activity or task, the IT modeler can define the issuance of electronic notifications by sending emails based on the activity execution times. They are defined in the "Alerts" tab of the activity properties panel.



Properties

Activity Duration

This section displays the Maximum Duration and the Average Duration that have been informed in the "General" tab. Alerts definition is performed considering any of these durations, as indicated in the property Define alert on.

Click on the icon to edit the duration and modify it.

Alerts List

Displays the list of alerts set for the activity.

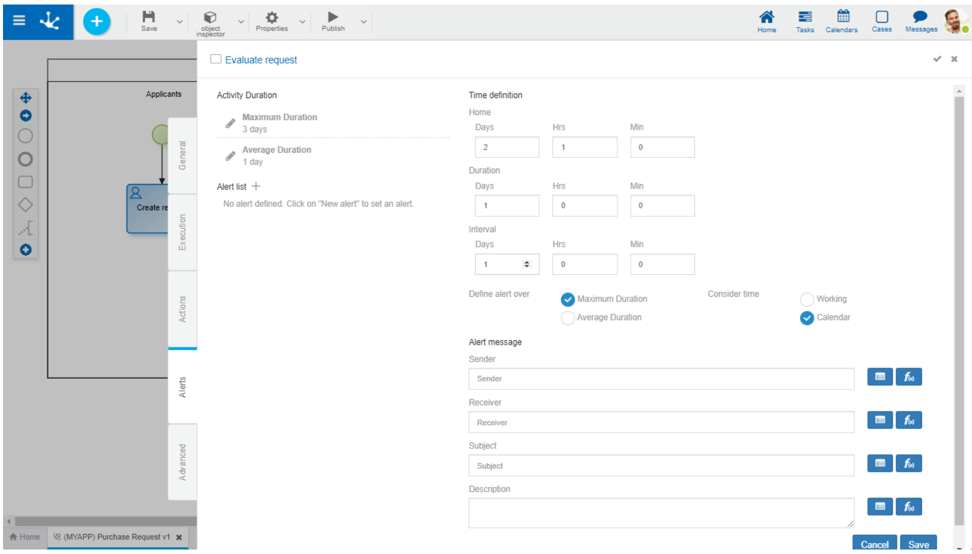
Indicates that the alert is set based on average duration.

Indicates that the alert is set based on maximum duration.

In order to define alerts, it is necessary to have entered the maximum or average duration of the activity.

To incorporate an alert, press the icon +. To modify it, press the icon and to delete it, press the icon .

Definition of Times



Alert start

Period of time that determines the start of the alert issuance, depending on the Maximum Duration or Average Duration established for the activity.
The time period can be measured either on a calendar time or working time basis, as specified in the property Consider time.

Days, Hours and Minutes values may:
• Not be informed: The alert is sent when the activity duration is fulfilled.
• Be informed with positive values: The alert is sent after the activity duration fulfillment.
• Be informed with negative values: The alert is sent before the activity duration fulfillment.

Alert duration

Period of time during which the alert is sent. The number of days, hours and minutes informed here allows to calculate the moment in which the alert sending must be finished as from the Alert start. The alert duration must be informed.
The time period can be measured either on a calendar time or working time basis, as specified in the property Consider time.

Alert interval

Time interval or frequency with which the alert is sent. Values are informed in Days, Hours and Minutes. If not informed, the alert will be sent every time the scheduled task is executed Execution of Activity Alerts.
The time period can be measured either on a calendar time or working time basis, as specified in the property Consider time.

Define alert on

The alert may be defined in relation to the Maximum Duration or Average Duration set in the "General" tab or from the same "Alerts" tab.

Consider time

Indicates that the periods set in the Start, Duration and Interval properties should be measured as calendar time or working time, taking into account the definition of environment calendars.
If working time is informed, the calendar defined for the participant responsible for executing the activity, if there is one, is considered first, or as a second option, the calendar defined for their organizational unit. When there are no special calendars, the standard environment calendar is considered.

Alert message

Sender

Email address from which the email is sent.
A value can be entered as long as the [email server] is not Google nor Microsoft.
Another possibility is to select the emailWorkflow() function, it is suggested when the email server is Google or Microsoft, and in this case it is not necessary to assign it a value in the property Value of the emailWorkflow() function because it will always take the address entered in the property User or account to establish connection.

Receiver

Receiver's email address.

Subject

Contains the email subject.
The field can be completed manually by combining it with variables available in **Deyel** using the icon .

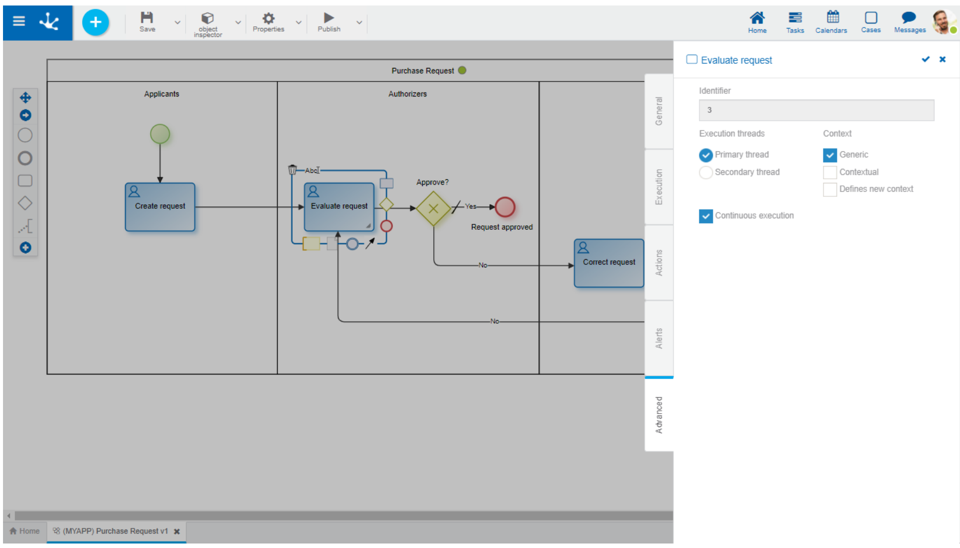
Description

It is the body of the email. The field can be completed manually and also combine it with variables available in **Deyel**, clicking on the icon . Html tags can be used to format the message.

Click on the "Save" button to store the new alert that is incorporated into Alerts List, from where it can be modified or deleted.
Click on the "Cancel" button to close the new alert panel, discarding the changes.

3.6.3.5.5. Advanced

IT modeler users can set advanced level modeling properties in this tab.



Properties

Identifier

Activity code that identifies the activity univocally in the process. This attribute is automatically generated by the modeler and cannot be modified.

Execution Threads

Indicates if the activity is executed on the Main Thread of the case or on the Secondary Thread.

Context

A process execution context determines the universe of users the case can receive to execute its current task.
When those responsible for the activities are expressly indicated users, it is not necessary to select any of the context attributes.

Generic

This attribute can be selected when the lane responsible defined for the activity is a role or an agent.

When the case reaches the activity defined with Generic context, all the role/agent users receive the case in a generic way, without the possibility of execution, so that one of them can assign the case or the coordinator of the role can assign it to a particular user.
The moment the case is assigned to a user, it automatically disappears from the other users' task list. To assign the case, press the "Assign" button.

When the next activity has no Generic attribute defined, the list of role/agent users is submitted from the current activity, to select who the case is given to.
Note:If the current executor is included in the role/agent of the next activity and also the continuous execution, property is selected in the current activity, the next activity execution interface is automatically presented to the current user.

Contextual

When the first case activity is executed, the organizational unit of the user that executes it is established as the "contextual unit" of the case.

It can be selected in cases where the lane responsible in which the activity is located is defined with role per unit.
When the case reaches the activity with the Contextual attribute selected, it can only be executed by those users with role per unit and who also belong to the context unit or to some unit that depends on it. The Generic attribute should not be selected.

When the activity has no Contextual attribute selected, it can be executed by the expressly defined responsible users or by the role/agent, without applying any other restriction.

Defines New Context

When the activity execution begins, a new case execution context is established. This means that the context unit becomes the organizational unit to which the user who is executing the activity belongs. This option is used in very specific situations with a high degree of modeling experience.

☐ Defines new context

The case execution context is not modified. It is the most used option.

Continuous Execution

This indicator is used to specify that after executing the activity it should automatically continue with the next one, whenever possible. In this way, the user can execute the case activities continuously, without accessing the to-do list.

Continuous execution is possible when:

- The responsible for the next activity is a user and it is the same user that executes the current activity.
- The responsible for the next activity is an organizational unit and it is the same organizational unit of the user that executes the current activity.
- The person responsible for the next activity is a role / agent and the user executing the current activity belongs to the role/agent.
  If in the next activity the Contextual attribute is checked, the organizational unit verifies that the current user is the context unit or a unit that depends on it.

☑ Continuous execution

According to the definition of subsequent activity, if the current user can execute it, then its execution starts automatically.

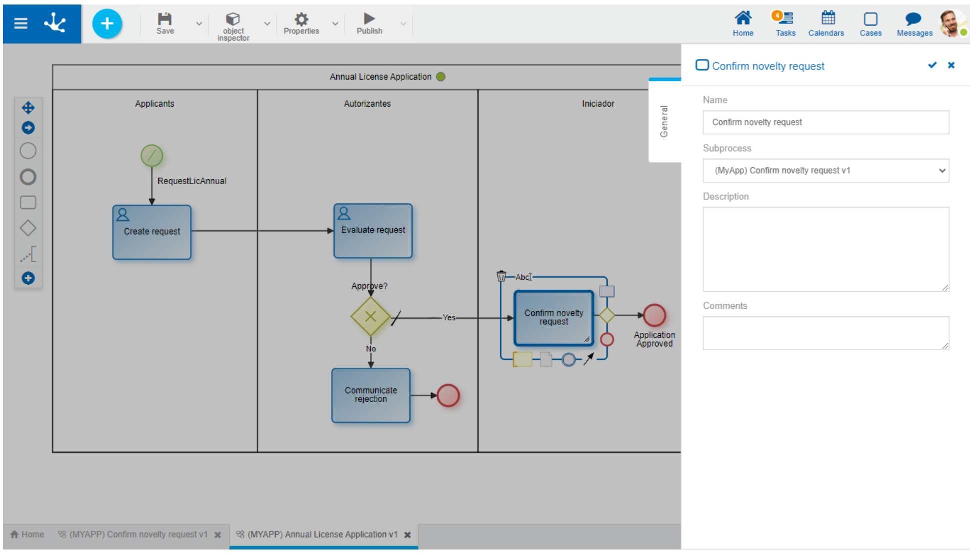
☐ Continuous execution

In this case, even though the current user can execute the next task, they must take the case from "My Tasks".

3.6.3.6. Subprocess Properties

There are different ways to enter a subprocess properties panel:

- Double click on the graphic element corresponding to the subprocess or abstract activity.
- Access the context menu of the subprocess graphic element.



General Tab

Properties

Name

Activity name. Describes in a generic way the objective of the process that is being represented.

Subprocess

Process represented by this abstract activity. Presents a list of all processes defined to select one of them.

Description

Conceptual description of the activities performed.

Comments

In this field the designer can document in detail what the subprocess execution consists of.

Actions

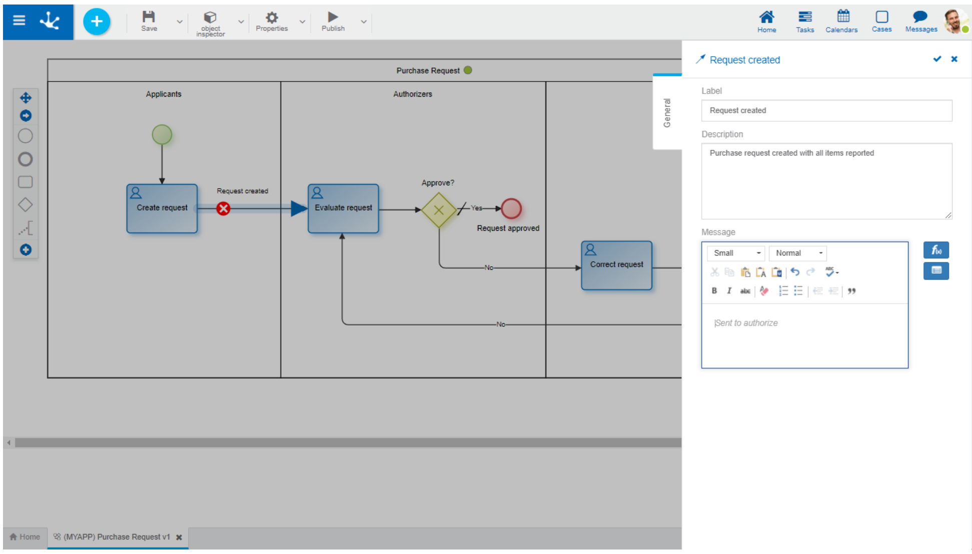
The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.7. Flow Properties

There are different ways to enter a flow properties panel:

- Double click on the graphic element corresponding to the flow.
- Access the context menu of the flow graphic element.



General Tab

Properties

Label

Flow label.

Description

Text field used to document the meaning of the flow.

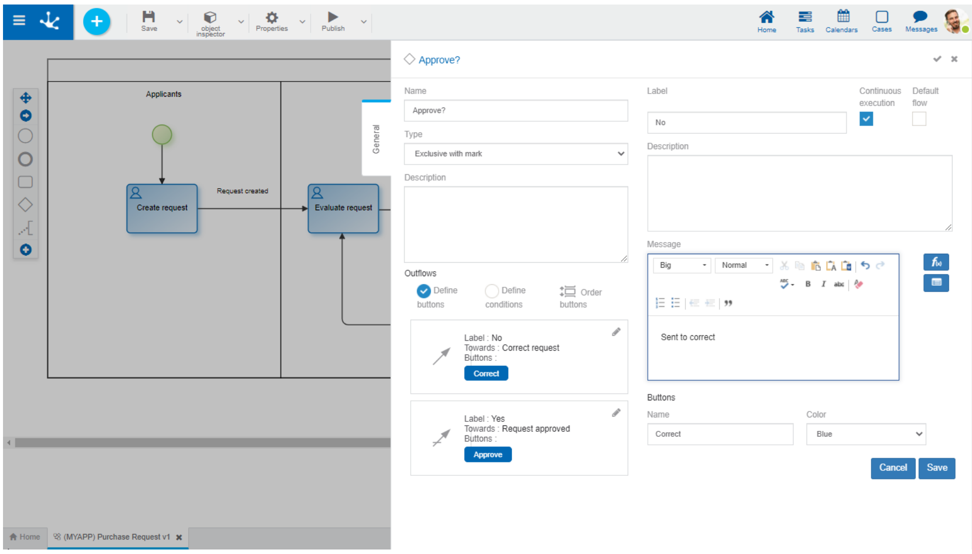
Message

Text displayed when moving to the destination activity of the flow.

Allows to select functions of **Deyel** from a list to incorporate dynamic information into the message.

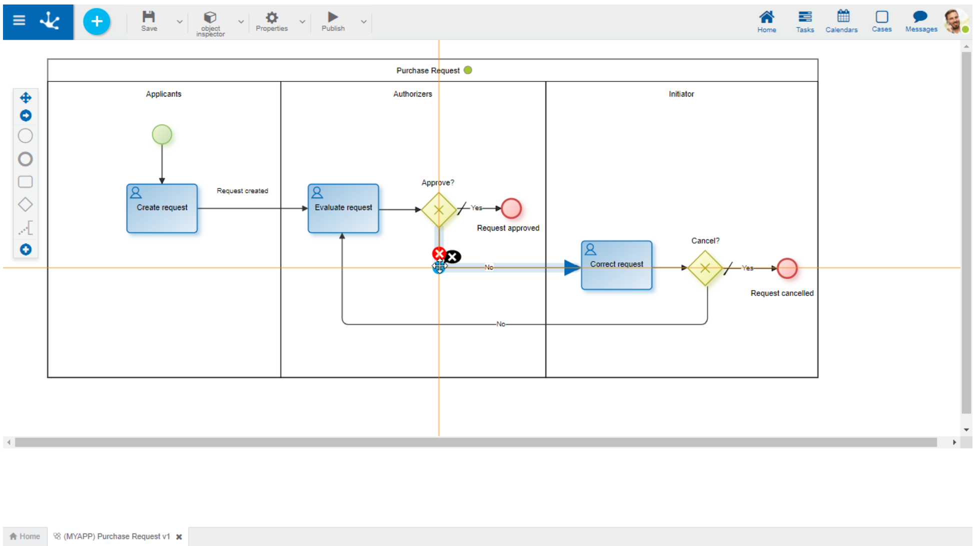
Allows to incorporate information on entities used in the process execution to the message.

When flow cases are gate outputs, in addition to flow properties, the panel displays the gate properties.



Visual Flow Options

These options are displayed when hovering over the graphic element.



Deletes the flow.

Indicates there is a vertex. Positioning the cursor over it enables a black cross that, when selected, will delete such vertex.

Deletes the vertex. Position the cursor over the blue circle to display the icon and then click on it.

To add a new vertex to the flow, keep the mouse button pressed until a blue point (vertex) is displayed. Once generated a new vertex, it can be moved with the Drag&Drop function.

Actions

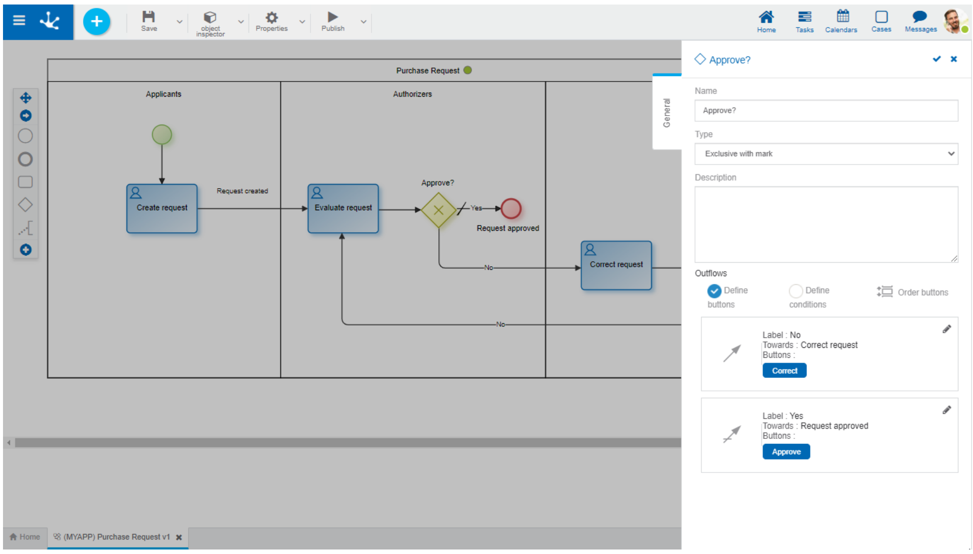
The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.8. Gateway Properties

There are different ways to enter the gateway properties panel:

- Double click on the graphic element corresponding to the gateway.
- Access the context menu of the gateway graphic element.



General Tab

Properties

Name

Gateway name that should reflect what is being evaluated.

Type

Indicates the gateway type.

Description

Text that describes the gateway purpose.

Output flows

Default Flow

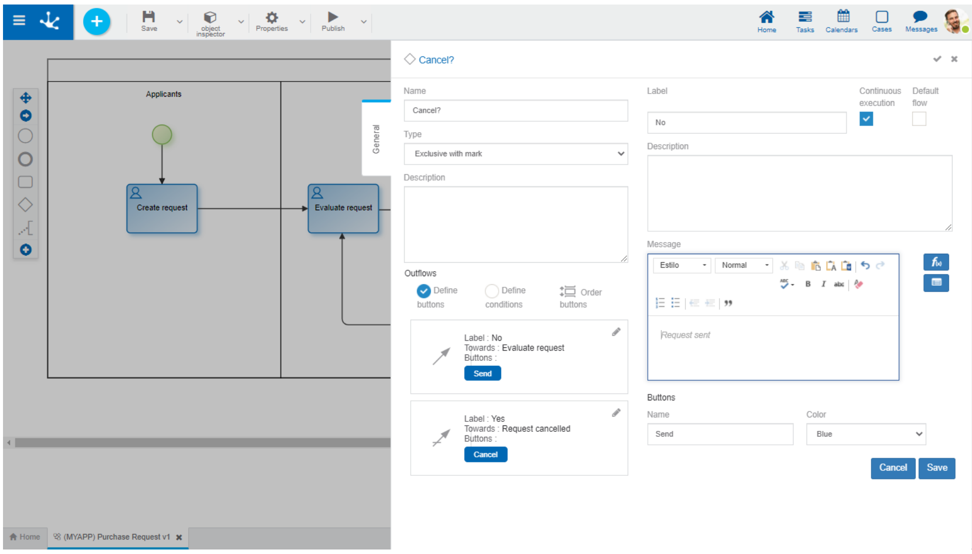
Allows to define a default flow indicating which flow to follow when other flow conditions are not met. This property is required.

Continuous Execution

Allows to define the continuous execution of each output flow of the exclusive gateways.

Define buttons

Allows to assign a button for the user to push at each gateway output flow. If the gateway is inclusive, more than one button can be assigned to each flow, and each button may have more than one flow assigned.
Buttons become visible in the execution activity previous to the gateway.
A name and a color are defined for each button .



Displays a properties panel that allows to establish the button name and color assigned to the flow, and also modifies other flow properties.
Within this panel, if it is an inclusive gateway, the following possibilities are enabled.

New button

Allows to add a new button to the flow.

Select assistant bot

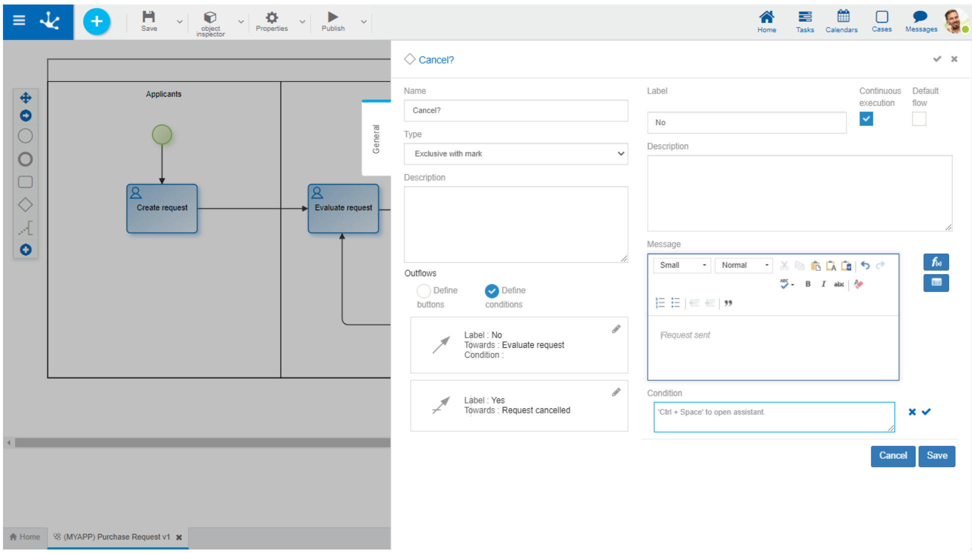
Allows to assign an existing button to the flow.

Order buttons

This functionality is enabled when you select Define buttons. Clicking on it, displays a panel to order buttons with the Drag&Drop function.

Define conditions

Allows to assign conditions to be met so that the process continues its execution following the flow.



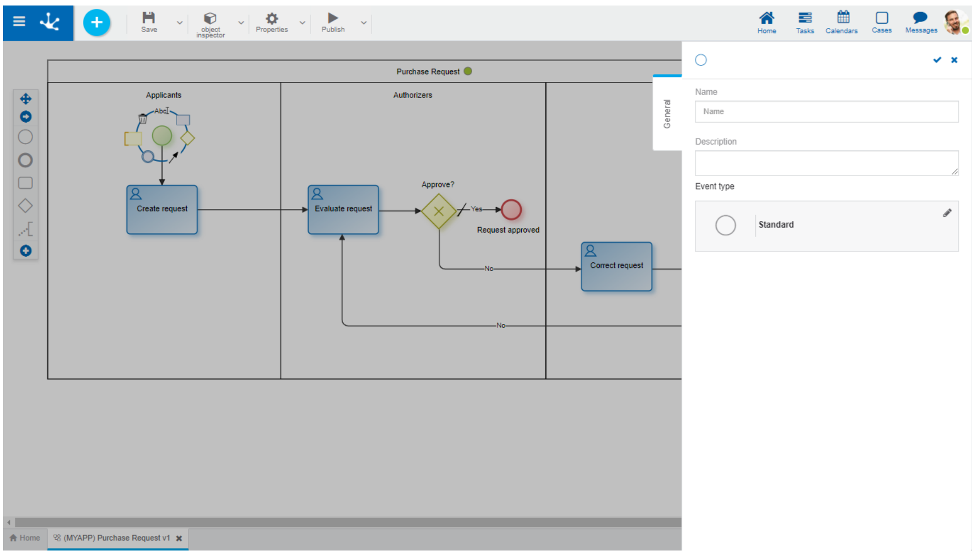
Displays a properties panel where the flow conditions are modeled by means of the [embedded rules wizard]() that allows to select fields of entities that participate in the process and operations to be applied. Additionally, it is also possible to modify other [flow properties]().

> *If the process is related to several forms, the wizard allows to select the form fields indicated as [main entity in form properties]().*
> *If an entity is not defined as the main entity, the first form fields displayed when expanding the list in the [Execution Definition]() property can be selected in the process activities.*

3.6.3.9. Event Properties

There are different ways to enter the properties panel an event:

- Double click on the graphic element corresponding to the [event]().
- Access the [context menu]() of the event graphic element.



Actions

The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.3.9.1. Starts Events

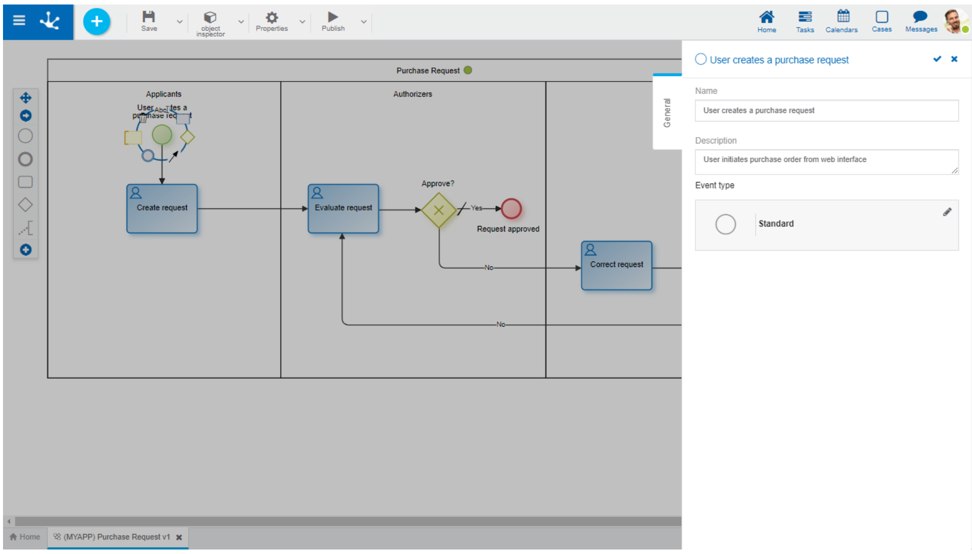
General Tab

In the "General" tab, common properties for all start events and the special ones for each case are defined, which are enabled when assigning the type of start event.

- Standard
- Command
- Email
- Signal
- Timer
- File
- Rule

3.6.3.9.1.1. Standard

The properties panel of the standard start event is displayed on the right side of the process modeler.



Properties

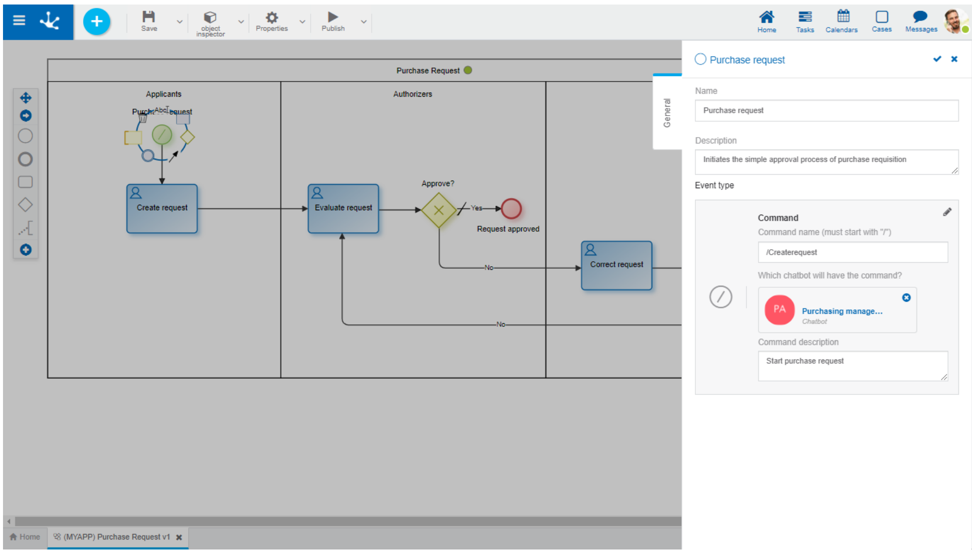
Name
Text that is displayed in the diagram next to the graphic element of the event.

Description

Field that allows to document the event.

3.6.3.9.1.2. Command

The properties panel of the [start event by command]() is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to provide a text that identifies the command.

Description

Field that allows to document the event.

Command

Text assigned by the user to identify the command that starts the process. MIt must start with a slash "/" and followed by the name the user informed, with no blank spaces.
By default it presents the command established in the process creation. It can be modified.

Chatbot

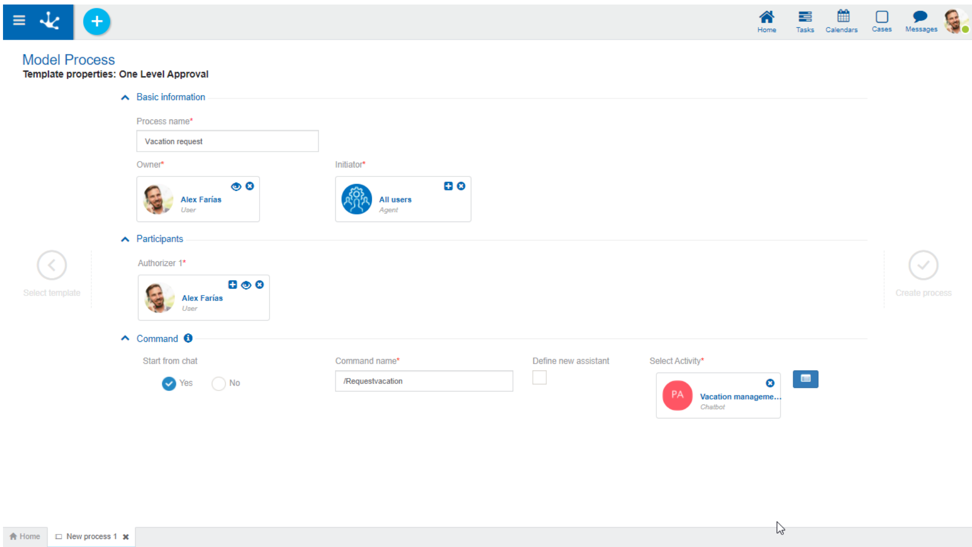
Indicates the [chatbot]() used to execute the command.
By default, the chatbot informed in the process creation is displayed, and besides, if the [Define new assistant]() process property is checked, a new chatbot is automatically created, configuring itself as [wizard]() of the user that is modeling the process.
To modify the assigned chatbot, click on the delete icon. This property has autocomplete function, therefore as characters are entered, the first five matches are dynamically displayed to select one of them.

Command Description

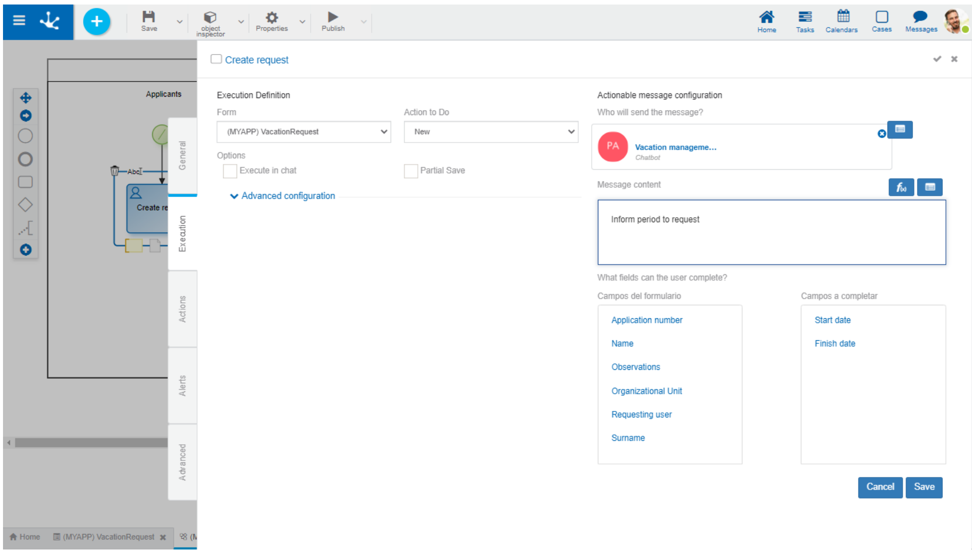
Explanatory text that is displayed when selecting the command from the chat window.

Example

The command start event is automatically defined when the process property is checked [Start from Chat](), when modeling a new process, whether from a template or not.



To modify the type in an already defined start event, access the [context menu]() of the graphic element and select the type of start event from the options that are presented.
The first activity of a process that starts with a command event, must have the [Execute on Chat]() property checked.



Properties

Who will send the message?

The user or chatbot that sends the message from the chat is informed. It generally matches the chat-bot assigned in the command start event.
Note that if a user is informed, that user does not see their own message.

Message content

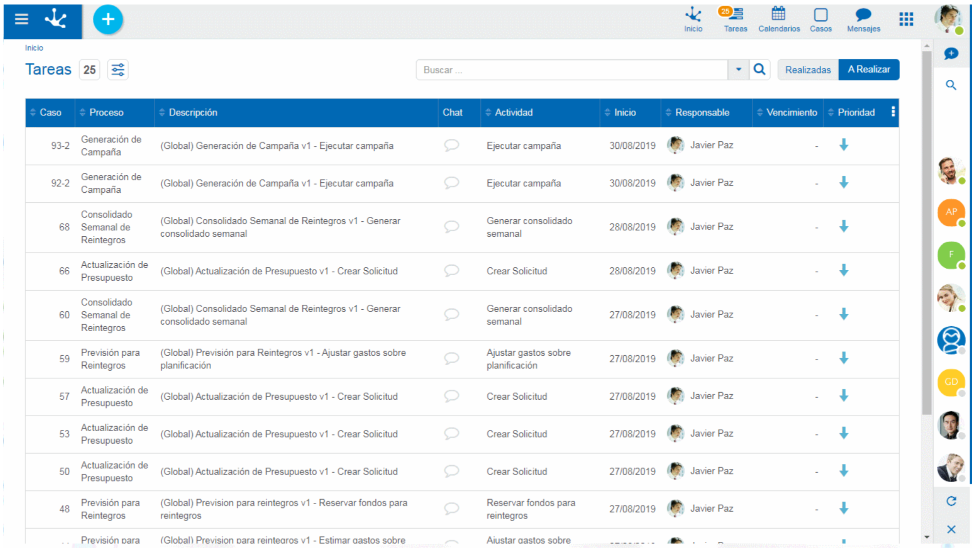
Inform the text displayed in the chat at the beginning of the process.

What fields can the user complete?

Move the fields that the user must complete from the chat to the fields box to complete, in the first process activity.

Use of the Process

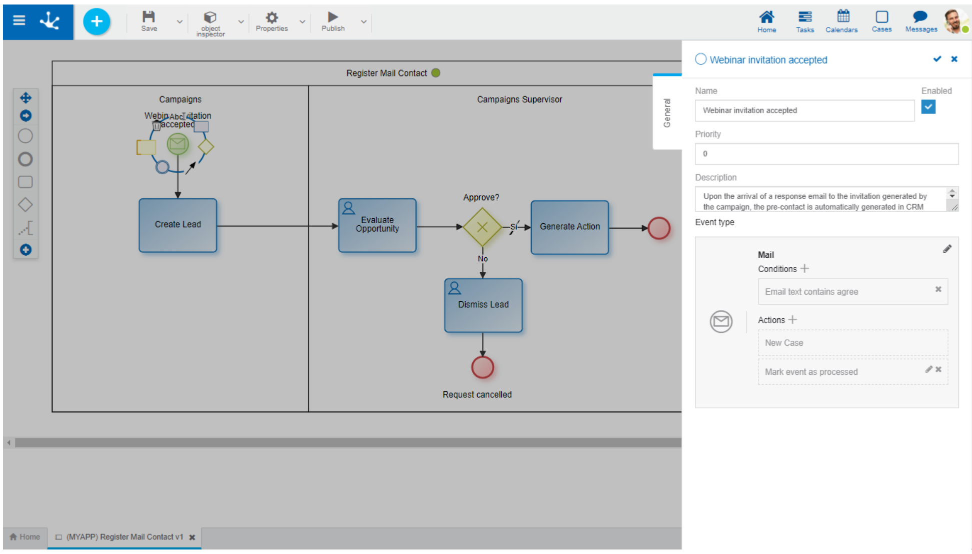
- To start the process by chat, the user must have permission to start the process.
- If the command is assigned to a chatbot configured as "visible", users can initiate the command directly from the chatbot in a chat.
- If the chatbot with the command is configured as "not visible", then necessarily some user must be using it as wizard. A chat with that user must be opened to access the command.



In the chat window, the data required in the form must be informed and one of the proposed buttons of the actionable message must be pressed.

3.6.3.9.1.3. Email

The properties panel of the start event by email is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the email expected to be received.

Enabled

Indicates that the event is enabled to receive emails and execute if applicable.

Priority

Execution priority assigned to the event. It is reported as an integer, with 0 being the highest priority. If the event performs the action mark event as processed, events with lower priority are not executed.

Description

Text that allows documenting detailed information about the event.

Conditions

They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.
To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

Property	Example
• Email subject • Email text	Email subject **contains** "Information request"
• Email sender • Email recipient	Email sender **Equals** AtencionConsultas@Deyel.com

Property	Example
	More than one address can be reported separated by ; (semicolon) without leaving spaces
• Name without the attachment extension in n position (starts at 1) • Attachment extension in n position (starts at 1)	Name without the attachment extension in n position **starts with** "Sheet", indicated in parameter 1 (first position)
• Number of email days elapsed	Number of days elapsed **Equals** 3

Actions

They are the actions that are carried out automatically when the event occurs.

- Create Case

For all start events, a case is compulsorily created for the process and a version in which the event is executed.

- Attach file

Allows to attach one or more files to the case.

Parameter	Description
Email attachment	Position number of the email attachment that is attached to the case. (*)
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully.(*)

> *Note: The parameters selected with (*) are mandatory.*

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is assigned.
Values map	Report <field1><value1><field2><value2>…, where fieldN corresponds to form field names and valueN to the values that are assigned to

Parameter	Description
	each field. It has higher priority than DS_XML_CON-TENT_PATH
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not re-ported
Annex Type	Annex type attached (*).
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previ-ously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed success-fully.(*).

Note: The parameters marked with (*) are mandatory.

- Check event as processed

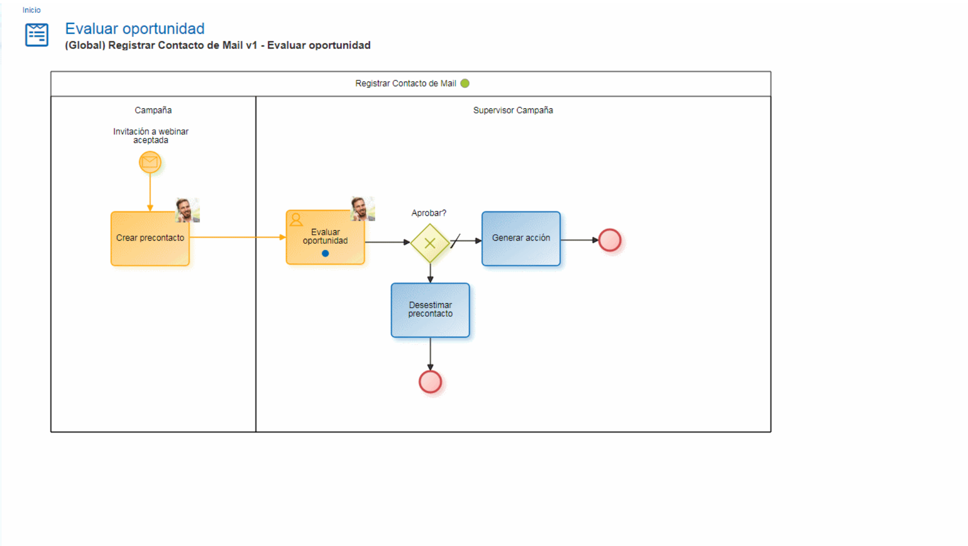
An automatic response is sent to the email received indicating that it has been processed.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully (*).

Note: The parameters marked with (*) are mandatory.

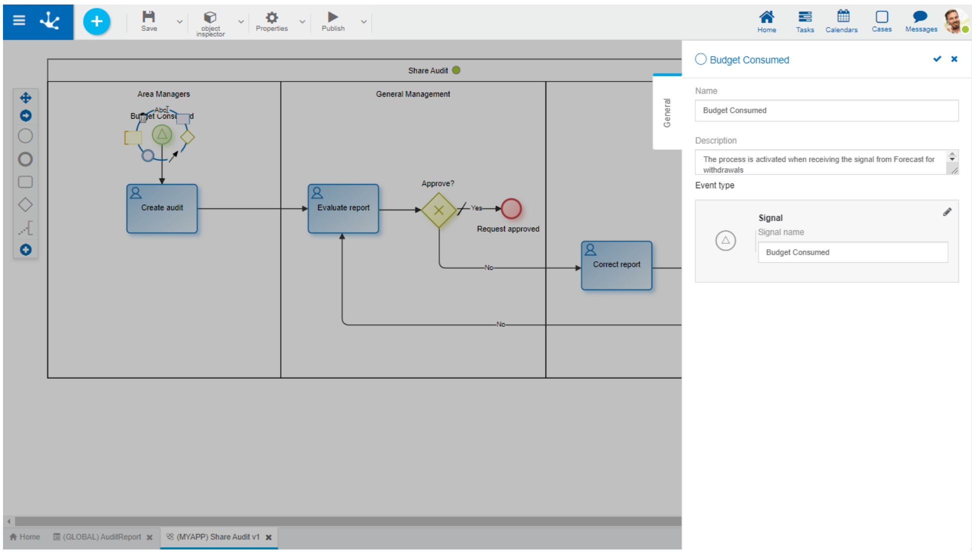
Example of Use

The "Register Email Contact" process starts its execution automatically when an email arrives to the email account established in the environment configuration, under the title "Invitation to **Deyel** Webi-nar" and the word "Agree" is in the content.



3.6.3.9.1.4. Signal

The properties panel of the [start event by signal]() is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the signal expected to be received.

Description

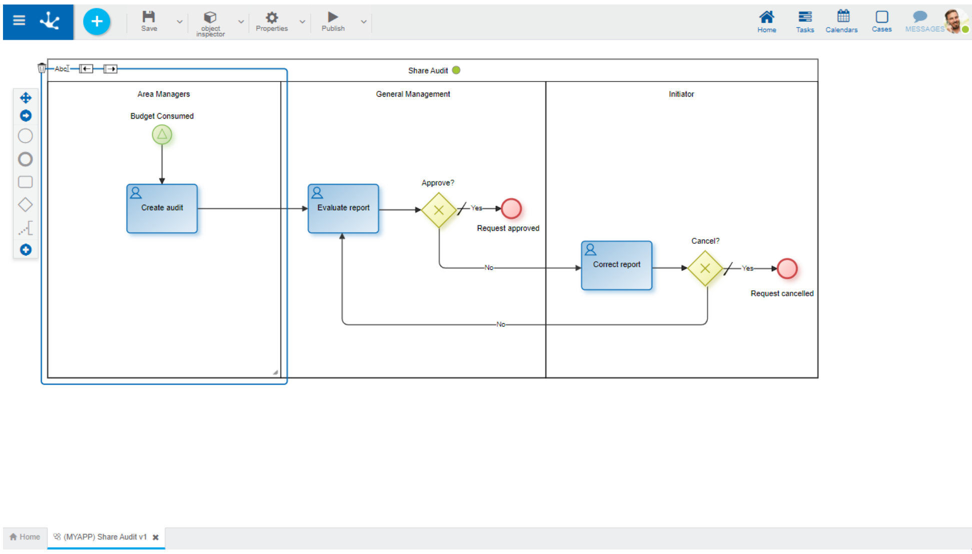
Text that allows documenting detailed information about the event.

Signal Name

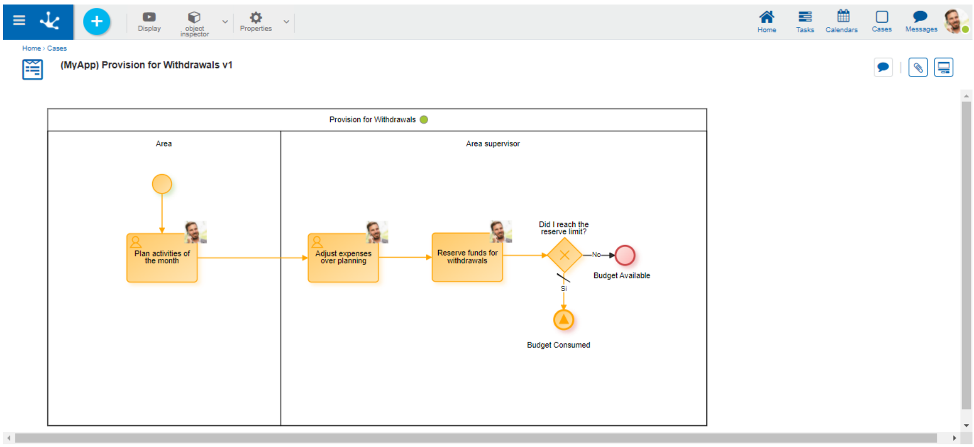
Signal that the event expects to receive to start execution automatically. The signal is sent by a [signal end event]() or a [throw signal intermediate event]().
There may be more than one process waiting for the same signal.

Example of Use

The audit process starts automatically upon receiving the "Budget Consumed" signal sent by the "Provision for Refunds",process in one of its possible endings.

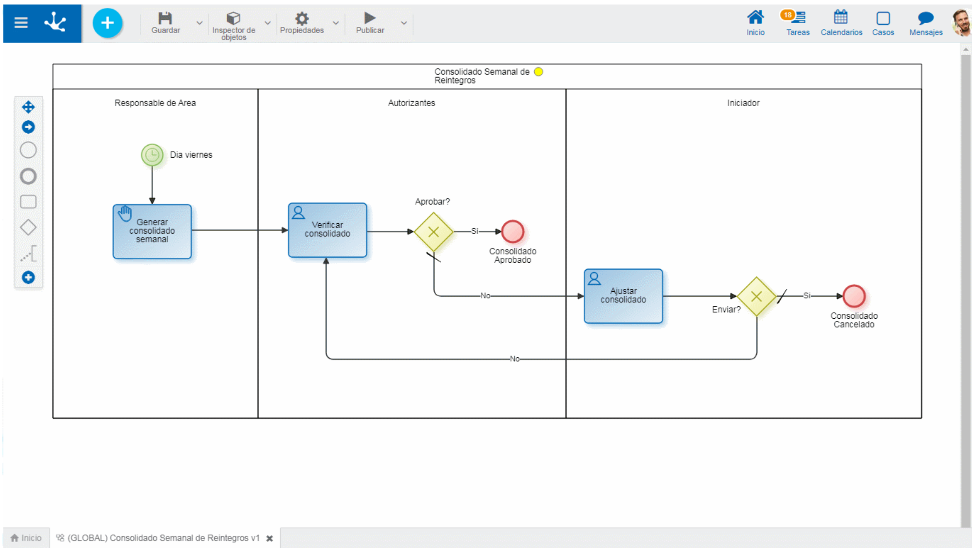


"Provision for Refunds" process in which the "Consumed Budget" signal is generated.



3.6.3.9.1.5. Timer

The properties panel of the timer start event is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the event scheduling.

Enabled

This property is checked to indicate that an event is active and can be automatically executed according to its scheduling.

Description

Text that allows documenting detailed information about the event.

Conditions

They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.

To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

For this type of event, apply the following conditions:

- Current time
- Current day
- Current month
- Current year
- Current hour
- Current minute
- Current seconds
- Current milliseconds
- Weekday

How often should it execute?

Type

Allows to define the execution schedule for the event

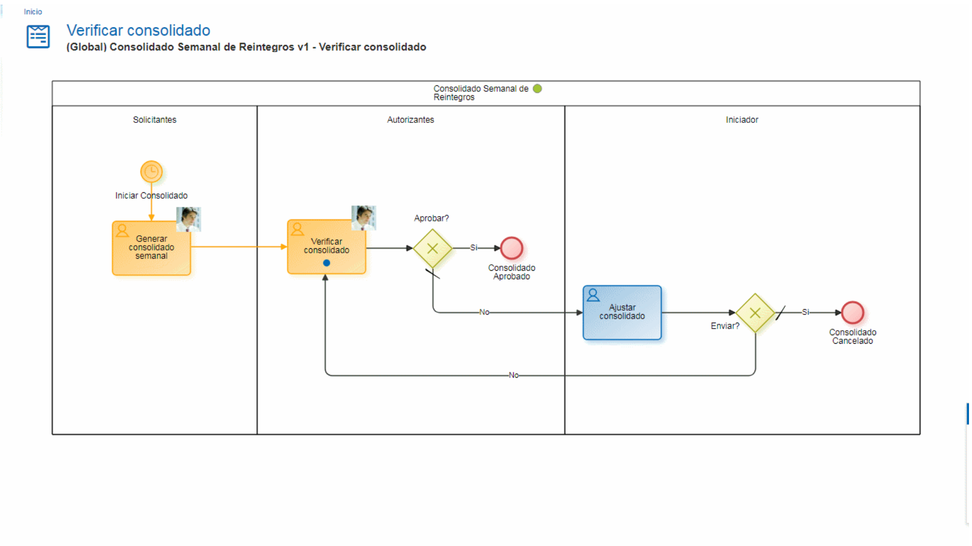
- Regular intervals
- Daily at a specific time

Value

Allows to define the interval value in seconds or at a specific time, according to the previously defined type.
The "Save schedule" button must be pressed to keep the established schedule. It can be seen on the Scheduled Tasks Monitor.

Example of Use

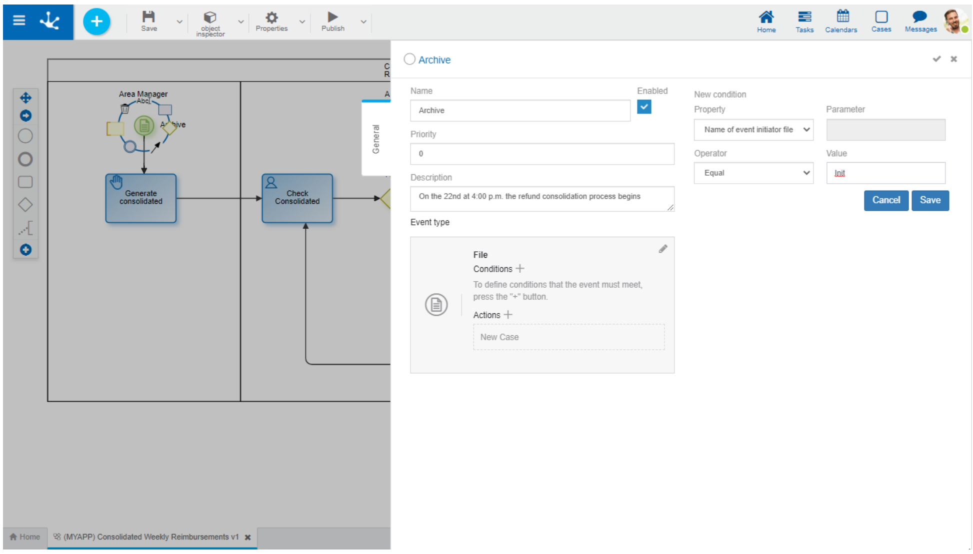
The "Consolidated Weekly Refund" process begins its execution automatically on Fridays at 10:00.



3.6.3.9.1.6. File

This type of event is available only for on-premises installations, as they require access to resources on the client's computer.

The properties panel of the start event per file is displayed on the right side of the process modeler.



Properties

Name
Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the email expected to be received.

Enabled
This property is checked when the event activates, waiting for the file.

Priority
Execution priority assigned to the event. It is reported as an integer, with 0 being the highest priority. If the event performs the action mark event as processed, events with lower priority are not executed.

Description
Text that allows documenting detailed information about the event.

Conditions
They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.
To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

Property	Example
Name of the event initiator file, without the extension	Name of the event initiator file **Contains** "Ticket"
Name of the folder that contains the event initiator file	Name of the folder that contains the event initiator file **Equals** "Receipt of Tickets"
File extension (without dot)	File extension **Equals** XML

Property	Example
Event initiator file path	Event initiator file path **Equals** "C:\Claims\Tick-ets Attention"
Folder path that contains the event initiator file	Folder path that contains the event initiator file **Equals** "D:\Claims Attention"
Number of file days elapsed	Number of file days elapsed **Greater than or Equal to** 9
File type (File or Folder)	

Actions

They are the actions that are carried out automatically when the event occurs.

- Create Case

For all start events, a case is compulsorily created for the process and a version in which the event is executed.

- Attach file

Allows to attach a file to the case.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully.(*)

> *Note: The parameters selected with (*) are mandatory.*

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is as-signed.
Values map	Report <field1><value1><field2><value2>…, where fieldN corresponds to form field names and valueN to the values that are assigned to each field. It has higher priority than DS_XML_CON-TENT_PATH

Parameter	Description
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not reported
Annex Type	Annex type attached (*).
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed successfully.(*).

Note: The parameters marked with (*) are mandatory.

- Check event as processed

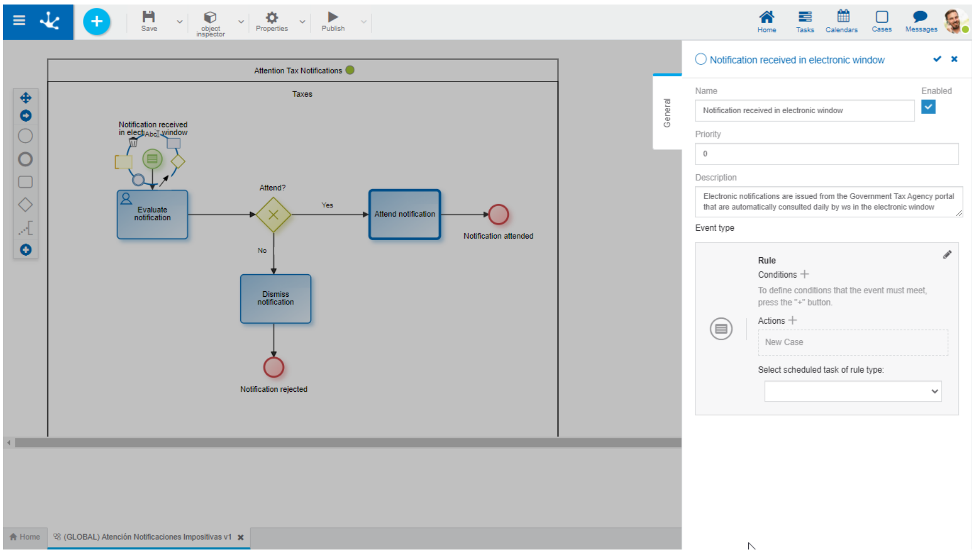
An automatic response is sent to the email received indicating that it has been processed.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully (*).

Note: The parameters marked with (*) are mandatory.

3.6.3.9.1.7. Rule

The properties panel of the start event by rule is displayed on the right side of the process modeler.



Properties

Name
Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the rule whose execution is expected.

Enabled
This property is checked to indicate that the event activates, waiting for the rule.

Priority
Execution priority assigned to the event. It is reported as an integer, being 0 the top priority.

Description
Text that allows documenting detailed information about the event.

Conditions
They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.

To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

Actions
They are the actions that are carried out automatically when the event occurs.

- Create Case

For all start events, a case is compulsorily created for the process and a version in which the event is executed.

- Attach file

Allows to attach a file to the case.

Parameter	Description
File to attach	File attached to the case.
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully.(*)

Note: The parameters selected with (*) are mandatory.

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is assigned.
Values map	Report <field1><value1><field2><value2>…, where fieldN corresponds to form field names and valueN to the values that are assigned to each field. It has higher priority than DS_XML_CONTENT_PATH
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not reported
Annex Type	Annex type attached (*).
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed successfully.(*).

Note: The parameters marked with (*) are mandatory.

Select scheduled rule task

The executed business rule is selected. It must be a previously published advanced rule.

Example of Use

The "Attention to Tax Notifications" process starts automatically when the business rule associated with the rule start event detects a notification in the government portal, following the WS specifications published in it.

3.6.3.9.2. Intermediate Events

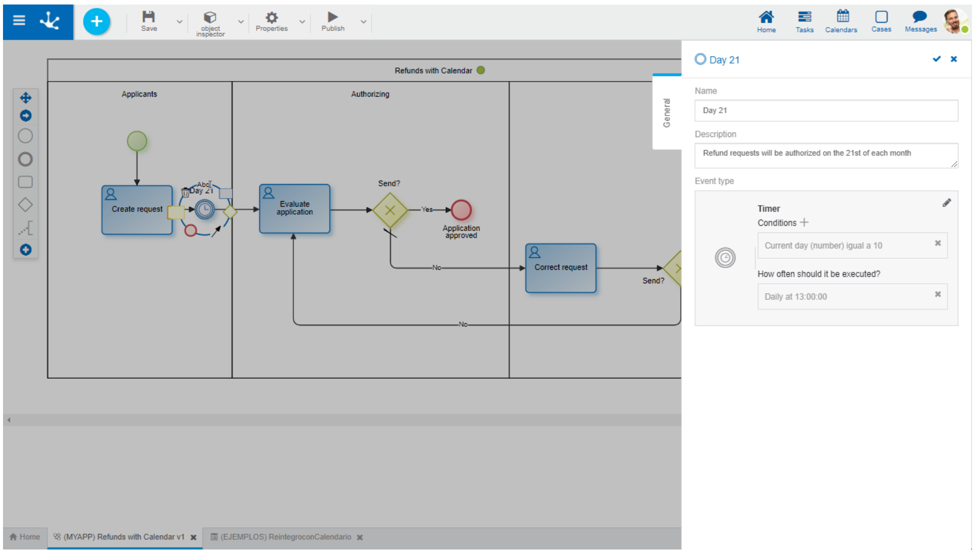
General Tab

In the "General" tab, common properties for all intermediate events and the specific ones for each case are defined, which are enabled when assigning the type of intermediate event.

- Timer
- Throw and Catch a Signal
- Throw and Catch Link

3.6.3.9.2.1. Timer

The properties panel of the timer intermediate event is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the event scheduling.

Description

Text that allows documenting detailed information about the event.

Conditions

They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.

To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

Property	Example
• Current time • Current day (numeric) • Current month (numeric) • Current year (numeric)	Current time **Equals** 13:30 Current month **Less than or equals** 6 *Time format is HH:MM. Supports one-digit values for the time.* *When showing the current month, a number between 1 and 12 must be informed in value.*
• Current hour (numeric) • Current minute (numeric) • Current seconds (numeric) • Current milliseconds	Current time (numeric) **Equals** 1.50 Current milliseconds **Greater** 48600000
• Day of the week (Sunday= 1)	Day of the week equals 6 (6 = Friday) *An integer between 1 and 7 must be informed in value, where 1 corresponds to Sunday.*
• DateTime parameter (*) • Date parameter (*) • Time parameter (*)	Inform in Parameter a form field that is converted to date/time/date time for its evaluation *The date format is DD/MM/YYYY.* *The datetime format is DD/MM/YYY HH:MM, with a blank space.* *Time format is HH:MM.* *Both formats support one-digit values for day and month.*
• Working days elapsed since the date (*) • Years elapsed since the date (*) • Months elapsed since the date (*) • Days elapsed since the date (*)	Inform in Parameter a specific date in DD/MM/YYYY format or a form field that contains a date *For these properties an integer value must be informed.*

Property	**Example**
• Hours elapsed since the “time” hour (*) • Minutes elapsed since the "time" hour (*) • Seconds elapsed since the "time" hour (*)	Inform in Parameter a specific time in DD/MM/YYYY format or a form field that contains a time *For these properties an integer value must be informed.*

(*) Properties available only for intermediate and border events

How often should it execute?

Type

Allows to define the execution schedule for the event

- Regular intervals
- Daily at a specific time

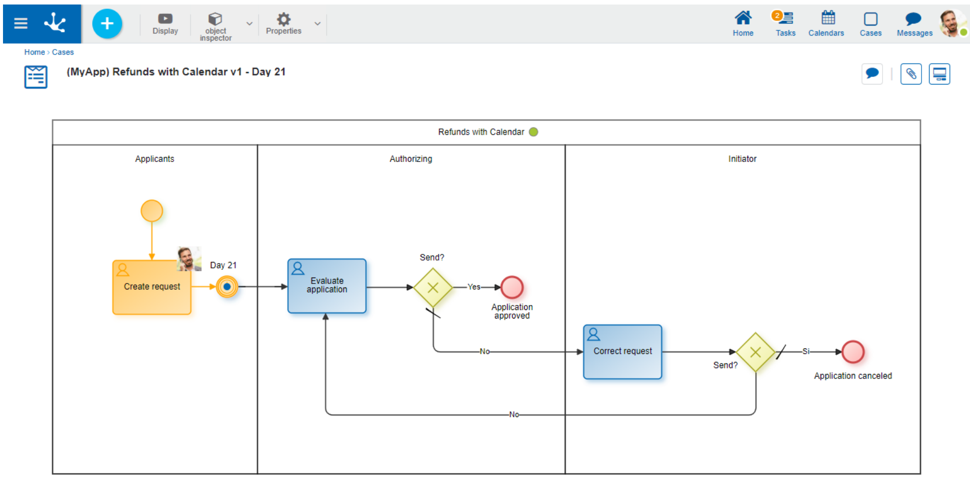
Value

Allows to define the interval value in seconds or at a specific time, according to the previously defined type.

The "Save schedule" button must be pressed to keep the established schedule. It can be seen on the Scheduled Tasks Monitor.

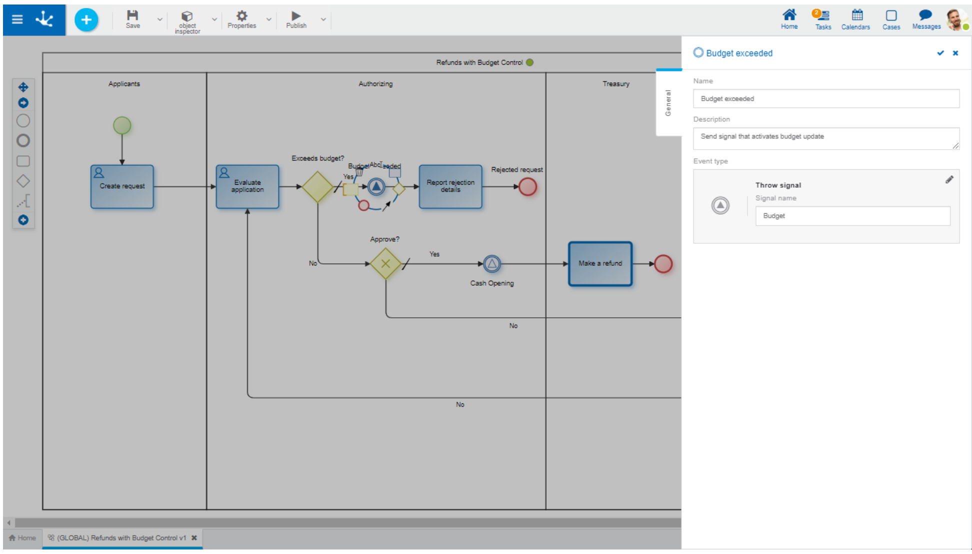
Example of Use

The "Refund Request with Calendar" process begins at the request of users. The authorizer receives requests not until day 21.



3.6.3.9.2.2. Throw and Catch a Signal

The properties panel of the throw and catch signal intermediate events, is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to inform a text in reference to the signal expected to be received or sent.

Description

Text that allows documenting detailed information about the event.

Signal Name

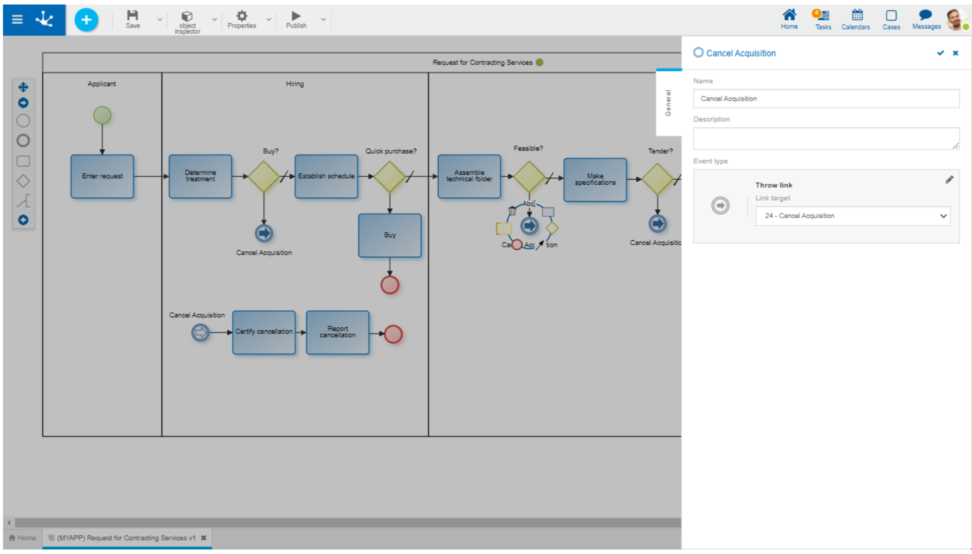
Signal identifier that the event expects to receive or sends in order to continue executing the case automatically, depending on whether it is a catch or a launch event. A character string is specified.
There may be more than one process waiting for the same signal.

Example of Use

The "Refund with Budget Control" process sends a signal to automatically start the "Review Budgeting" process, when the established budget has been exceeded.
Approved refund requests await a treasury signal that enables the cash flow.

3.6.3.9.2.3. Throw and Catch Link

The properties panel of the throw link and capture link intermediate events, is displayed on the right side of the process modeler.



Properties

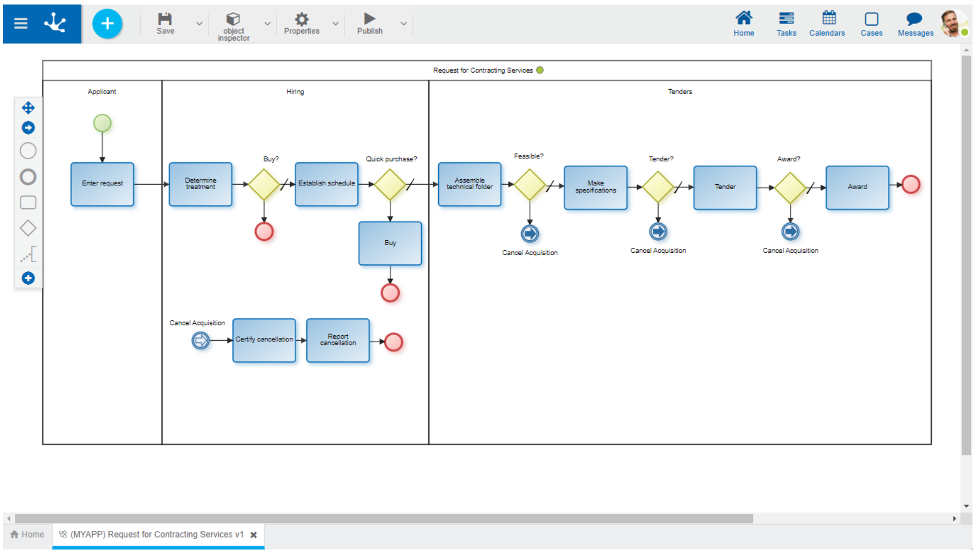
Name
Text that is displayed in the diagram next to the graphic element of the event.
If it is a catch link event, it is also the identifier used to reach it, from the throw link event.

Description
Text that allows documenting detailed information about the event.

Link Destination
This attribute corresponds to the throw link event. Allows to select the event type catch link to go to.

Example of Use

The "Request for Contracting Services" process, to facilitate its interpretation, presents several links to the "Cancel Acquisition" event. These events are particularly useful in complex diagrams.



3.6.3.9.3. Border Event

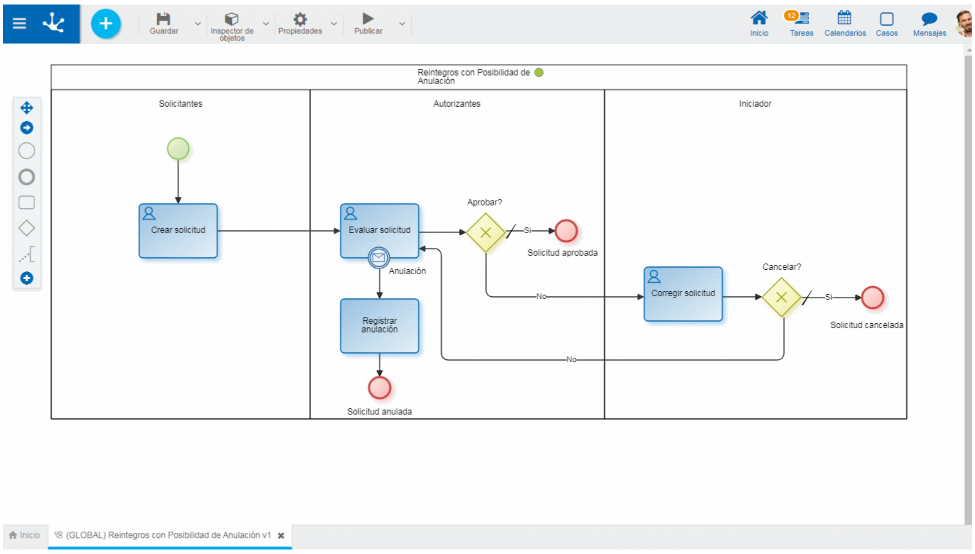
General Tab

In the "General" tab, common properties for all border events and the specific ones for each case are defined, which are enabled when assigning the type of border event.

- Email
- Throw and Catch a Signal
- Timer
- File
- Rule

3.6.3.9.3.1. Email

The properties panel of the email border event is displayed on the right side of the process modeler.



Properties

Name
Event name. It is displayed in the process next to the graphic element that represents the event.

Description
Field that allows documenting the event.

Priority
Execution priority assigned to the event. It is reported as an integer, with 0 being the highest priority. If the event performs the action mark event as processed, events with lower priority are not executed.

Interrupting
The email border event is always interrupting. This means that if the established conditions are met, the event actions are executed and the case follows the event output flow.

Enabled
Indicates that the event is enabled to receive emails and execute if applicable.

Conditions
Allows to define conditions to be met for the email event to be executed.

Actions
They are the actions that are carried out automatically when the event occurs.

- Move Case

The case affected by the event moves on to the next activity.

- Attach file

Allows to attach a file to the case.

Parameter	Description
Email attachment	Position number of the email attachment that is attached to the case. (*)
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully.(*)

> *Note: The parameters selected with (*) are mandatory.*

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is as-signed.
Values map	Report <field1><value1><field2><value2>…, where fieldN corresponds to form field names and valueN to the values that are assigned to each field. It has higher priority than DS_XML_CON-TENT_PATH
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not re-ported
Annex Type	Annex type attached (*).
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previ-ously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed success-fully.(*).

> *Note: The parameters marked with (*) are mandatory.*

- Check event as processed

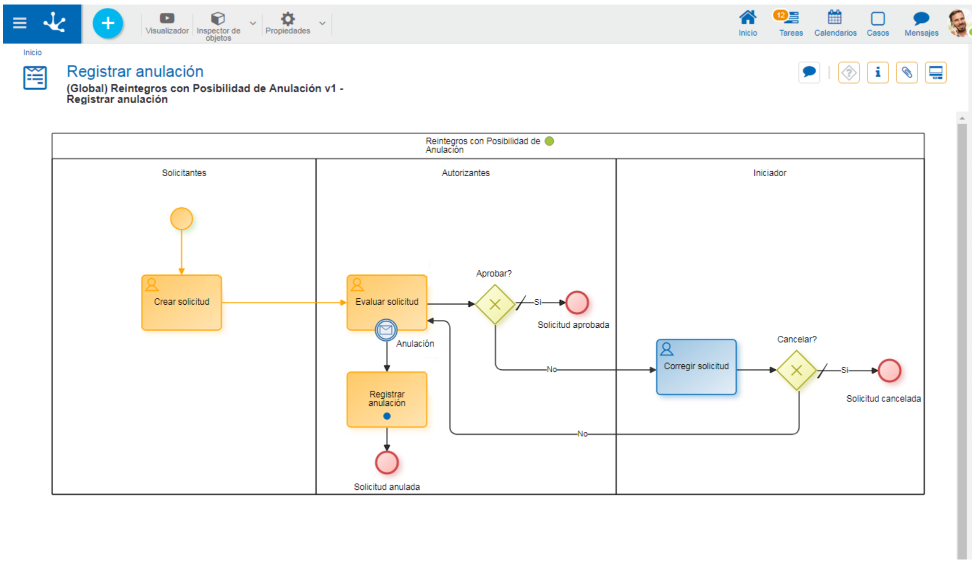
An automatic response is sent to the email received indicating that it has been processed.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully (*).

Note: The parameters marked with (*) are mandatory.

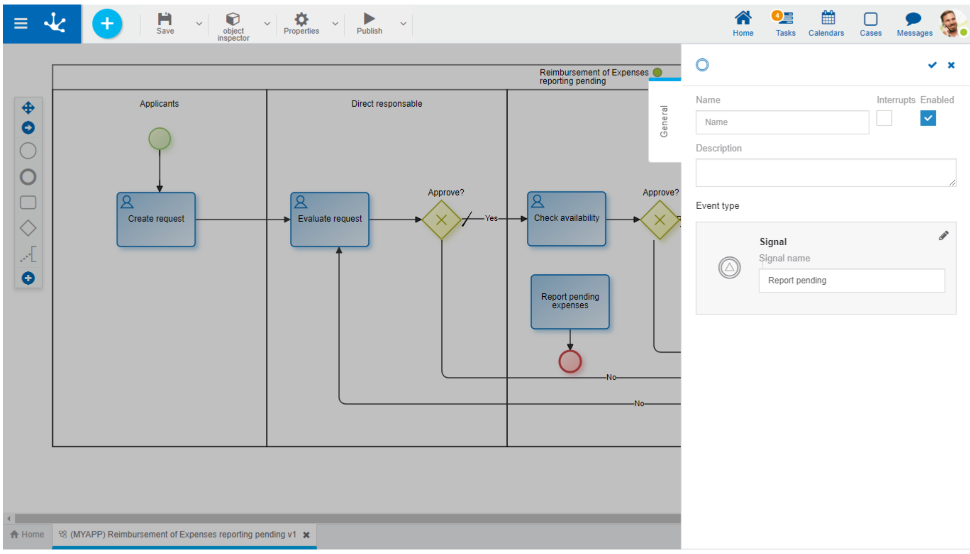
Examples of Use

In the "Refunds with Possibility of Cancellation" process, if the applicant notices a mistake in the request sent, they can send an email to cancel it, as long as it has not been approved yet.



3.6.3.9.3.2. Signal

The properties panel of the signal border event is displayed on the right side of the process modeler.



Properties

Name

Event name. It is displayed in the process next to the graphic element that represents the event.

Description

Field that allows documenting the event.

Interrupting

Defines if the event is interrupting or non-interrupting. In both cases the signal must be received when the current activity of the case is the one that has the border event.

- Interrupting: When the signal is received, the execution of the current activity is interrupted and the case follows the event output flow.
- Non-interrupting: When the signal is received, the execution of other tasks begins, defined as event output flow. The current activity is not interrupted and the case continues after it finishes.

Enabled

Indicates if the event is activated to wait for the signal and execute.

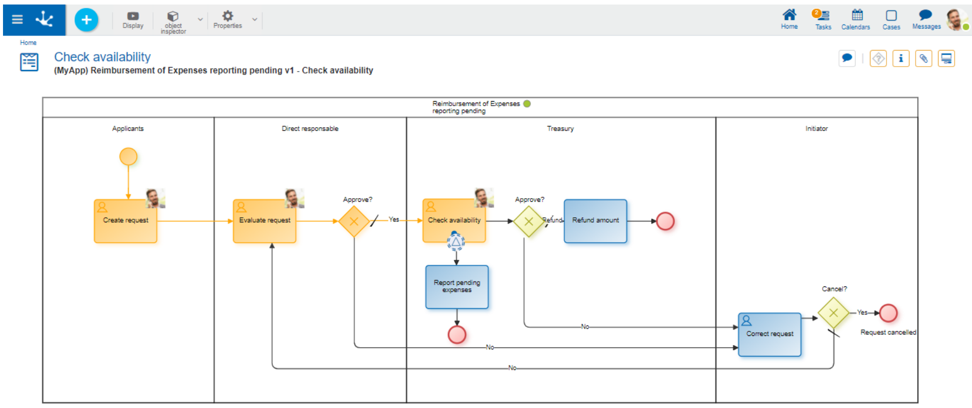
Signal Code

It is the signal identifier. A character string is specified.

Examples of Use

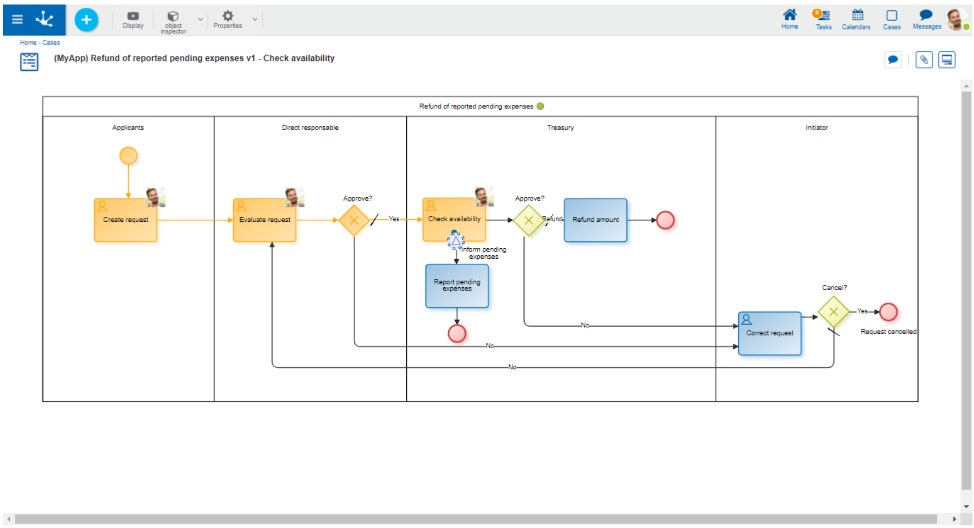
Interrupting Signal Border Event

In the "Refund with possible payment suspension" process, if the "Suspension of refunds" signal is received, the cases in the "Check documentation" activity are suspended and the process ends.



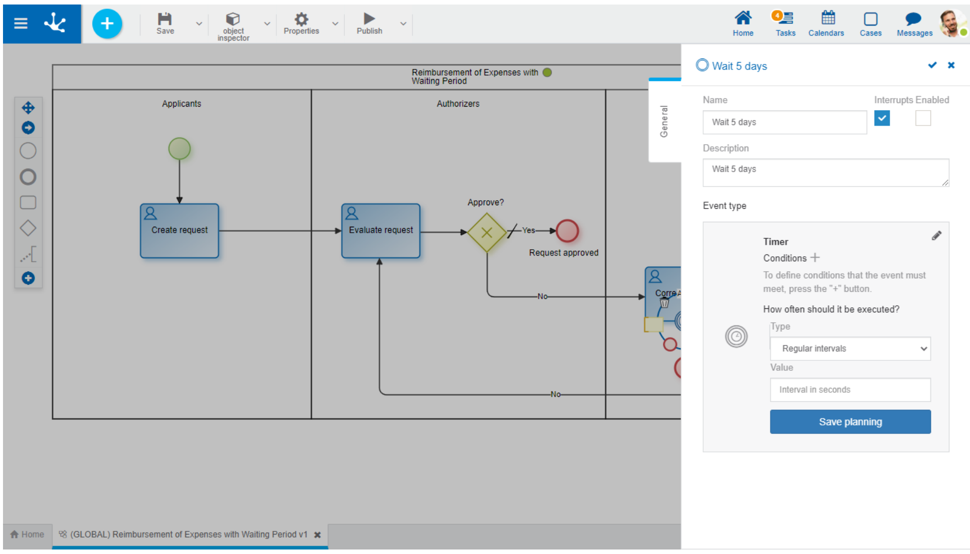
Interrupting Signal Border Event

When the "Inform pending expenses" signal is received, in the "Refund of reported pending expenses" process, a report of the cases in the "Check availability" activity is generated. The cases continue through the circuit defined in the process.



3.6.3.9.3.3. Timer

The properties panel of the timer border event is displayed on the right side of the process modeler.



Properties

Name
Event name. It is displayed in the process next to the graphic element that represents the event.

Description
Field that allows documenting the event.

Interrupting
Defines if the event is interrupting or non-interrupting.

- Interrupting: When the conditions of the event are met, the execution of the current activity is interrupted and the case follows the event output flow.
- Non-interrupting: When the event conditions are met, the execution of other tasks begins, defined as event output flow. The current activity is not interrupted and the case advances after it finishes.

The event conditions are evaluated when the current activity of the case is the one that has the border event.

Enabled
Indicates if the case is enabled to be executed as scheduled, when the established conditions are met.

Conditions
They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.

To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

For this type of event, apply all the conditions.

How often should it execute?
Type
Allows to define the execution schedule for the event

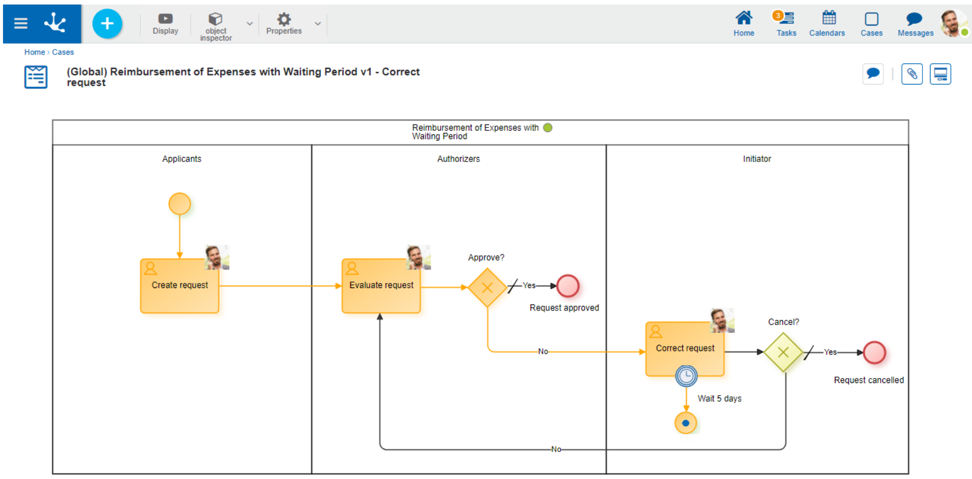
- Regular intervals
- Daily at a specific time

Value

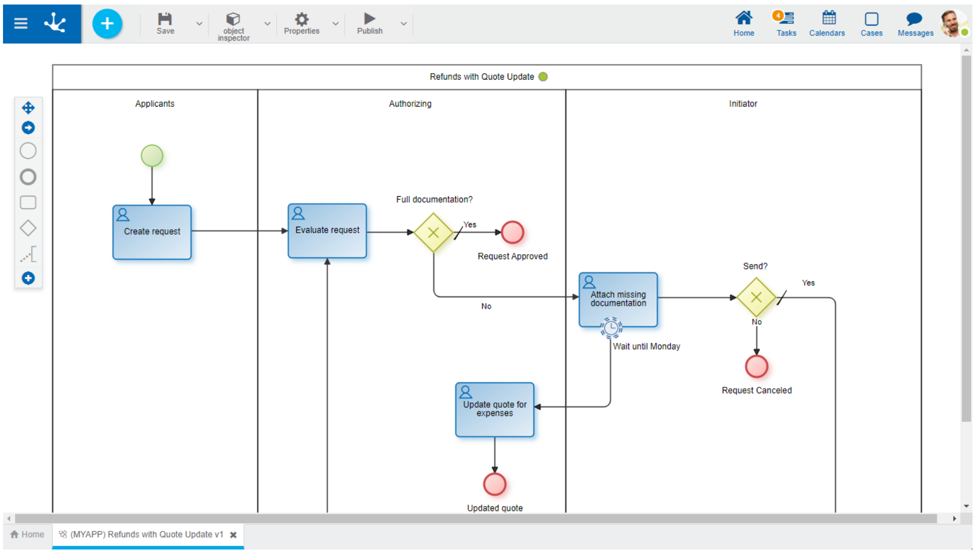
Allows to define the interval value in seconds or at a specific time, according to the previously defined type.
The "Save schedule" button must be pressed to keep the established schedule. It can be seen on the Scheduled Tasks Monitor.

Examples of Use

In the "Expenses Refund with Waiting Period" process, if the applicant receives the request for its modification, they have 5 days to correct it. If the deadline expires and the request was not resubmitted, the process ends automatically and the request expires.

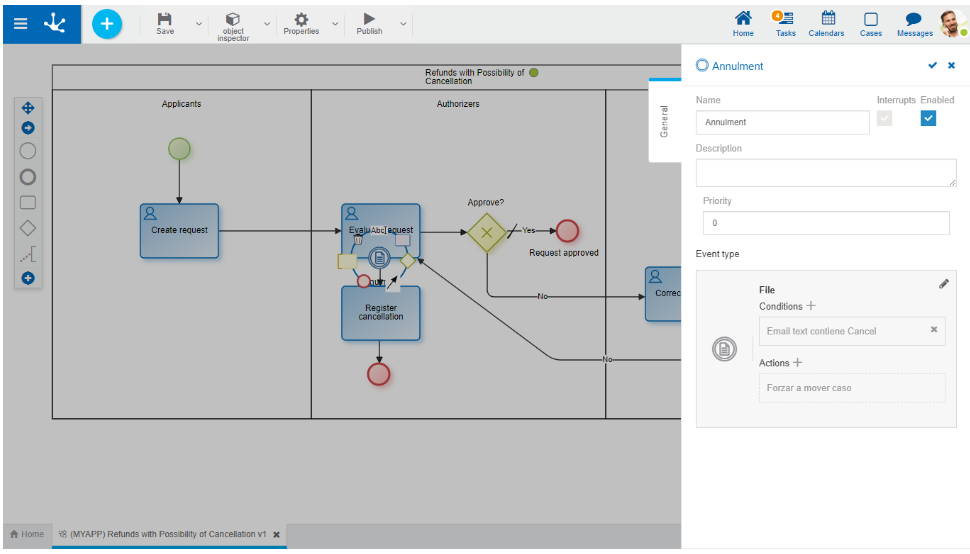


If in the "Refunds with Quote Update" process, while the case is in the "Attach missing documentation" activity, the conditions established in the timer border event are met, the quote is updated. When the applicant attaches the missing documentation, the case returns to the "Evaluate request" activity.



3.6.3.9.3.4. File

The properties panel of the file border event is displayed on the right side of the process modeler.



Properties

Name

Event name. It is displayed in the process next to the graphic element that represents the event.

Description

Field that allows documenting the event.

Priority

Execution priority assigned to the event. It is reported as an integer, with 0 being the highest priority. If the event performs the action mark event as processed, events with lower priority are not executed.

Interrupting

The file border event is always interrupting. This means that if the established conditions are met, the event actions are executed and the case follows the event output flow.

Conditions

Allows to define conditions to be met for the event to be executed.

Actions

They are the actions that are carried out automatically when the event occurs.

- Move Case

The case affected by the event moves on to the next activity.

- Attach file

Allows to attach one or more files to the case.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully (*).

> *Note: The parameters marked with (*) are mandatory.*

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is assigned.
Values map	Report <field1><value1><field2><value2>…, where fieldN corresponds to form field names and valueN to the values that are assigned to each field. It has higher priority than DS_XML_CONTENT_PATH
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not reported
Annex Type	Annex type attached (*).

Parameter	Description
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed successfully.(*).

Note: The parameters marked with (*) are mandatory.

- Check event as processed

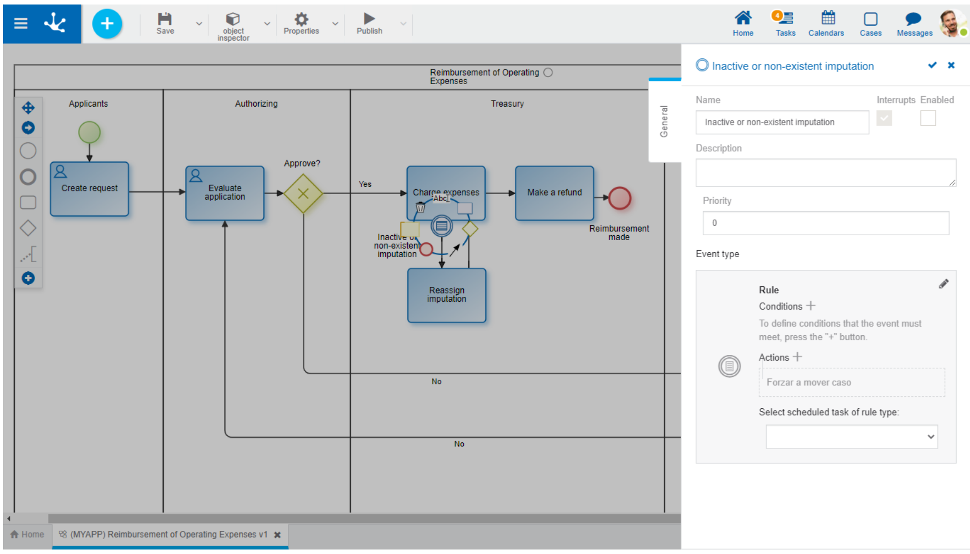
An automatic response is sent to the email received indicating that it has been processed.

Parameter	Description
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully (*).

Note: The parameters marked with (*) are mandatory.

3.6.3.9.3.5. Rule

The properties panel of the rule border event is displayed on the right side of the process modeler.



Properties

Name
Event name. It is displayed in the process next to the graphic element that represents the event.

Description
Field that allows documenting the event.

Priority
Determines the priority of the event.

Interrupting
The rule border event is always interrupting. This means that if the established conditions are met, the event actions are executed and the case follows the event output flow.

Enabled
Indicates that the event is enabled to be executed according to the rule.

Conditions
They are the conditions that must be met for the event to be executed. If there are defined conditions, a list of them is displayed.

To add a condition, press the icon + and from the panel that opens, select Property and Operator in the corresponding drop-down lists. Report Value and where applicable, indicate in Parameter the field to be evaluated of the form associated with the process.

Actions
They are the actions that are carried out automatically when the event occurs.

- Move Case

The case affected by the event moves on to the next activity.

- Attach file

Allows to attach one or more files to the case.

Parameter	Description
File to attach	File attached to the case. (*)
Depends on the previous execution	Indicates if the action is executed only when the previously defined actions were executed successfully.(*)

Note: The parameters selected with (*) are mandatory.

- Attach form

Allows to relate a form to the case.

Parameter	Description
User Code	If it is not reported, the current user is assigned.
Values map	Report <field1><value1><field2><value2>..., where fieldN corresponds to form field names and valueN to the values that are assigned to each field. It has higher priority than DS_XML_CONTENT_PATH
XML	File path that contains the XML. It is mandatory if DS_VALUE_MAP is not reported
Annex Type	Annex type attached (*).
Create version if it exists and if it is unique	If when attaching the form, it already exists and is unique, a historical version of it is previously created.
Reset previous form and it is unique	Indicates that if there is a form associated with the case and it is unique, data is deleted from it.
Depends on the previous execution	The action is executed only if the previously defined actions were executed successfully.(*).

Note: The parameters marked with (*) are mandatory.

Select scheduled rule task

Allows to select the rule to use, which must be an advanced rule and must be published.

Example of Use

In the "Refund of Operating Expenses" process, if the "Charge expenses" activity is executed and a rule that detects inactive or non-existent expense charges is executed, charges are reassigned so that the case can move to the "Make a refund" activity.

3.6.3.9.4. End Events

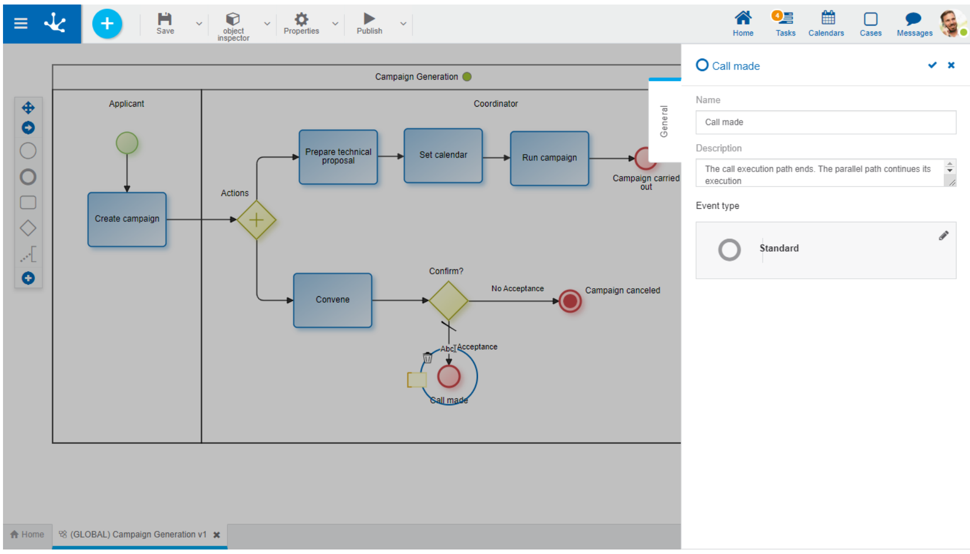
General Tab

In the "General" tab, common properties for all end events and the specific ones for each case are defined, which are enabled when assigning the type of end event.

- Standard
- Signal
- Terminal

3.6.3.9.4.1. Standard

The properties panel of the standard end event is displayed on the right side of the process modeler.



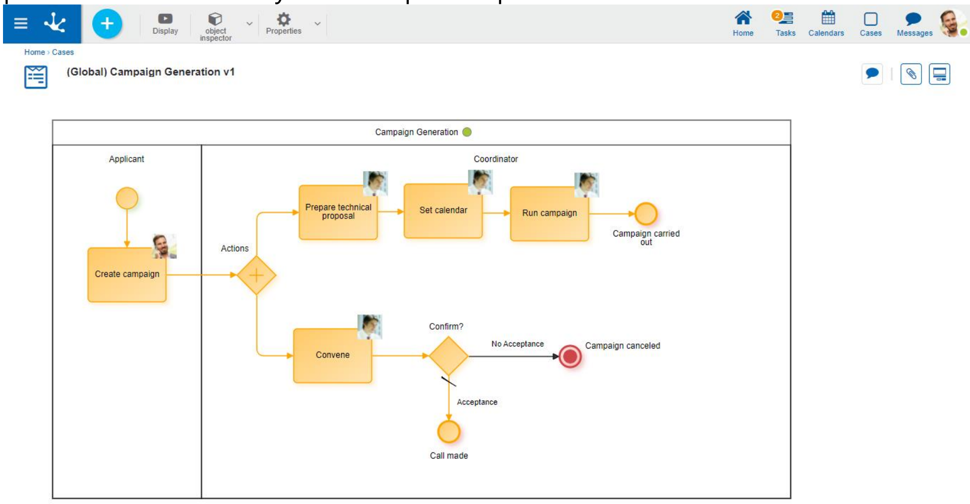
Properties

Name
Text that is displayed in the diagram next to the graphic element of the event.

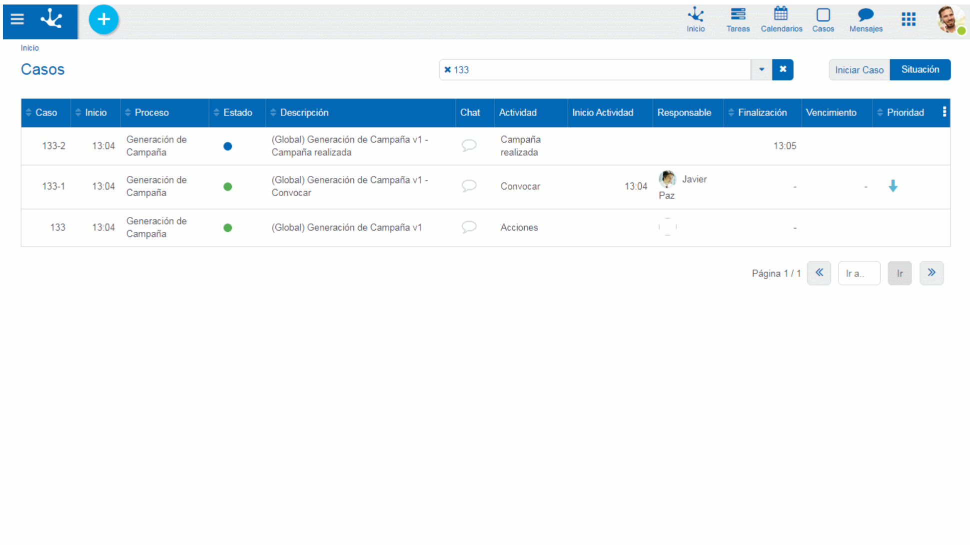
Description
Field that allows documenting the event.

Example of Use

The "Generate Campaign" process has two paths. The standard end event finishes the execution of the path that reaches it only. The fork parallel path is still active.

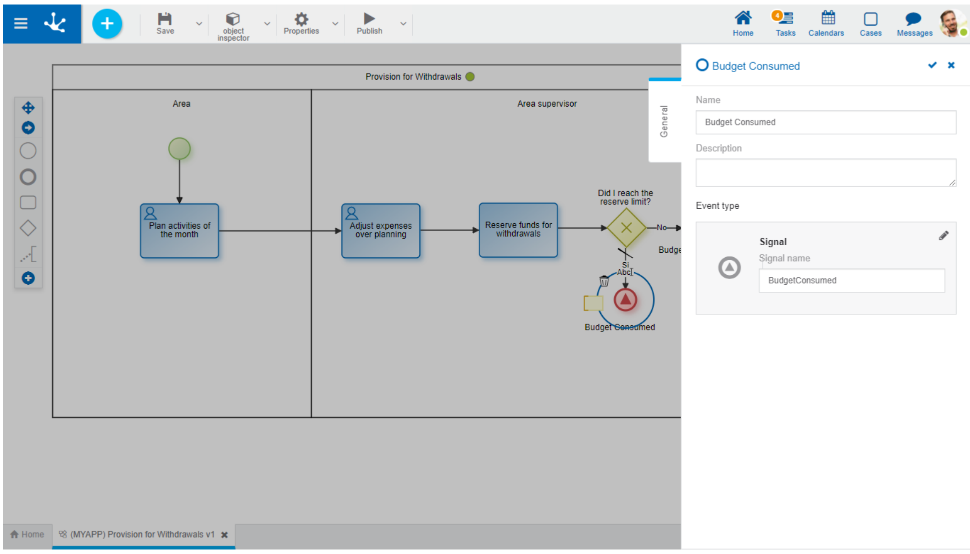


In the case show, the path end in which the standard end event is located can be seen. The parallel path is still active.



3.6.3.9.4.2. Signal

The properties panel of the signal end event is displayed on the right side of the process modeler.



Properties

Name

Text that is displayed in the diagram next to the graphic element of the event.
It is recommended to refer to the waiting signal.

Description

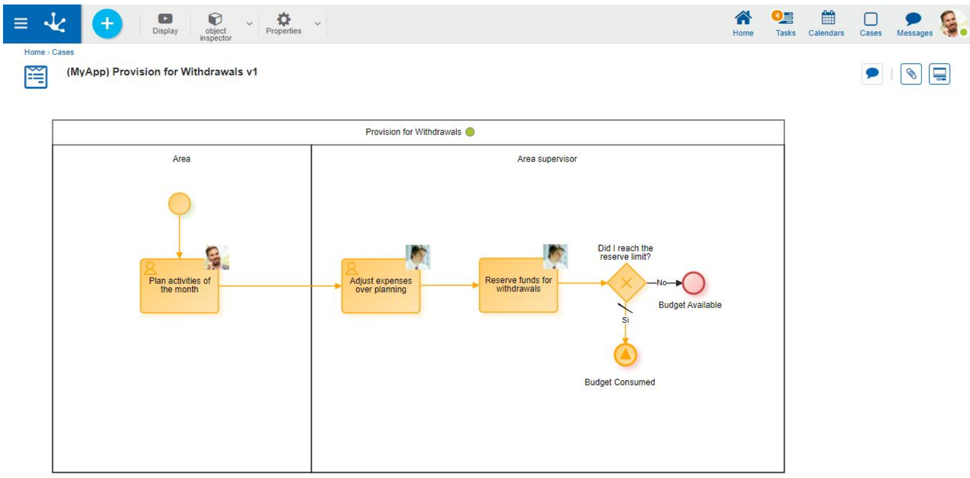
Text that allows documenting detailed information about the event.
The processes that send the signal can be informed.

Signal Name

Enter a string of characters representing the signal code to send.
The name entered must match the one configured when the signal is received.

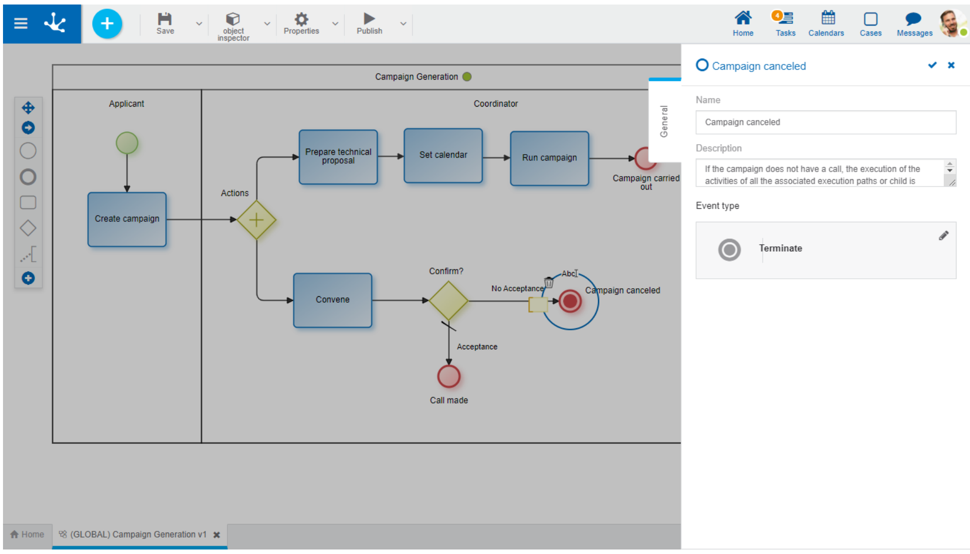
Example of Use

If the "Provision for Refunds" process reaches the availability limit, it sends the "Consumed Budget" signal. The "Actions Auditing" and "Budget Update" processes start when the signal start events receive the aforementioned signal.



3.6.3.9.4.3. Terminal

The properties panel of the terminate end event is displayed on the right side of the process modeler.



Properties

Name

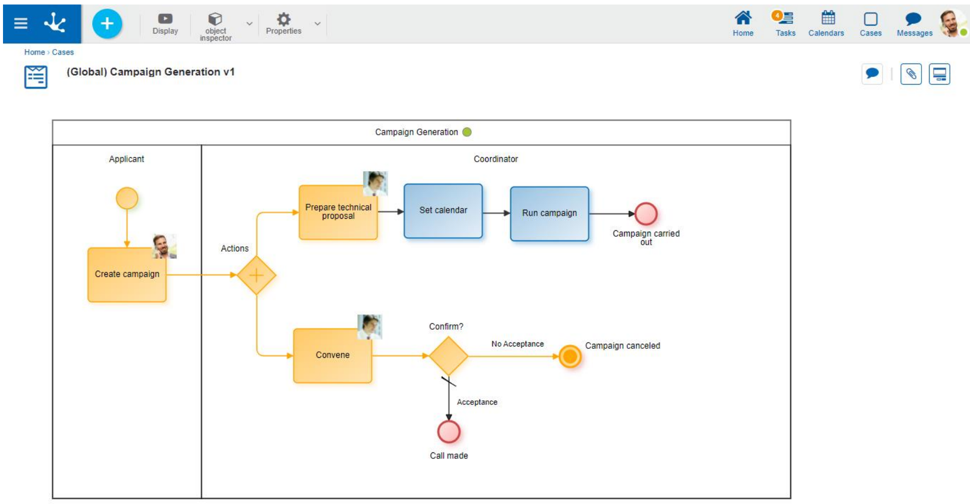
Text that is displayed in the diagram next to the graphic element of the event.

Description

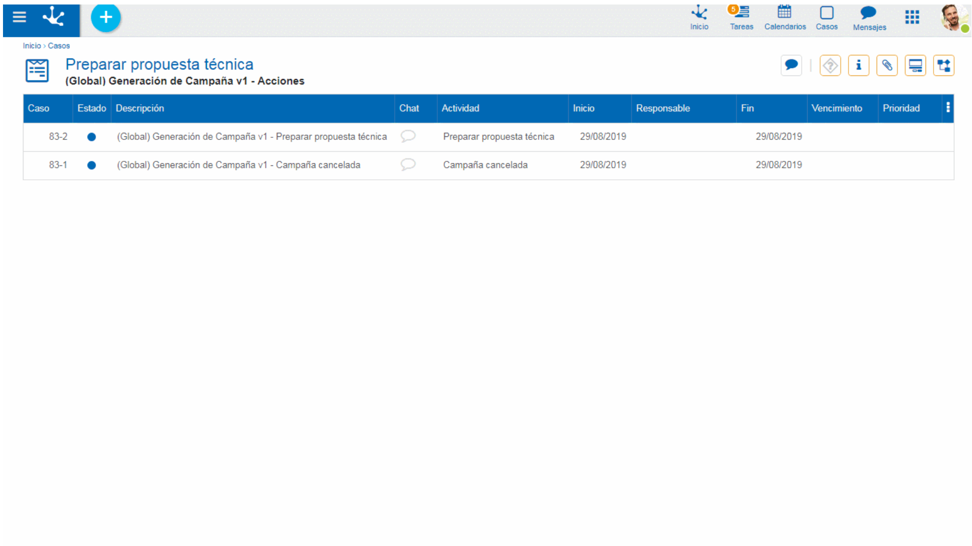
Text that allows documenting detailed information about the event.

Example of Use

The "Campaign Generation" process, all paths are canceled when the evaluation of the call is not satisfactory.



In the case show, the termination of all fork paths can be verified.



3.6.3.10. Good Practices

Good practices for processes modeling in **Deyel** consist of a set of recommendations, to be met whenever possible.

They allow to build clearer and more understandable processes models, standardizing the use of the graphic elements that compose them.

- Processes Modeling
- Lanes Modeling
- Activities Modeling
- Events Modeling

- Flows Modeling
- Gateways Modeling

3.6.3.10.1. Processes Modeling

Good Practices

Name

- The name of the processes and sub processes must clearly describe their main purpose.

- Short names or abbreviations must not be used.

Diagrams Size

- Long diagrams do not allow to give a global perspective to the readers, they make reading difficult and don't communicate clearly the purpose of the processes.

Number of Activities

- Although various factors affect the complexity of a process, the number of activities is one of the most relevant factors.

- As a general criterion, diagrams with a maximum of 15 to 20 activities are recommended.

Unification of Activities

- If a set of consecutive tasks can be executed sequentially by the same person, at the same time, then these activities must be integrated into one.

Subprocesses

- The use of subprocesses is recommended to group activities with the same purpose.

Activities Alignment

- It is recommended to keep the activities aligned with each other, horizontally and vertically. This practice allows ordering the diagrams, keeping them neat visually.

Standard Size of Elements.

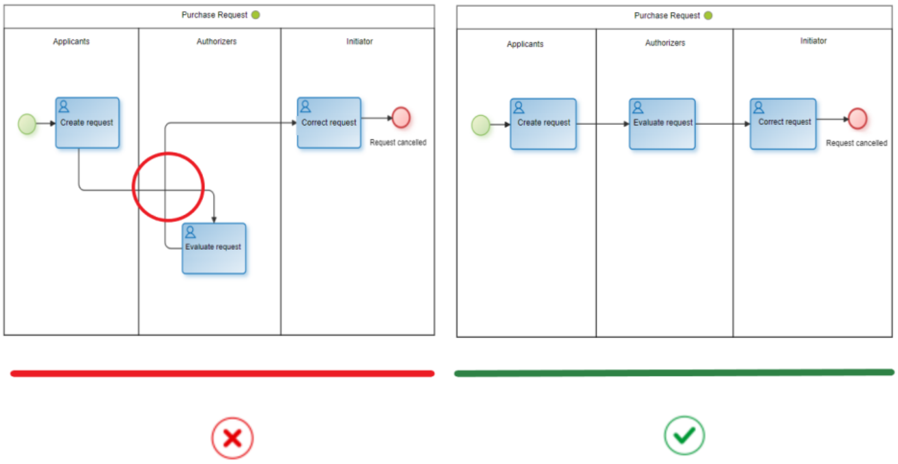
- It is recommended not to change the size of diagram elements.

- Keeping the standard sizes avoids discrepancies and keeps the visual elements homogeneous.

Flow Orientation

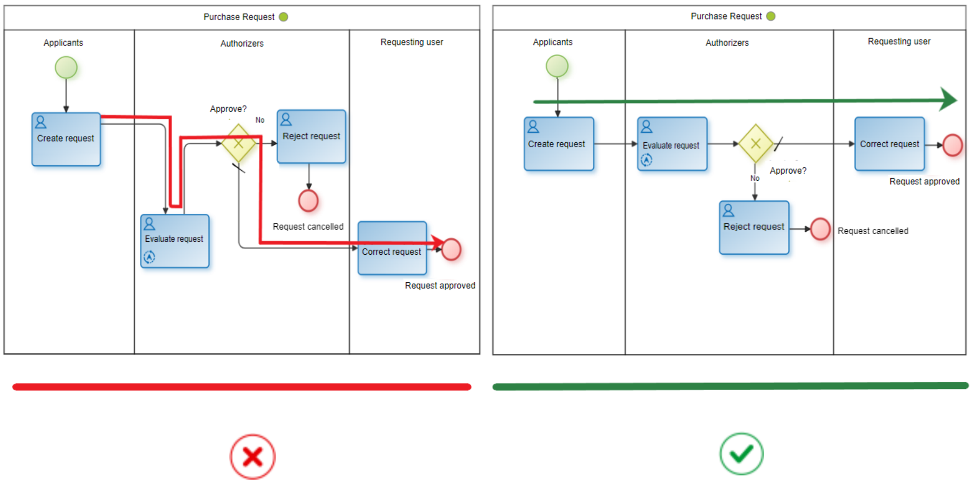
- For people who read from left to right, it is intuitive to follow a logical flow from left to right or from top to bottom. It is recommended to diagram the process flows in this direction.

- The crossing of connectors must be avoided, maintaining a chronological sequence and a consistent flow direction.



Primary Scenario Clarity

- The main road should be easily identified when reading the diagram, so it is recommended to diagram the main road first and then add the alternative roads.



Links

- It is recommended to use this type of event to avoid complexity in the flows.


Throw Link


Catch Link

Artifacts

- It is recommended not to overuse the objects that serve to document the process. Notations, associations, groups and data objects are elements that can clarify the diagram, but the excessive use of these types of elements can increase the visual complexity of the model.

- In order not to use a large number of artifacts, it is recommended to document the details within each activity or each element of the model.

3.6.3.10.2. Lanes Modeling

Good Practices

Name

- The lane name must be chosen carefully, so that it accurately represents the participant of the process.

- It is recommended to use the description field to document the responsibility.

Participant Type

- Avoid using responsibles of type user as much as possible.

- It is recommended to use roles or agents, that give greater possibilities to changes.

Need

- A lane must be created only if at least one intermediate task or event is executed on it.

- It is recommended not to create lanes to represent participants who only run automatic activities.

3.6.3.10.3. Activities Modeling

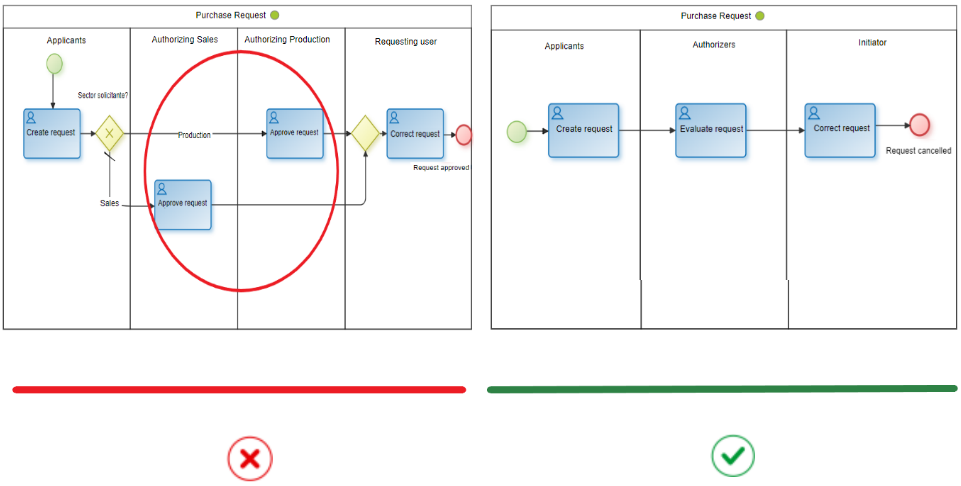
Good Practices

Name

- The activities name is made up of an infinitive verb and an object.
- The name must clearly identify the objective of the activity. For example, "Create request", "Authorize request", "Notify rejection", and so on.
- The first letter must be used in uppercase and the others in lowercase. Short names or abbreviations must not be used.
- It is recommended to avoid long names, they usually denote that certain details of the activity affect their name. The name must represent the objective while details are documented within the activity.
- The use of "and" and "or" in the names of activities must be avoided. These types of compound names can mean that they are actually two different activities.
  For example, if the activity is called “Review and approve request”, you must consider which is the correct option. If the same participant performs both actions at the same time, then the most relevant action must be chosen and used to name the activity, then it can be assumed that the primary objective is approval and the review is a subtask. The correct name is “Approve request”. On the other hand, if it is considered that both actions have the same relevance and are made at different times, then it is convenient to separate them as “Review request” and “Approve request”.

Repetition

- Multiple instances of the same task should not be diagrammed to represent multiple participants.
- It is recommended to use roles or agents so that the participant assignment is made accordingly, when executing the process.



Typing

- It must be indicated [each activity type](#).
- It is recommended to be careful selecting the appropriate type, which allows a correct interpretation of the diagram.

Automatic Tasks vs Automatic Actions

- There are certain actions, such as sending an email, executing a rule, etc. that can be modeled in different ways in **Deyel**:
  a) Representing them explicitly in the model, through shipping type activities, business rule, services, etc.
  b) Specifying automatic actions that are executed when starting or ending a user activity or manual activity.

- The recommendation is that the tasks to be viewed individually have to be modeled as different activities and the type of each one is selected.

- Those others that do not need to be visually explicit, should be modeled as automatic actions of user activity. For example, a rule that retrieves the initial value of a field before executing the user activity,

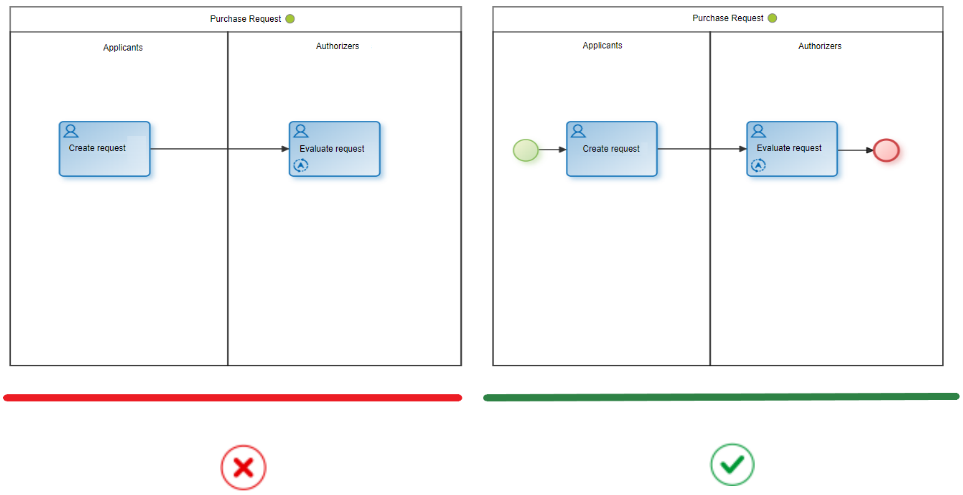
- It is important to maintain a uniform criterion in this regard and also consider that long diagrams are not convenient.

3.6.3.10.4. Events Modeling

Good Practices

Start and End Events

- It is recommended to always use the start and end events in each process and subprocess to represent its beginning and end.



Name

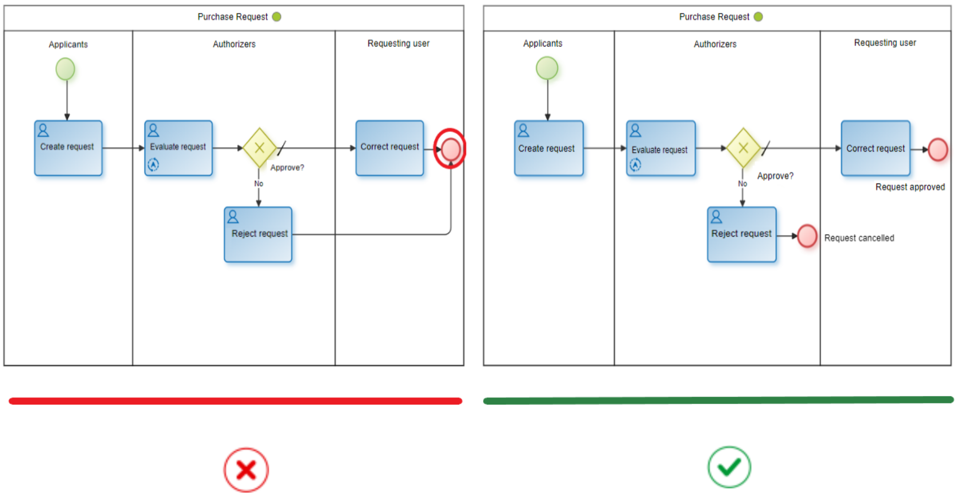
- The start and end events must not be tagged when they are unique. It is very common to name them as "Start of the process" and "End of the process" but this is redundant and unnecessary.

- Events must be identified when multiple start or end events are used.

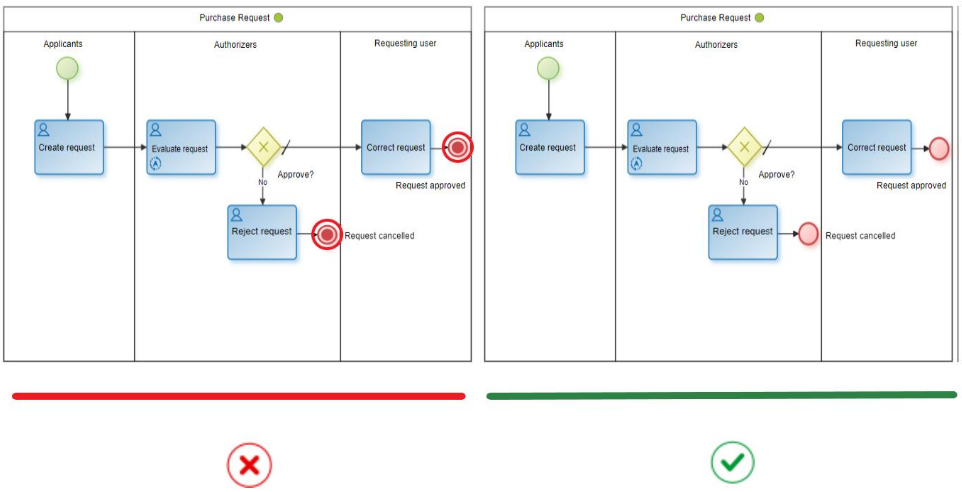
- The start events must have labels indicating the condition or fact that triggers the start of the process.

- The end events must be named indicating the final state of the process. In general the name must use a noun, which is the business object, along with a verb in the past tense. For example: "Request approved", "Request canceled", etc.

- It is recommended to identify the final successful and unsuccessful states.



- Terminal end events must only be used when strictly necessary. They are used to model situations where multiple alternative paths are enabled and only the completion of one of them is required to complete the entire process.



3.6.3.10.5. Flows Modeling

Good Practices

Use of Legends

- It is recommended to use the legends to represent the condition through which a flow is passing.
- Legends have to be visually associated with the flow and are not confused with other legends.

Avoid Crossings

- As far as possible the crossings of flows should be avoided.
- If necessary, let it be in places where the legends of the flows are not confused.

Avoid Diagonal Flows

- It is always preferable to use "L" shaped flows.
- There can be multiple vertices in the flow and it is recommended to minimize their number.

Anchor Points or Ports

- Central anchor points have to be used in activities.
  - Flows enter from the top side and the left side.
  - Flows come out from the bottom side and the right side.
- In the gateways it is recommended to use the anchor points of the vertices.
  - Flows enter through the top or left vertices, using the same entry point.
  - It is recommended to distribute the outgoing flows neatly.
  - The gateway name must not be below the flows.

3.6.3.10.6. Gateways Modeling

Good Practices

Name

- All divergence gateways must be named.
- A question is generally used that represents the decision or logical condition evaluated. For example: "Authorized Request?".

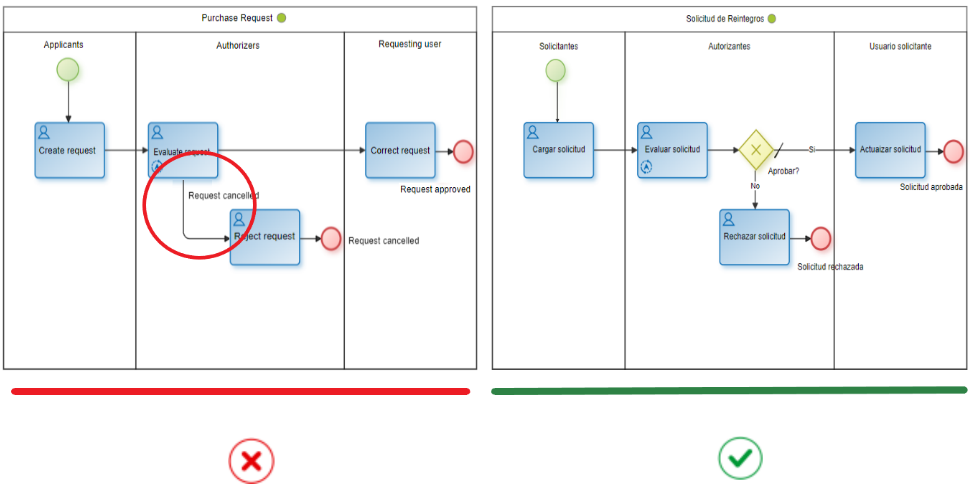
- All outgoing flows must be named.

- Their name must represent the responses or possible values of the condition evaluated. For example, if a gateway is called "Request Authorized?", Its outgoing flows should be called "Yes", "No".

Gateways for Forks

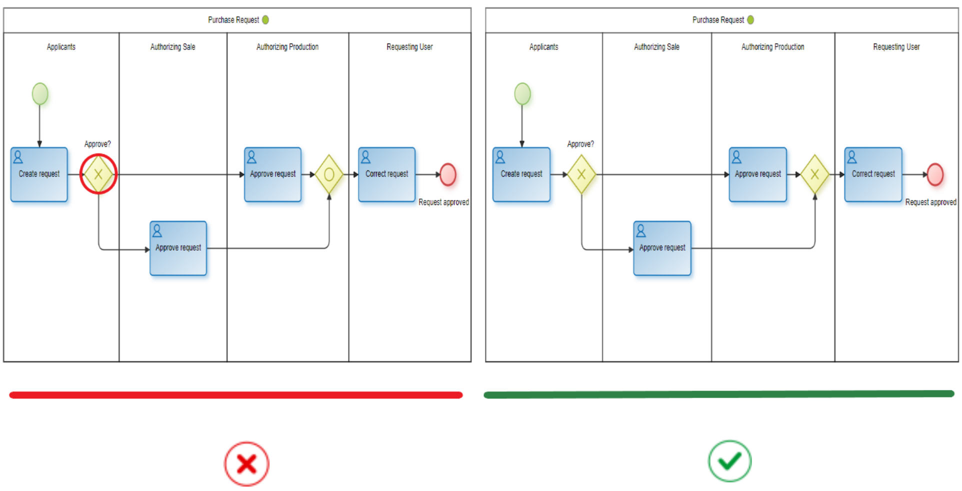
- Flows must not be branched using tasks.

- Gateways should always be used for this purpose.



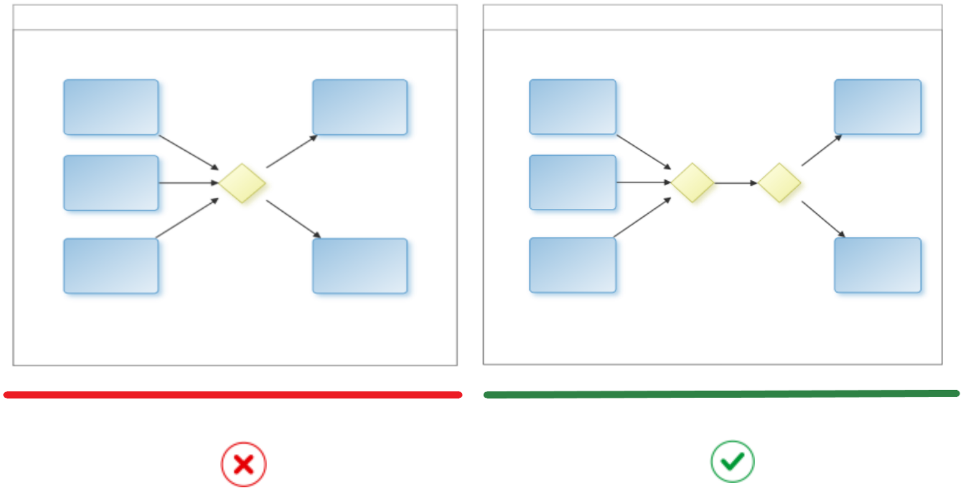
Gateways for Synchronization

- To synchronize flows, it is recommended to always use the same type of gateway that is used to fork them.



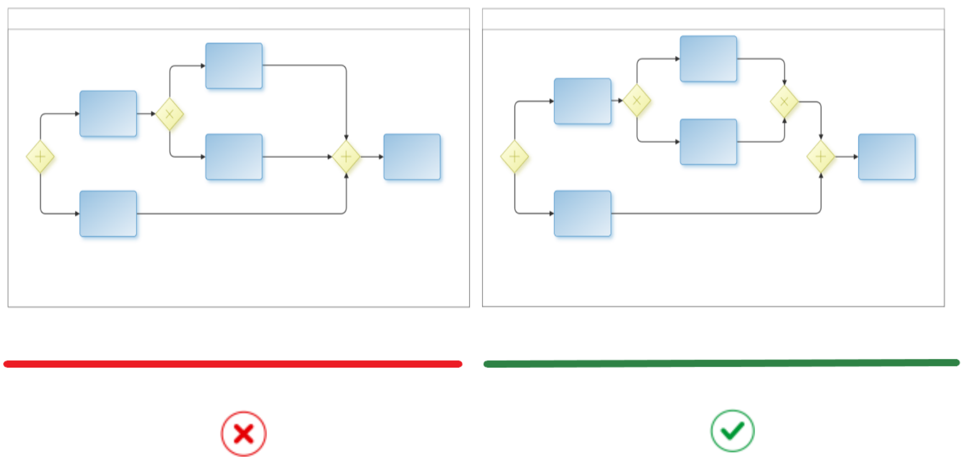
Separate the forks and Synchronizations

- It is recommended not to use gateways to join and separate flows at the same time.



Balancing

- Flow branches must be equivalently synchronized.
- The number of flows leaving a fork must be equal to the number of flows that are received in a synchronization.



Exclusive Gateway

Has two representations. The same representation must be used for the entire definition of a process.

- It can be used as a fork or synchronization element.
- It is used to represent a fork in the flow, where there are several possible alternatives but only one should be considered.
  They are mutually exclusive alternatives.
- These gateways require the definition of a default flow.
  This flow represents the path taken when none of the other conditions are met.
  We recommend that the most common path, the most probable, is the one that is modeled as the default flow.
- The exclusive gateway can be defined in pairs, one as a divergent element to activate several mutually exclusive paths and if these paths converge, a gateway of this type must be used as a convergent element, to graphically represent the concurrence of the flows.

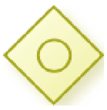
Parallel Gateway

Its graphic representation is as follows:

- It can be used as a fork or synchronization element.
- When used as a fork, the output flows do not require conditions as all paths must be followed.
  Likewise, it is recommended to put a legend in each flow that represents the condition that was met in order to be able to transit such flow.
- When the gateway is used as a convergent element (synchronization), all the predecessor activities are expected to finish their execution.
- The parallel gateway must be defined in pairs, one as a divergent element to activate several parallel paths, and the other as a convergent element, to synchronize the previously activated paths.

Inclusive Gateway

Its graphic representation is as follows:



- It can be used as a fork or synchronization element.

- The inclusive gateway as a fork element is used at a point in the process where one or more alternatives may be viable based on a condition.

  For example, after creating a document, it must be approved by the corresponding offices according to the type of document created.
  To implement the multi-decision pattern it is necessary to use the inclusive gateway.
  This gateway allows one or more paths to be enabled according to the evaluation of the conditions of each flow.

- If none of the conditions are met, a default flow can optionally be defined, that takes into account this situation.
  If this default flow is not defined, then an error is obtained stating that there are no viable alternatives.

- The inclusive gateway as a convergence element is activated if at least one case reaches the inclusive gateway and if some other case of the processes execution that could reach the gateway (the canceled threads are not considered) arrived previously.

- The inclusive gateways can be defined in pairs. That is, one as a divergent element that generates parallel activities, and then that converge in an inclusive gateway of convergence, which synchronizes the previous paths.

3.6.3.10.6.1. Patterns

Patterns for processes design are examples that show how to connect activities to solve a common problem.

Parallel Paths

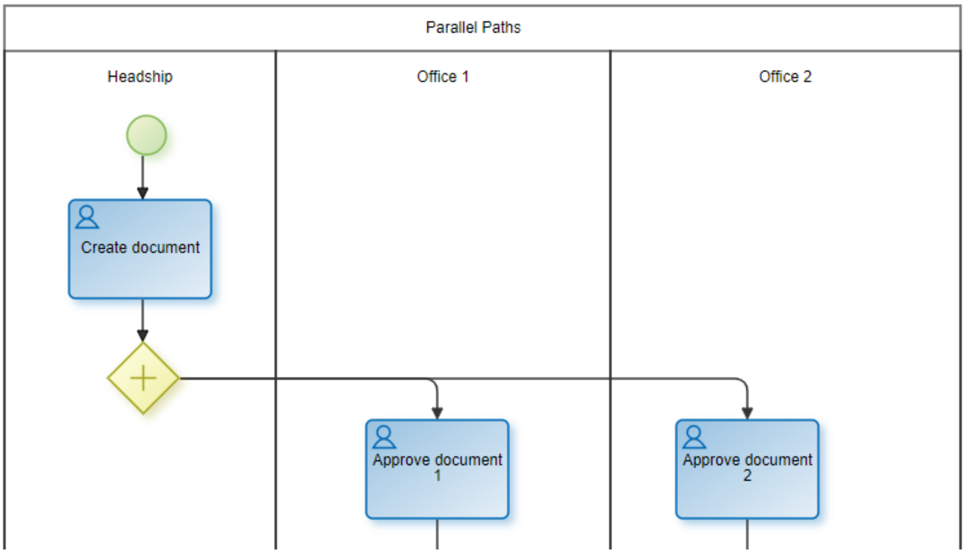
A parallel path is a point in the process execution where the execution flow is divided into two or more flows that are executed in parallel.

Example

A document is created in one office, which requires the approval of two other offices.

Implementation

To implement parallel paths, it is necessary to use a parallel gateway. This gateway creates all alternative paths without evaluating conditions.



Synchronization

Synchronization is a point in the process where two or more different flows of the process are joined into a single flow. It is called synchronization because it waits for all the flows to be joined to complete before proceeding to the next activity.

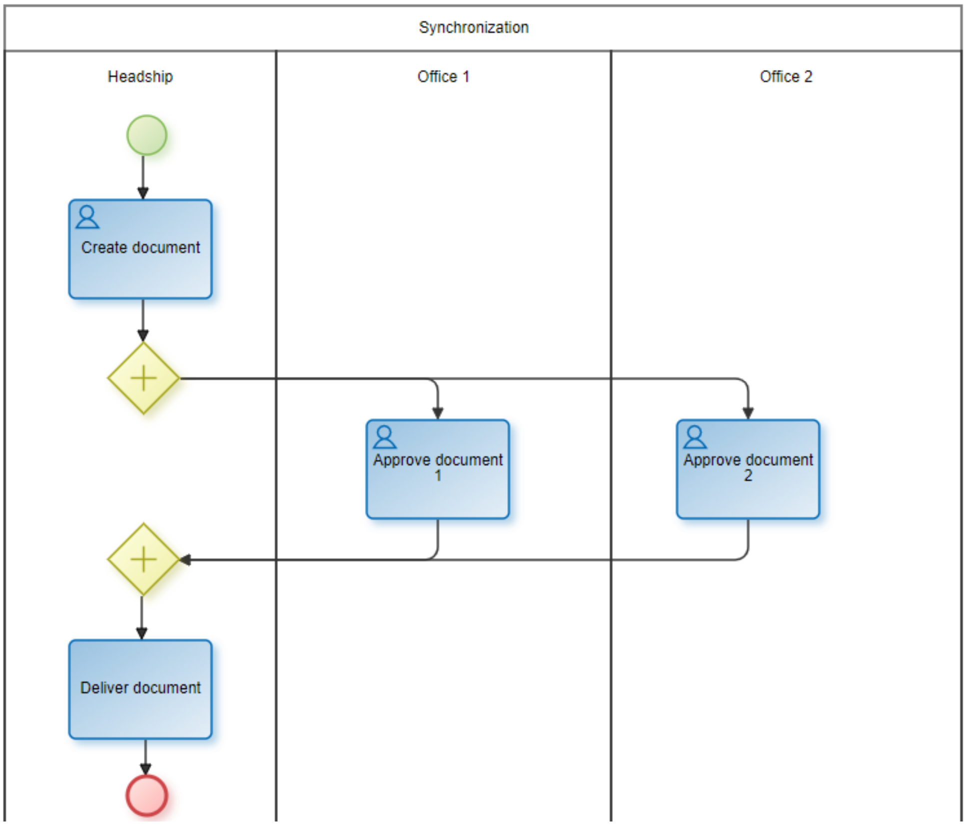
Example

The document created by one office must be delivered after it has been approved by two other offices.

Implementation

In the example we use the parallel gateway as convergence which means that it synchronizes the previously activated paths.

The synchronization pattern can also be modeled with the exclusive and inclusive gateway, according to the needs of the business.



Exclusive Decision

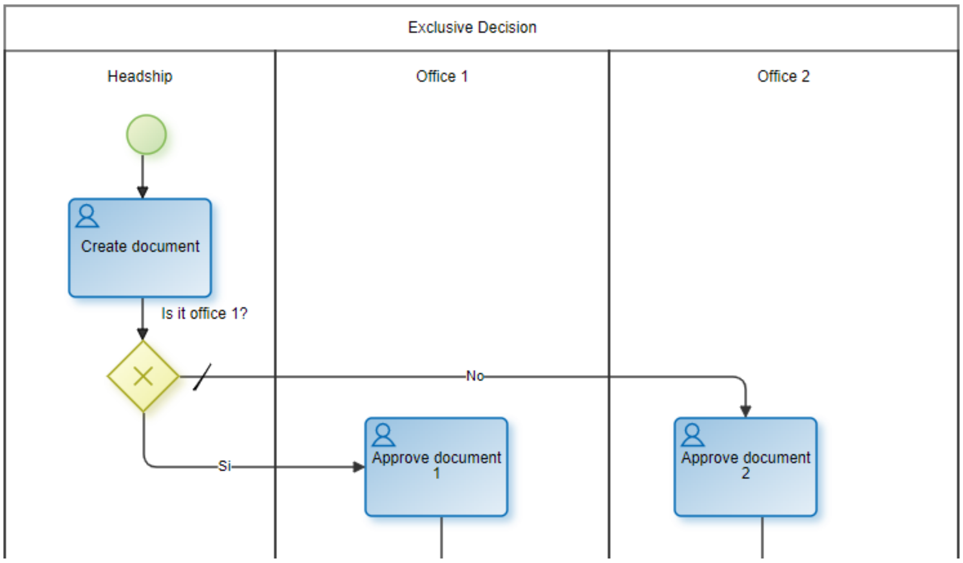
Exclusive decision is a point in the process where a path is chosen from several paths based on a condition or information from the process.

Example

When creating a document, it must be approved by an office that corresponds to the type of document created.

Implementation

The exclusive decision pattern can be modeled with the exclusive gateway. The exclusive decision has multiple output flows, but only one of them can be made based on the conditions of each stream.



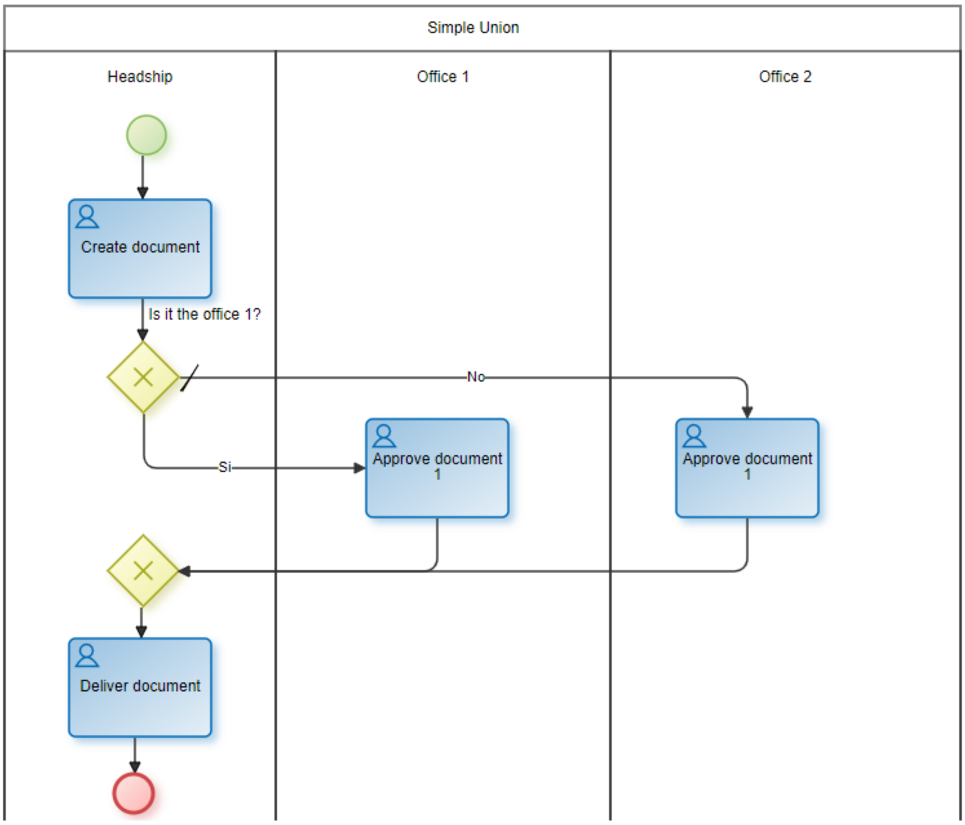
Simple Union

Simple union is a point in the process where two or more alternate paths meet without synchroniza-tion. This pattern assumes that of the different paths only one is executed.

Example

After creating a document, it must be approved by the corresponding offices according to the type of document created. Once approved by the corresponding office, it must be delivered by the office that created it.

Implementation



Multi-Decision

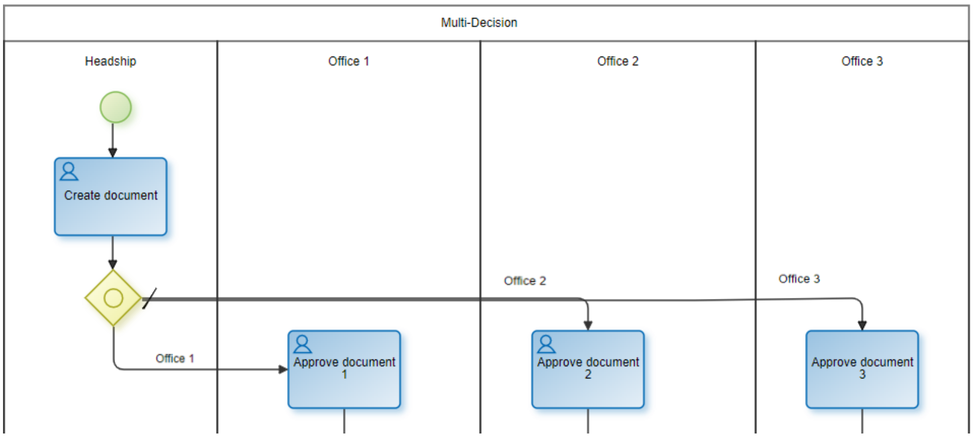
The multi-decision pattern is used to model a point in the process where a set of paths are chosen based on a condition.

Example

After creating a document, it must be approved by the corresponding office or offices according to the type of document created.

Implementation

To implement the multi-decision pattern it is necessary to use the inclusive gateway. This gateway allows one or more paths to be enabled according to the evaluation of the conditions of each flow.



Synchronized Structured Union

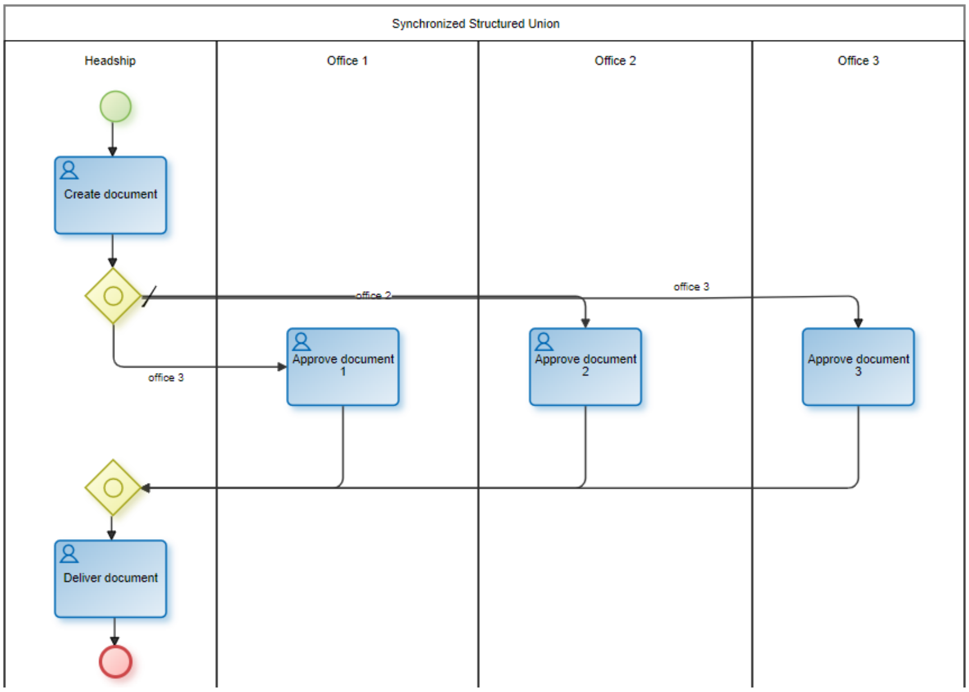
It is a point in the process where multiple paths that were previously activated in the process converge in a single thread of execution.

Example

Once the document has been approved by the appropriate office or offices, it must be delivered by the office that created the document.

Implementation

To implement this pattern it is necessary to use two inclusive gateways, one for divergence (activate some paths) and the other for synchronization (synchronize the activated paths).



Multi-Merge

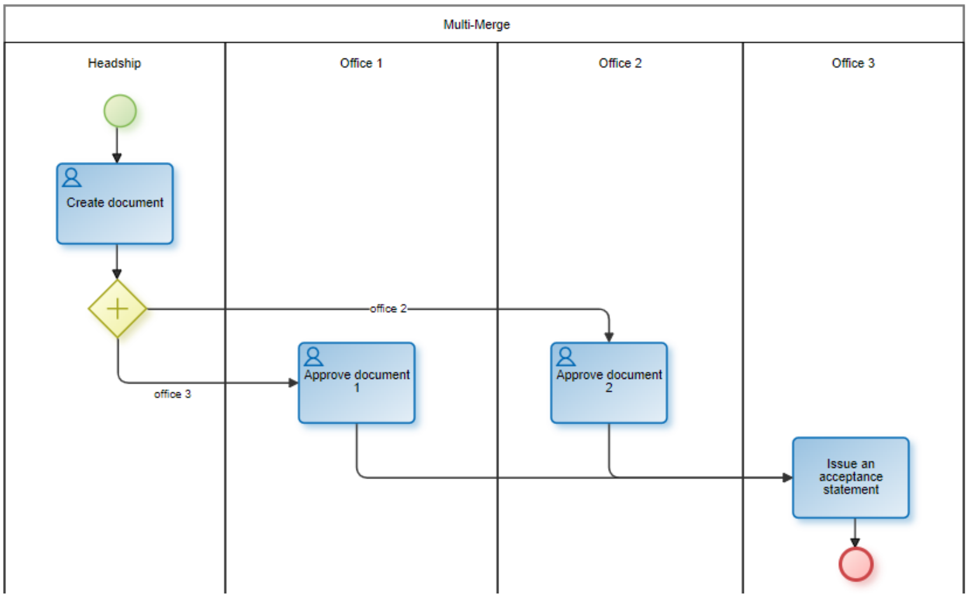
The multi-merge pattern is used to model the convergence of two or more paths in a single path. Each time an input path is activated it activates the next activity in the execution flow.

Example

After creating a document, it must be approved by two offices. Each time an office approves it, a third office must send an approval release.

Implementation

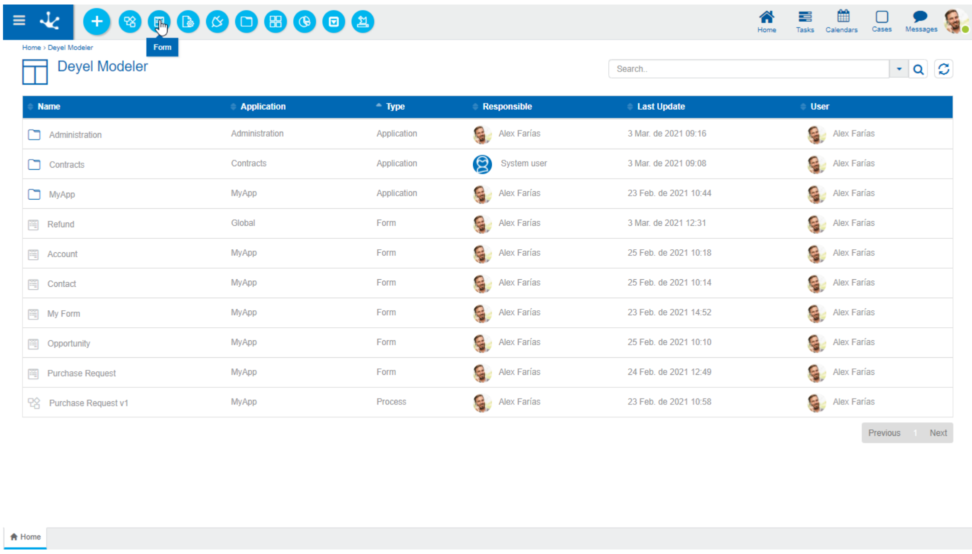
The pattern uses a parallel gateway to enable two paths. Each time the activities on one path are executed, the next activity will be as well. In this case, the "Send approval statement" activity is executed twice.



3.6.4. Forms Modeling

[Phase 2: Forms Modeling](#)

The form modeler is a tool that allows to graphically design forms, as well as define the characteristics of their fields and behavior in the associated processes.



Its main characteristic lies in the simplicity to manage the functionality associated with the forms, facilitating their progress through the different [states](#) that indicate its modeling situation and productive use.

The general characteristics of the forms modeling environment and the main elements that compose it are described in the topics:

A new form can be created from the icon corresponding to the context menu.

- From the icon
- From the menu displayed with the option "Form"

An existing form is modified by selecting it from the grid with the "Open" button.

3.6.4.1. Modeling Facilities

Phase 2: Forms Modeling > Forms modeling

New Form

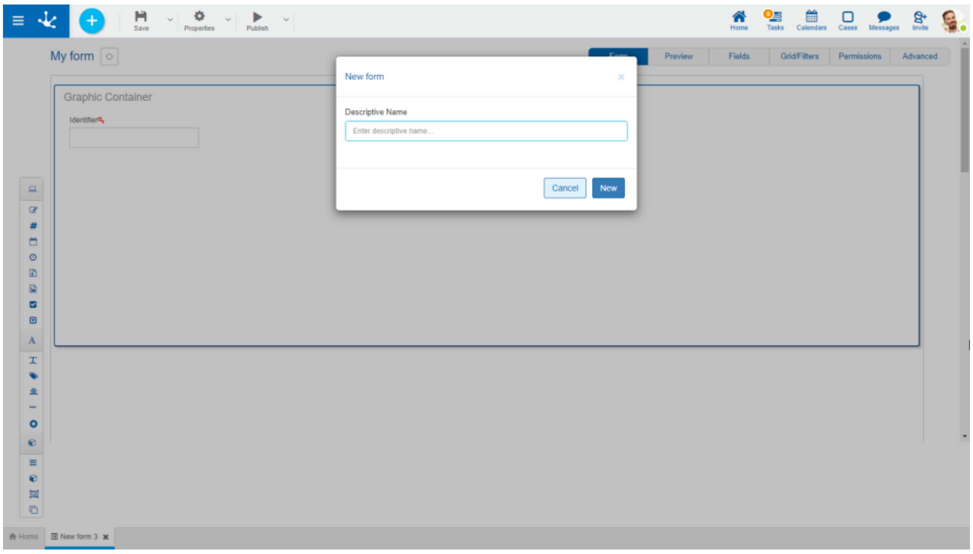
The modeler user defines a new form, which after being published is available to be used in the portal.

It can be modeled simultaneously:

- Data model layer
  Involves modeling all the fields with associated data types, field identifier, fields used as filters in searches, field data lengths, behavior and other validations related to business rules.

- Form display layer
  As its name implies, it is entirely related to the visual aspect of the form. This implies that you have control and decision about the arrangement, order, and width of the different fields and containers, interactive buttons, titles, labels, and informational messages, among other topics. There is also the option of displaying or not, the different sections or fields of a form and of using accordions.

When the form is created, a panel opens, allowing the entry of its name.



Workspace Sections

- Top Toolbar

- Form Information
  - Name
  - State
  - Locking

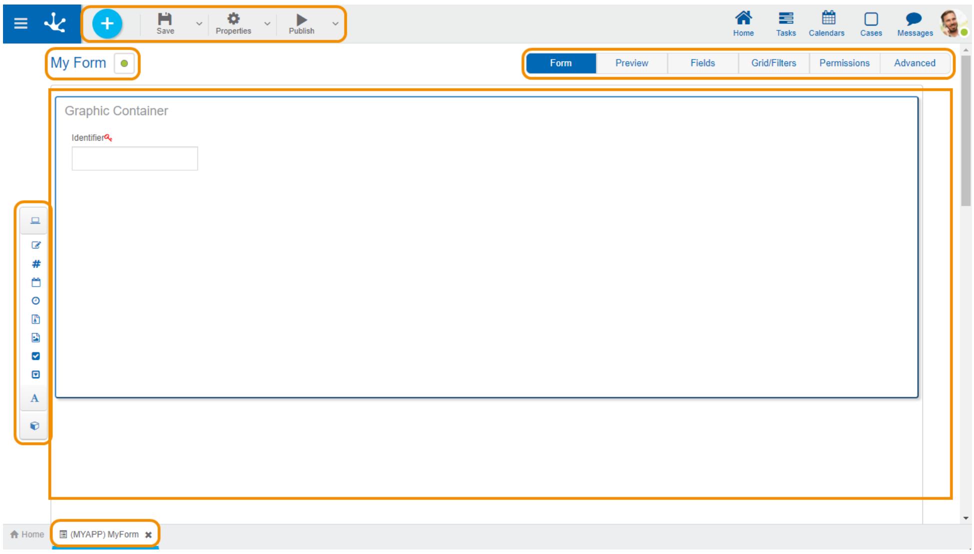
- Graphic Modeling Area
  - Graphic Container
  - Identifier

  Every new form contains an identifier field defined by default within the area of graphic modeling. It has the following characteristics:

  - Its data type is integer with a length of 10.
  - It is autonumeric, increasing value, starting from 1.
  - It cannot be deleted.
  - Only behavior properties can be modeled Visible and Validation.
  - It cannot be included within a "Multiple occurrence" type group.
  - Properties cannot be modeled Default Value, Type of content and Security.
  - Relations cannot be modeled.

- Design Options

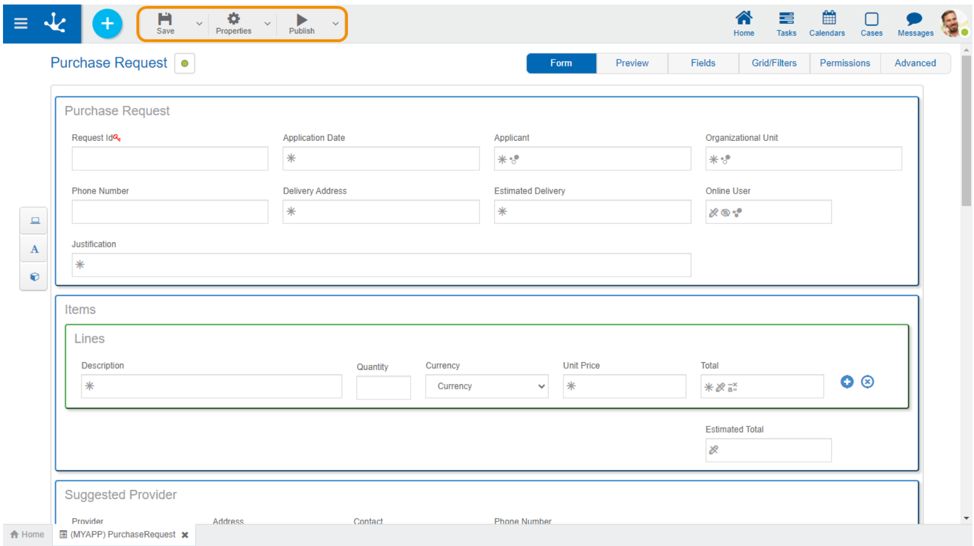
- Side Toolbar



3.6.4.1.1. Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its state, some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The application of the object must exist.

- The name must be unique in the application.
- The object must not be locked by another user.
- The object's permissions must exist.
- Modeled fields in process activities should not be eliminated as mandatory, whether they are used as parameters in automatic activities, in flow conditions or messages, in embedded rules of other fields in the form or in process activities, or as related attributes on entities**.**

To the right of the icon the option to open the submenu.

Properties

Open the form properties panel.

To the right of the icon the option to open the submenu.

Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.

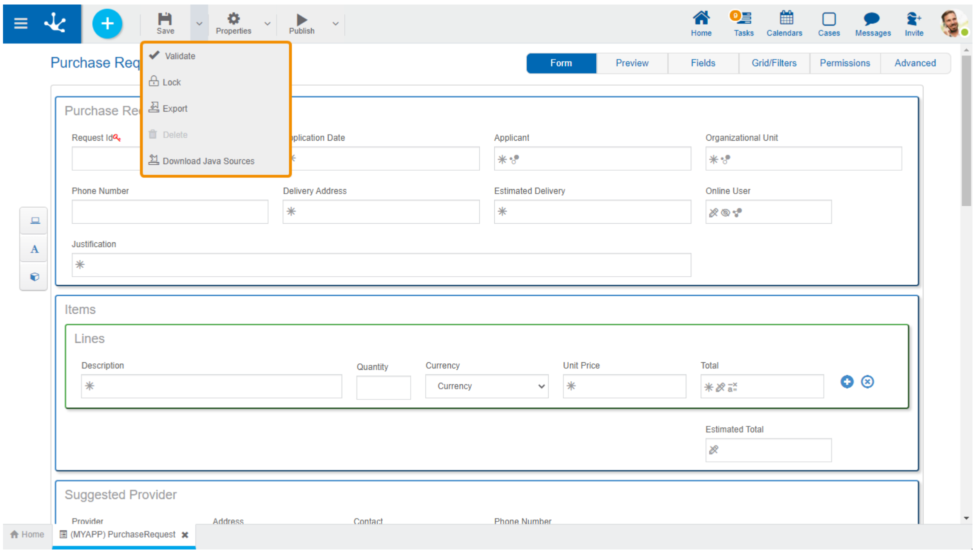
Main Conditions

- The entities and related rules must be published.
- Relations to published processes should not be removed.
- If new instances are created during the modeling of an already published form but without data, the form cannot be published again.
- If instances of a form are created while it is being modeled, it cannot be saved or published without opening it again in the modeler. Another option to save or publish the modeling in progress can be to delete instances.

To the right of the icon the option to open the submenu.

3.6.4.1.1.1. Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".



Validate

This icon validates if the form is ready to be published, that is, the validations performed are applied at the moment of publication and the result of the same is reported.

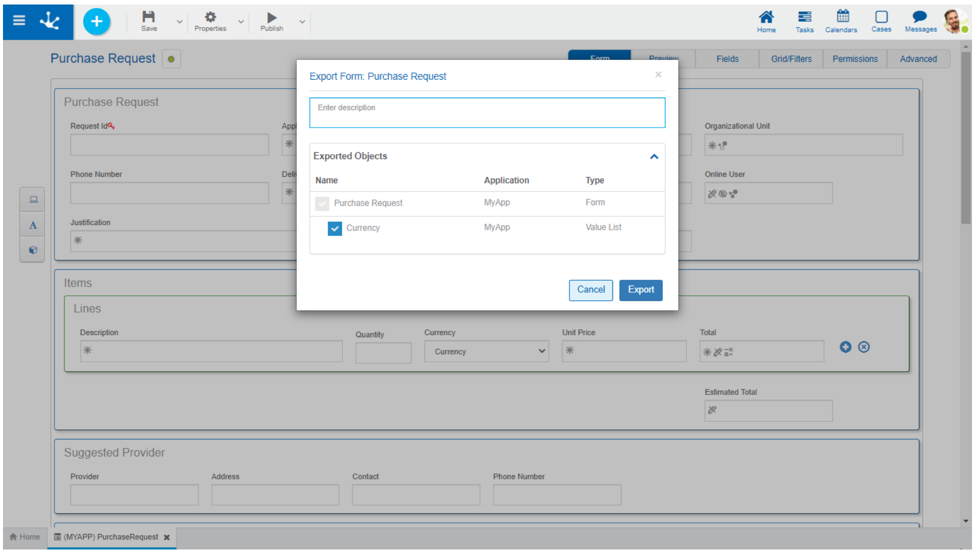
/ Lock unlock

- It allows blocking a form to ensure that no one can modify it until the person who is using it unlocks it, that is, releases it.

- Allows you to unlock a form so that another user can modify it.

Export

This icon opens a window for the user to select and confirm the export of the object and the related objects included in it.



Description

In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the export record.

Exported Objects

By expanding the container, the objects related to the form being exported are shown. Objects not meant to be exported are unchecked.
The related objects that can be exported along with the form are:

- Value lists associated with fields.
- Advanced rules used in fields, from the "Relation" tab of the field properties or included in embedded rules.

You must press the "Cancel" button to leave the export without effect or the "Export" button to finish the operation.

> *Forms corresponding to related entities are not included in the export.*

Delete

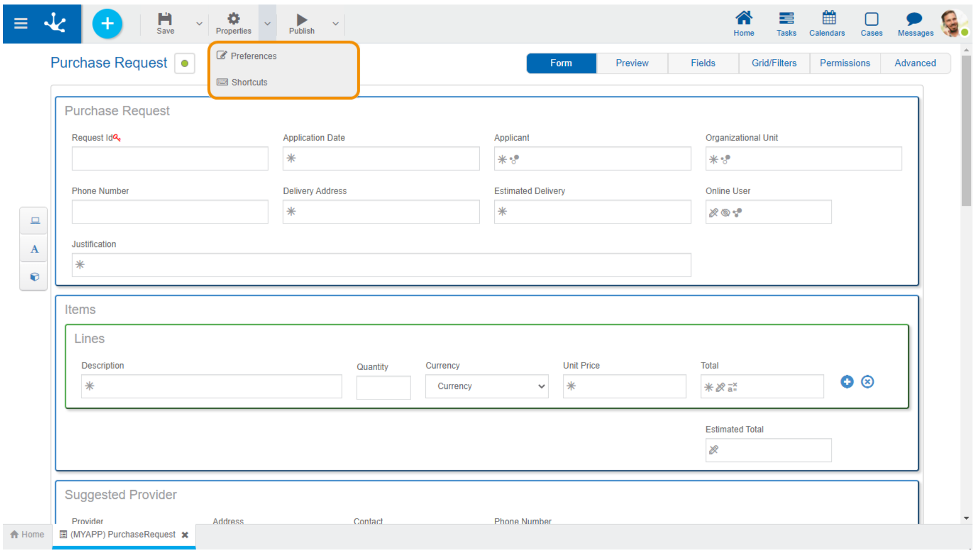
Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid.

Download Java Sources

This icon allows to download the Java files that represent the object's model and service, so that it can be used in advanced rules.
Pressing the icon displays a message to confirm file download.

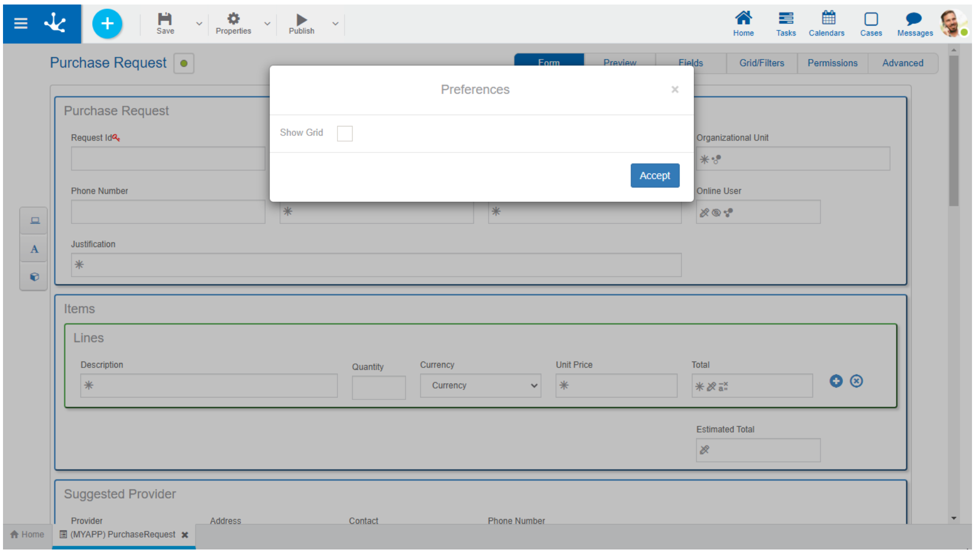
3.6.4.1.1.2. Properties Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Properties".

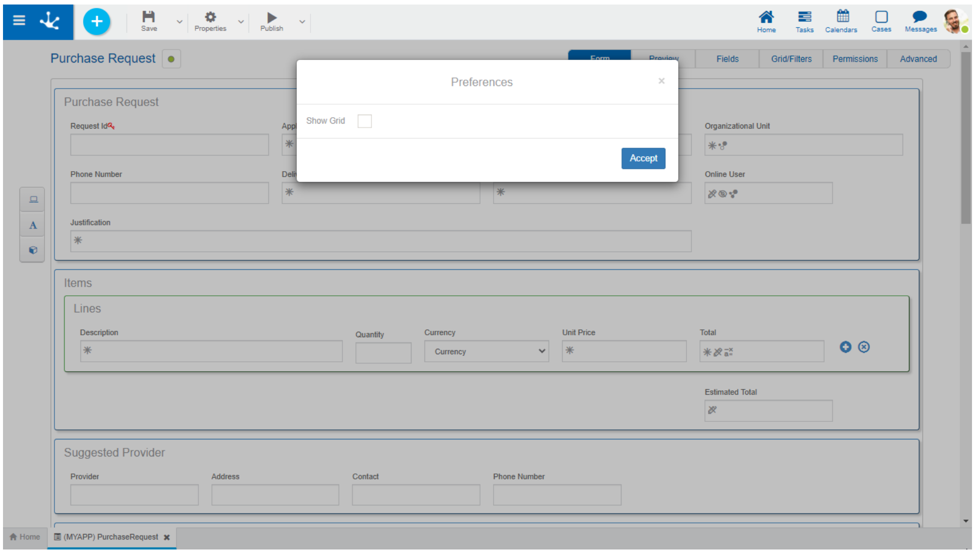


Preferences

Defines display preferences for forms modeling.

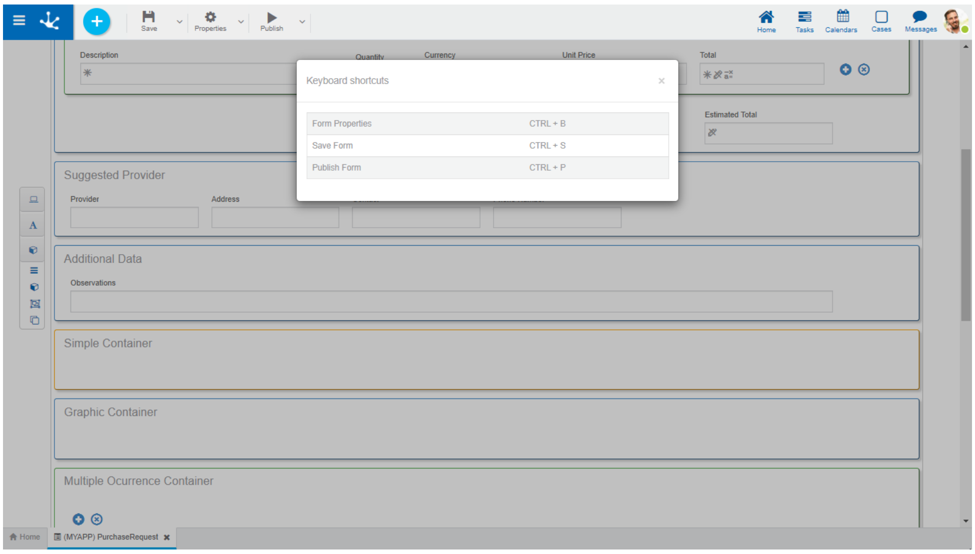


- **See grid**
  Indicates the division into rows of the graphical modeling area. The default value is "No".



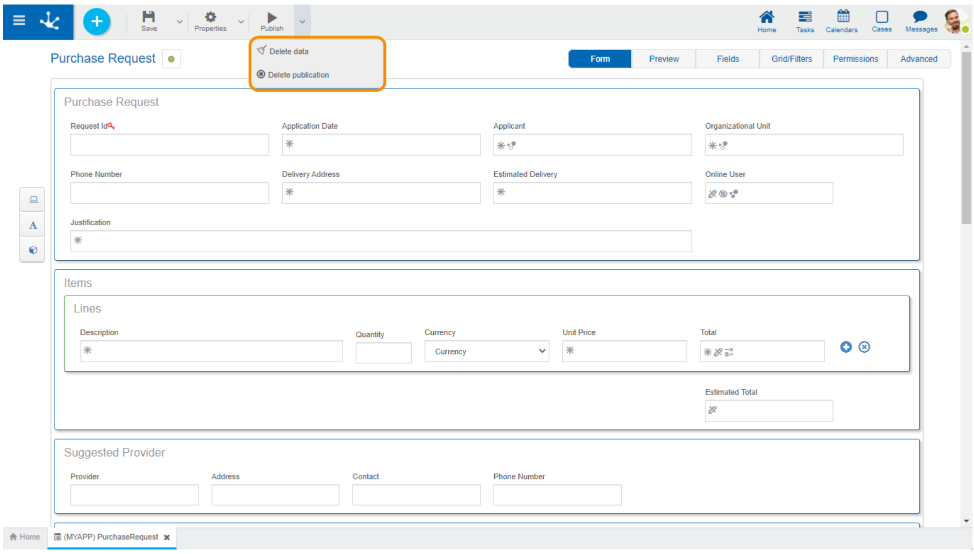
Shortcuts

Opens a panel with all available keyboard shortcuts to use in forms modeling.



3.6.4.1.1.3. Publish Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".



Delete Data

Instances that would have been generated when using the form are deleted.

> *If the instances of a form are linked to cases of processes related to the form, first these cases must be deleted from the option [Delete Data](#) from the top bar of the process modeler.*

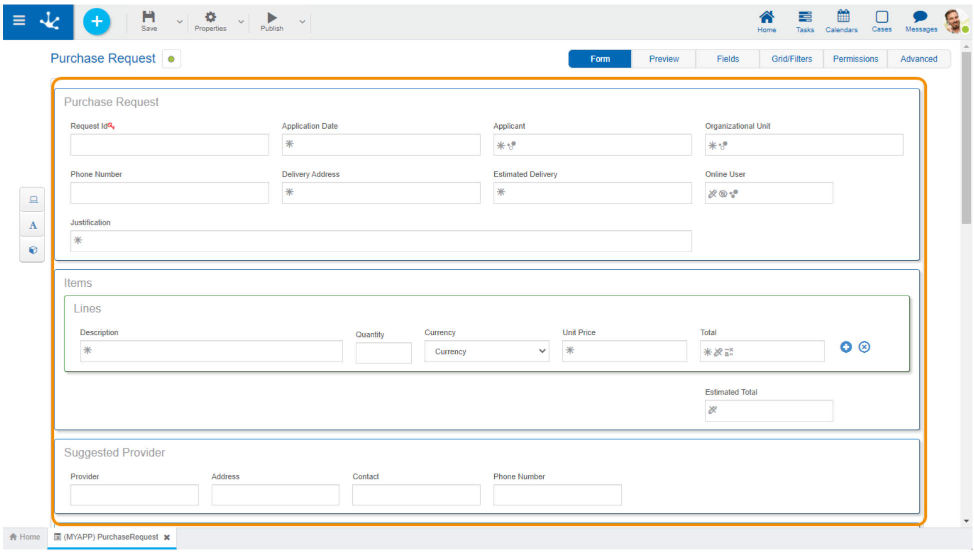
Delete publication

This icon allows to leave the form unavailable for use by returning it to the "Draft" [state](#), in addition to deleting the data.

3.6.4.1.2. Graphic Modeling Area

The graphic modeling area is the space where the different elements are dragged from the [side toolbar](#), allowing to model the graphical arrangement of the elements in the form.

The modeling area is divided into rows, and each element on the form occupies at least one cell within the row.



Operations on the Elements

When you drag an element from the left toolbar to the graphic modeling area, it is inserted in the chosen place. Hovering the mouse over the element displays a set of icons that allow to perform different operations. The operations available depend on the type of item you are working with.

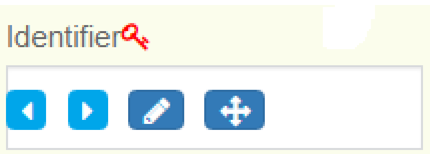
Allows to delete an item. Clicking on this icon displays a confirmation message that, when pressed, deletes the modeled element.
In case the form is published and it already has data loaded, this icon is disabled.

Allows to modify the graphic width of the element. The right icon enlarges the width in a unit and the left icon decreases it by the same amount.

Allows to enter the section of element properties.

Allows to move the field to any other sector in the modeler area. You can drag the field by keeping the click on this symbol and dropping it on a row, or on the cell separators, so the field moves to the indicated area.

Every form is created containing an identifier field by default, and is represented by a key to the right of the label.



Behavior Indicators

In each form field, you can visualize the icons corresponding to the modeled behavior rules, the relations to entities and the related attributes.

Required / Required with Rule

Not visible / Visible with Rule

Not editable / Editable with Rule

Validates with Rule

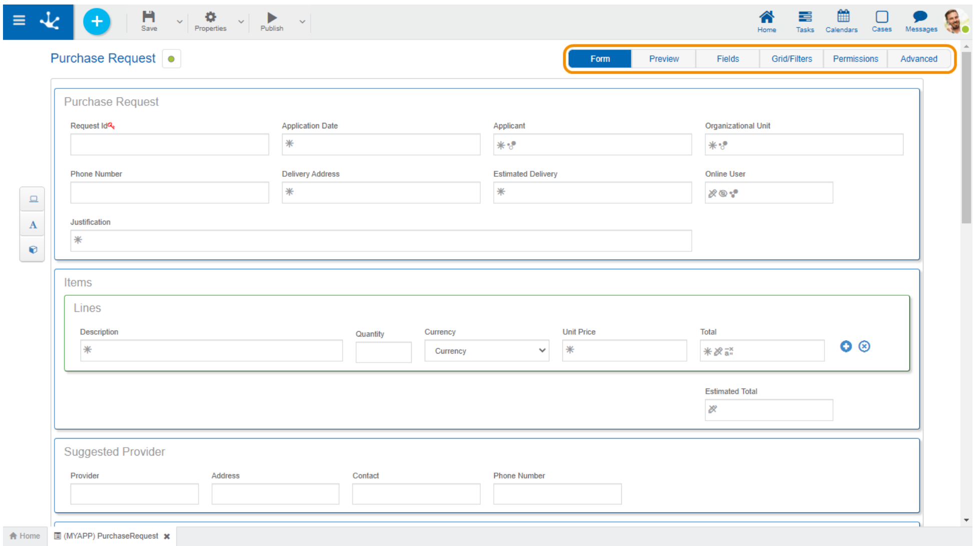
Calculates with Rule

Relation to an Entity

Related Attribute

3.6.4.1.3. Design Options

The mode of creation/editing of a form allows defining the set of fields that compose it, the type of information that is stored in each one, their distribution within the form and with which characteristics they are presented to the user. In this way you can work on the data model and its visualization at the same time.

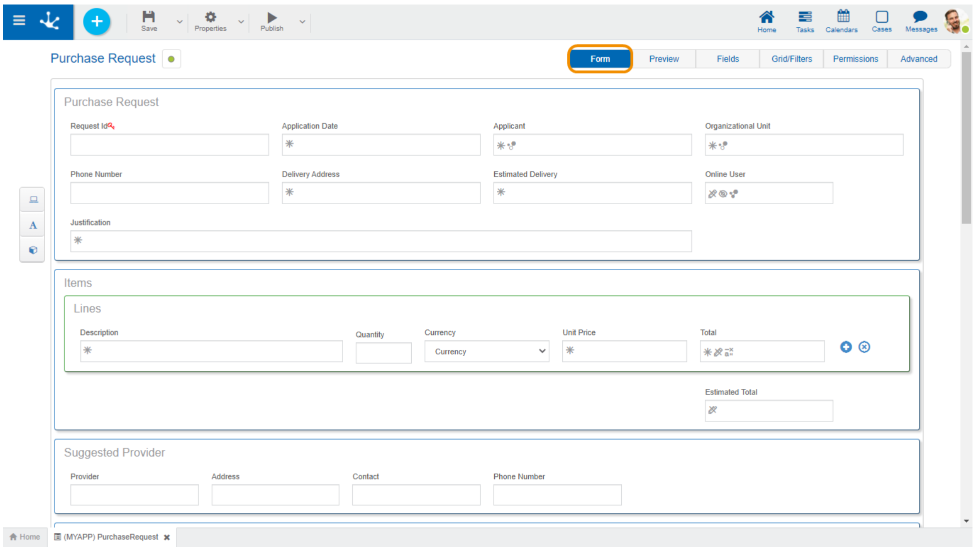


- Form
- Preview
- Fields
- Grid and Filters
- Permissions
- Advanced Edition

3.6.4.1.3.1. Form

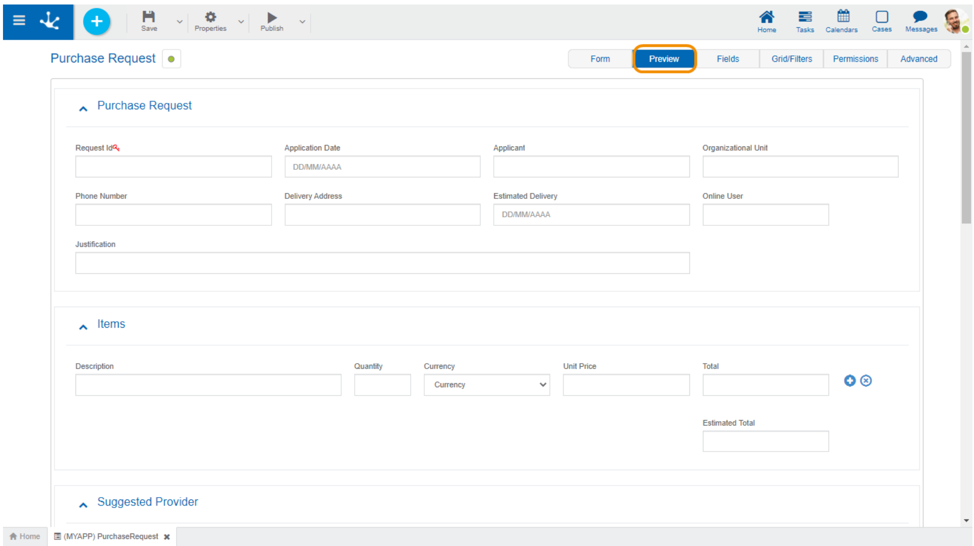
The graphical modeling area is presented when the modeler starts, where fields, graphical elements and containers can be defined.

These items are available in the left side toolbar, where its structure and operation are explained in detail.



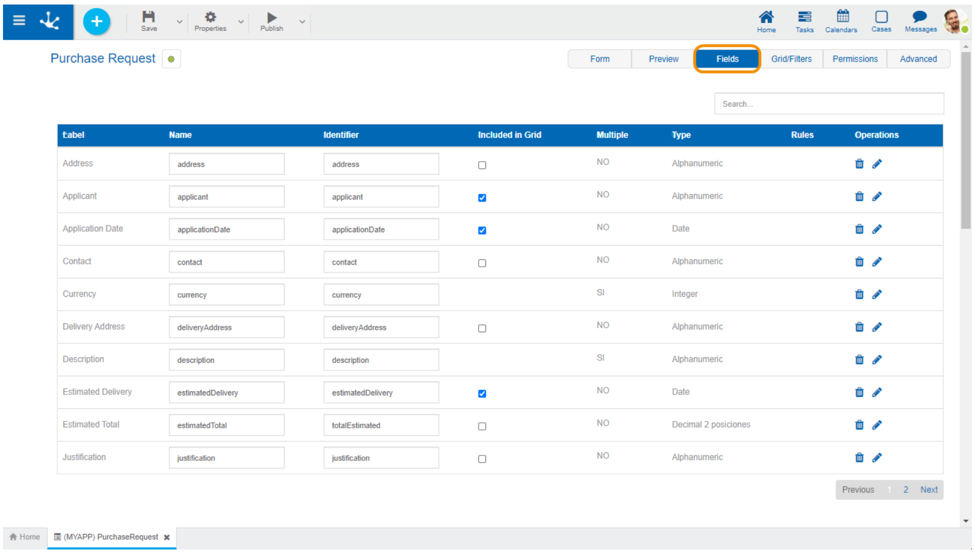
3.6.4.1.3.2. Preview

It allows to have a vision of the modeled form, showing how it would look in the user portal. For example, buttons for editing the "Form" tab are hidden and the containers (accordions and tabs) are displayed, the containers that have the hide property active are hidden, etc.



3.6.4.1.3.3. Fields

Allows you to see the list of all form fields in a paginated table, with quick search capabilities, filters, order, viewing the properties of each one and allowing operations to be carried out.



Columns

Label

Allows to enter the text that is displayed on the field. It works together with the prefix to reference the field in validation messages and supports blank spaces.

Name

Name assigned to reference a field in the modeling, allowing the field to be uniquely identified within the form. Used in rule wizards to refer to field within conditions. It generates automatically from the Label property, it can be modified by the user and does not allow spaces or special characters.
It allows its editing and it must be unique in the form.

Identifier

It is the name that is assigned to refer to a field in the programming code, it is used to refer to the field within the Java code in the "Execution Code" tab of the advanced rules and in the JavaScript code in the "Advanced Editing" tab of the form modeler. Allows to uniquely identify the field within the modeled form. It can be modified by the user, as long as no data has been loaded into the form and it does not allow spaces or special characters.
It allows its editing so that the user can modify it only when the form does not contain data.

Included in Grid

Indicates if the field is displayed in the results grid where the form instances are shown.

Multiple

Indicates if the field has multiple occurrences.

Type

Determines the data format that can be entered in the field. The supported data set varies, depending on the type of field that has been created from the elements of the left side toolbar.

Rules

In case the field has any associated rule of Required, Visibility, Editability or Validation, an icon is displayed indicating the type of rule.

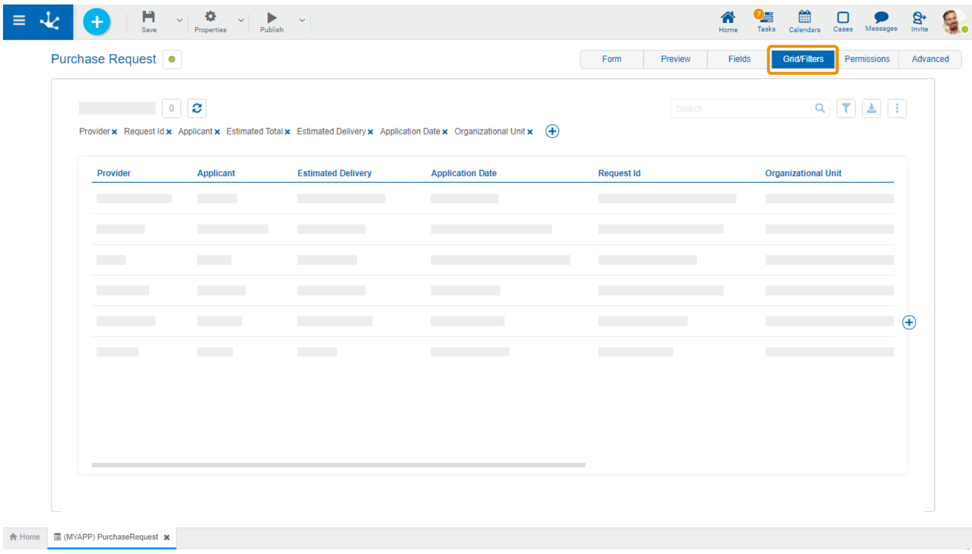
Operations

Allows to delete the field only in forms without data and requires confirmation by the user.
Attributes editing opens a new panel that allows to edit the field properties.

3.6.4.1.3.4. Grid and Filters

Grid

Allows to model the columns displayed in the results and search grids. The default columns of the grid correspond to those fields that have been configured with the Included in Grid property checked.



New fields can be added by pressing the icon to the right of the last column of the grid and its order can be modeled by dragging the shaded rectangles of the columns to swap their positions.

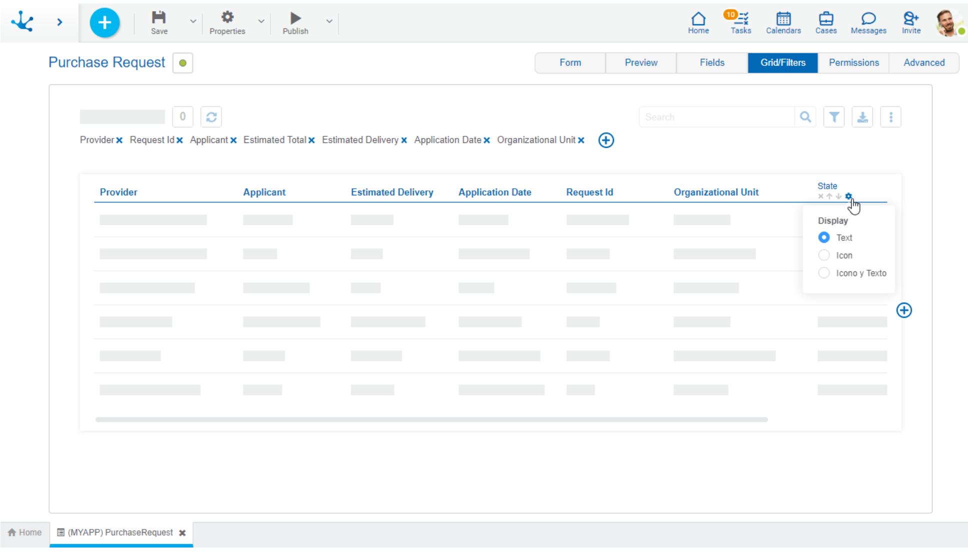
When hovering over the title of each column, the following icons are displayed:

Allows to model the width of each column by moving the limit bar to the right to enlarge the column, or to the left to shrink it.

Remove the column from the grid.

To establish the column by which the default sorting will be performed, it is ascending or descending depending on the selected icon.

It is displayed when a field has a relation modeled to a value list . Pressing the icon allows to select the content type to display in the column. The default value is "Text", which can be changed to "Icon" or "Icon and Text".



In forms with associated processes, columns related to the case execution can be added when modeling the result grid .

Case Activity

It is the activity of the process in which the case is.

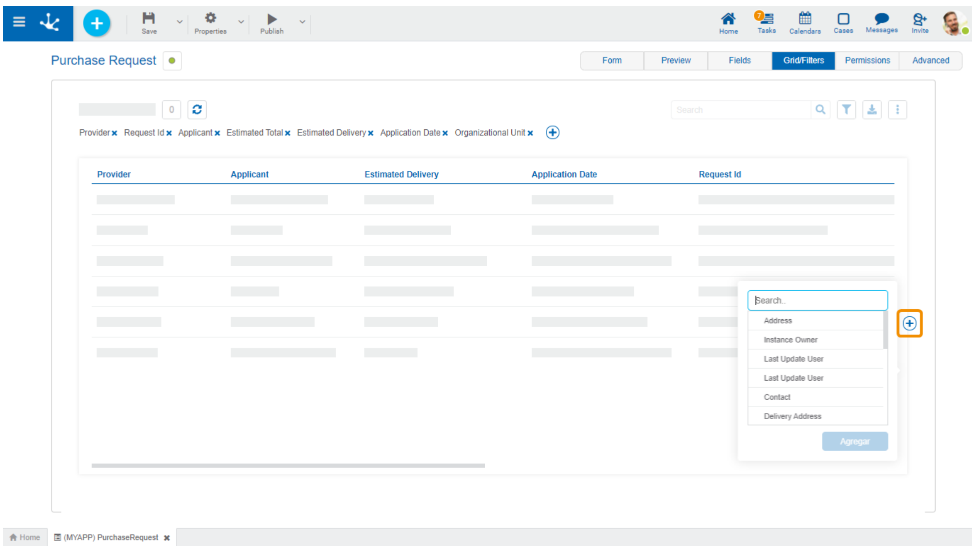
Case Responsible Agent

Refers to the user, role or office that the case has pending on its task list.

Case State

It is represented by a circle of different colors.

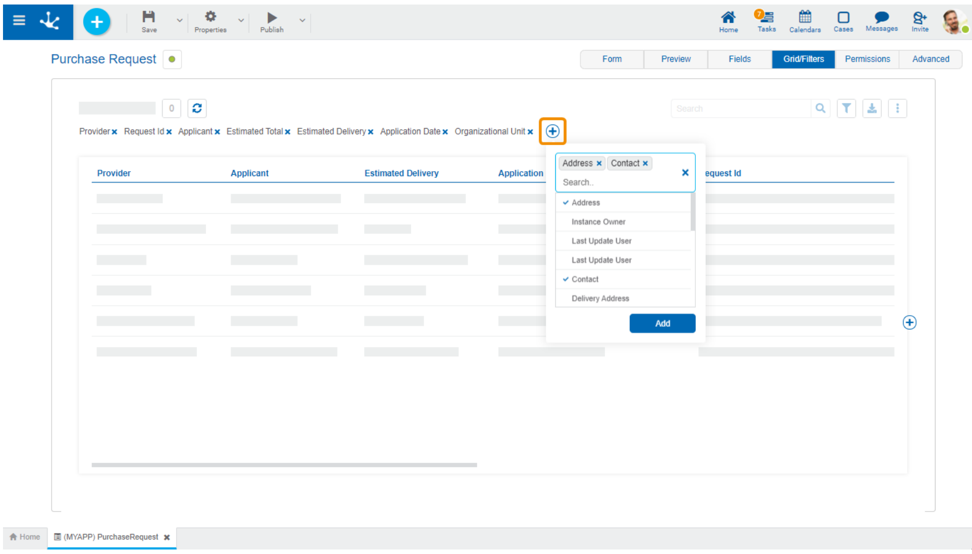
- Active: Green
- Finalized: Blue
- Cancelled: Red
- Discontinued: Gray



Filters

The definition of filters allows modeling search criteria on form instances. Each filter corresponds to a form field or to a field related to its execution.

Pressing the icon located in the filter line, a panel to select the fields opens.



3.6.4.1.3.5. Permissions

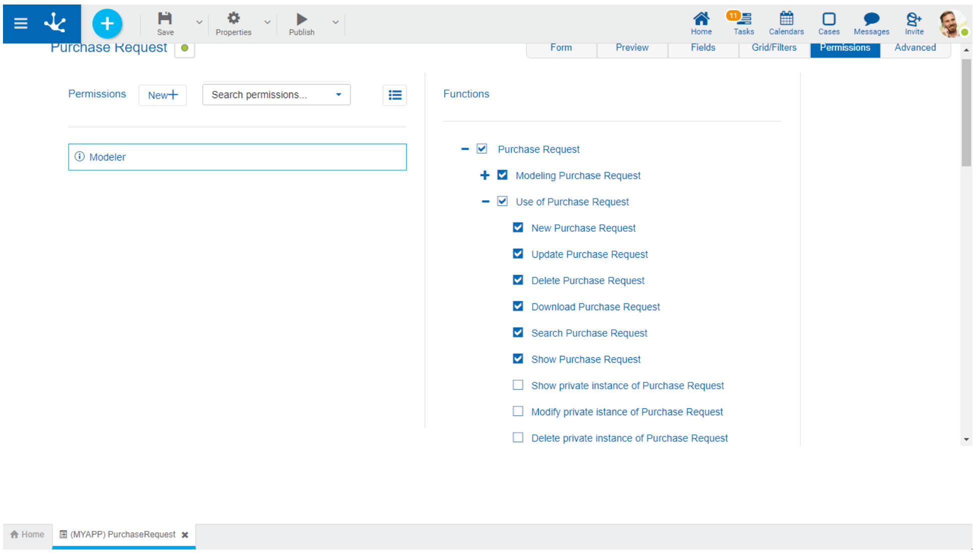
Allows to assign the security functions for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the permission settings option from the menu.

Sections

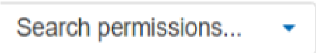
- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission Modeler.

Users who are assigned the permissions have access to the functions included in it.



Opens a panel to create a new permission and once created, the security functions included in it must be selected .



Allows to select a permission from a list and enables the input of characters to filter the values in the list.


Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon ✖. If there are functions selected for that permission, they must be unchecked in order to delete it.

Security Functions to Model the Form

- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Copy to modeler: Enables the copy operation of the object.
- Save changes: Enables the operation of saving modifications made to the object.
- Publish form: Enables the operation of publishing the object leaving its state in "Published".
- Delete all data: Enables the delete data operation.
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete draft definition: Enables the operation of deleting the object.
- Block form: Enables the lock or unlock operation, when locking a form only the user who locked the form can modify it.
- Export form: Enables the operation to export the object from the save submenu of the upper toolbar.

Security Functions to Use the Form

- Create: Enables the operation of creating an instance of the object.
- Modify: Enables the operation of modifying an instance of the object.
- Delete: Enables the operation of deleting an instance of the object.
- Download: Enables the operation of downloading the instances of the object in Excel.
- Search: Allows to use the show grid of the form instances.
- Show: Enables the operation of showing an instance of the object.
- Show/Modify/Delete Private Instance: They enable user operations on a private instance, regardless of the organizational unit they belong to and the rest of the criteria that define the privacy.

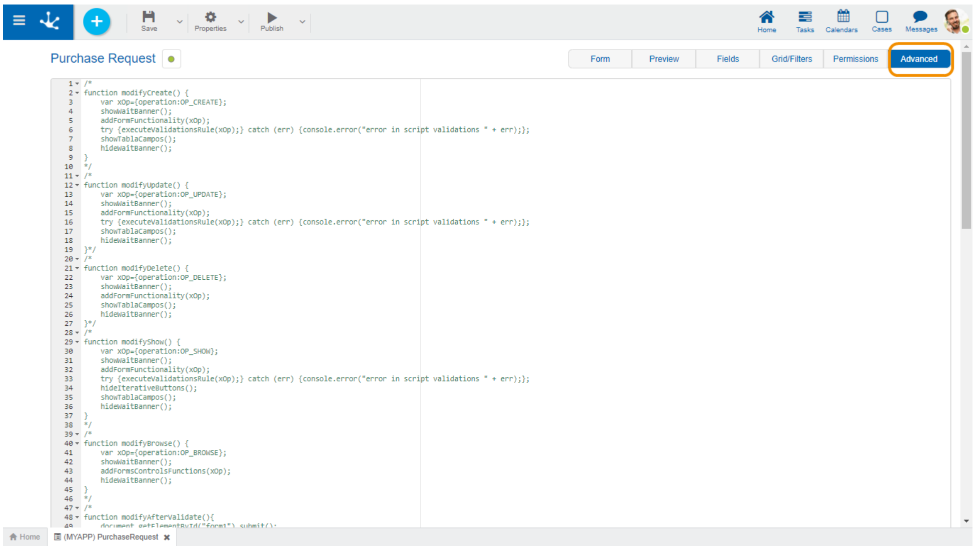
> *Private instance security functions are displayed if the properties are checked in the form* Hierarchical Privacy *and* Privacy by Permissions.

3.6.4.1.3.6. Advanced Editing

Being **Deyel** a development platform, it allows to make changes to the default functionality of a form. This functionality is aimed at IT users with knowledge of web development.

The "Advanced" tab presents a JavaScript code editing window that allows to apply programming logic in the web interface when using the form.

There is a set of JavaScript functions implemented in the platform that contain the default logic and behavior of the forms. Since business needs may require modifying this logic, these functions can be rewritten by programmers and apply different behavior to particular forms.



Predefined JavaScript Functions

Functions according to Operation

- **modifyCreate():** It is executed when entering the creation of a new form instance.
- **modifySubmitCreate():** It is executed when you click the "Accept" button on the creation of a form instance.
- **modifyUpdate():** It is executed when entering the modification of a form instance.
- **modifySubmitUpdate():** It is executed when you click the "Accept" button on the modification of a form instance.
- **modifyShow():** It is executed when entering to show a form instance.
- **modifySubmitShow():** It is executed when you click the "Submit" button showing a form instance.
- **modifyBrowse():** It is executed when entering the form's grid and filters tab.
- **modifySubmitBrowse():** It is executed when the "Submit" button is clicked in the form's grid and filters window.
- **modifySearch():** It is executed when entering the form's grid and filters tab.
- **modifySubmitSearch():** It is executed when the "Submit" button is clicked; runs when entering in the form's grid and filters screen.
- **modifyDelete():** It is executed when entering the deletion of a form instance.
- **modifySubmitDelete():** It is executed when you click the "Accept" button on the deletion of a form instance.
- **modifyAfterValidate():** It is executed after controlling the asynchronous validations, when confirming a registration or modification operation. Allows to perform operations after executing validations.
- **modifyPrint(pNode):** It is executed by pressing the "Print" button of the forms. Allows you to modify the default print display. The pNode parameter is the Jquery node of the entire html template of the form, any Javascript logic can be applied to modify such node, which is reflected only in printing.

JavaScript Functions Structure

The predefined functions have the following structure:

```
function...() {
      var xOp={operation:"OPERATION"};
    showWaitBanner();
      addFormFunctionality(xOp);
      try {executeValidationsRule(xOp);} catch (err) {console.error("error
      in script validations " + err);};
```

```
    showFieldTable();
    hideWaitBanner();
}
```

The OPERATION variable takes the following values according to the operation being performed with the form, allowing different actions to be executed on the form instance.

- "CREATE";
- "UPDATE";
- "SHOW";
- "BROWSE";
- "DELETE";
- "SEARCH";

Internal Functions to Predefined JavaScript

showWaitBanner(): Shows the wait message.

addFormFunctionality(): Adds functionality to view elements such as containers, field controls, repeatable field buttons.

executeValidationsRule (): Associates JavaScript events to the form interface, related to modeled rules for visibility, calculation, and editability.

showFieldTable(): Allows to display the fields section of the form, which is hidden.

hideWaitBanner(): Hides the wait message if it is visible.

Other Useful Functions

GetCdActivity function

In some cases where the form is associated with a process, different actions are carried out depending on the running activity.
In order to add programmed logic, there is the getCdActivity () function, which returns the number of the activity in progress.

Example:

if**(getCdActivity() == 5){**

//show container
}{
//hide container
}

Container Functions

hideContainerById({idContainer:'id'}): This function hides in the interface the container indicated in the 'id' parameter.

showContainerById({idContainer:'id'}): This function displays in the interface the container indicated in the 'id' parameter (if hidden).

Graphic Container Functions

closeContainer({type:0,idContainer:'id'}): Defines that a graphic container is closed.

type: Indicates what type of container it is.
- 0 for Bootstrap-style containers.
- 1 for jQuery-style containers.

idContainer: Identifies the container to apply the functionality.

openContainer({type:0,idContainer:'id'}): Defines that a graphic container is displayed.

type: Indicates what type of container it is.
- 0 for Bootstrap-style containers.
- 1for jQuery-style containers.

idContainer: Identifies the container to apply the functionality.

Multiple Occurrence Container Functions

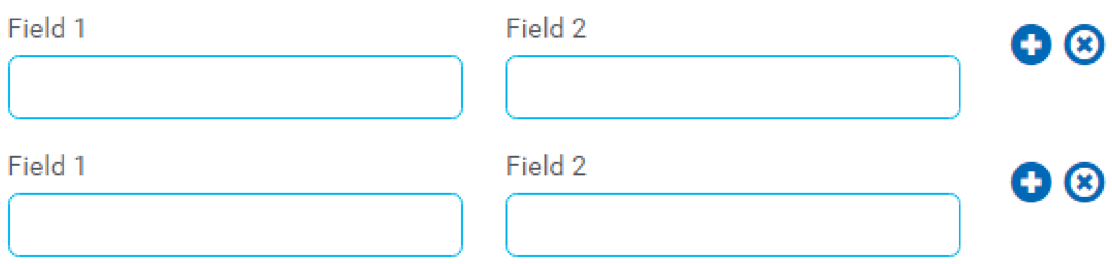
showIterativesHeaders(): Allows multi-occurrence containers to repeat their field labels in each row.

Example:

showIterativesHeaders (){

return ["idContainer"]

}



Supported Web Technology

In addition to native JavaScript, **Deyel** allows developers to use other web technologies on this tab.

- jQuery Version 2.1.4 official site https://jquery.com/
- Bootstrap 3.3 Official site https://getbootstrap.com/docs/3.3/
- Font awesome official site https://fontawesome.com/v4.7.0/

These technologies are already included in the platform, any functionality of the same technologies that the programmer user wants to use does not require anything additional.

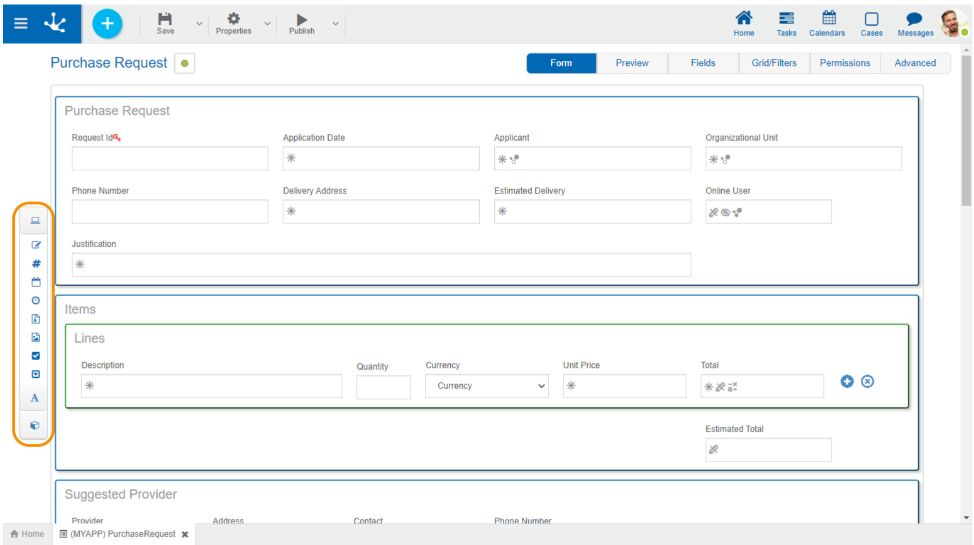
3.6.4.1.4. Side Toolbar

It is the toolbar that contains the icons corresponding to the different types of elements that can be defined in a form.

To use it, it is necessary to click on the corresponding section of the bar and select the type of element to add, dragging it to the desired place on the form.

Separators

They are light blue rectangular boxes that are displayed to the right and left, or above and below the elements defined in the modeling area, when dragging a field, graphic element or container with the mouse from the bar on the left. Indicate the positions within the modeling area where a field, graphic element or container chosen to be included in the form can be dropped.

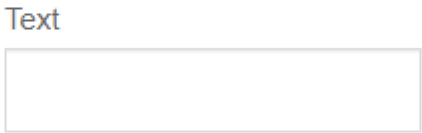


Bar Elements

Fields Modeling

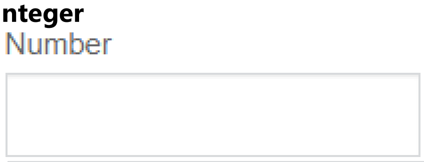
Pressing this icon displays a subset of elements that allow modeling fields represented by controls within the form. Each field can have a data type associated with it, depending on the control that represents it.

Text

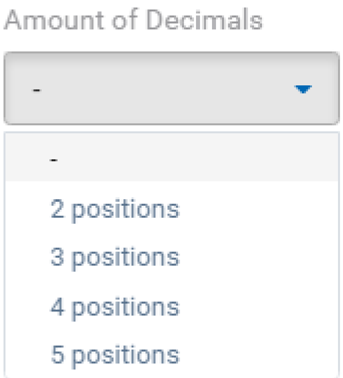


- Alphanumeric (Default Type)
  The values are saved keeping the entered uppercase and lowercase letters.
- Uppercase Alphanumeric
  Values are saved in uppercase.
- Long alphanumeric
  It works as a default alphanumeric, with the exception that it allows storing long texts (usually up to 4GB).
- Rich Text
  It has the characteristics of the alphanumeric type. It presents an extended editor that allows you to format the text by applying different styles, colors, sizes, etc. See detail of use of control.

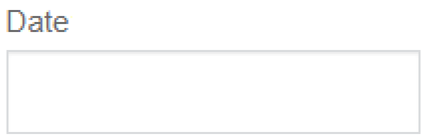
Integer



- Number
  It can contain integer values between -2147483648 and 2147483647 (they are stored in 32 bits).
- Large Integer
  It can contain integer values between -9223372036854775808 and 9223372036854775807 (they are stored in 64 bits).
- Decimal
  If the data type is decimal, the selection of the number of decimal places (2 to 5) is enabled.

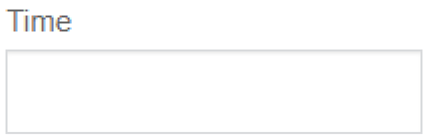


Date



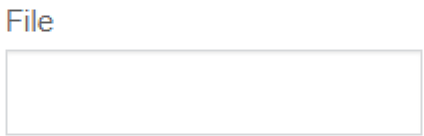
- Date
  Allows you to view a date or enter it from a selector. See detail of use of control.
- Date and Time
  Allows you to view a date and time or enter them from selectors. See detail of use of control.
- Local Date
  Allows you to view a date or enter it from a selector, according to the time zone corresponding to the calendar of the user who uses it.
- Date and Local Time
  Allows you to view a date and time or enter them from selectors, according to the time zone corresponding to the calendar of the user who uses them.

Time



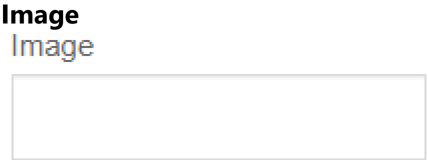
- Time
  Allows you to view a time or enter it from a selector. See detail of use of control.
- Local time
  Allows you to view a time or enter it from a selector, according to the time zone corresponding to the calendar of the user who uses it.

File



- File in Database
  Allows user files to be used as attachments to the form. See detail of use of control.
- File in Folder
  The files are stored in the file structure of **Deyel**. This option is available only in the On-Premise version.

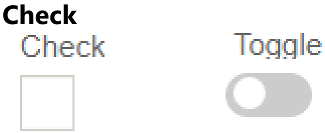
Image



- Image in Database
  Allows using image type user files as an attachment to the form. Allowed extensions are jpg, png, tif, bmp, and gif.
  See detail of control use.
- Image in Folder

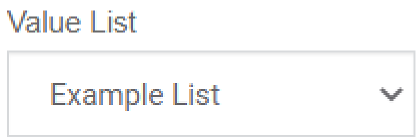
Images are stored in the file structure of **Deyel**. This option is available only in the On-Premise version.

Check



Allows to model fields represented by a check control. The values are of the logical type "YES/NO".
It can be displayed in toggle format if the field Display property was modeled.
See detail of use of control.

Value List



It allows modeling fields represented by a value list type control, whose possible values are predetermined based on a pre-existing list or are defined at the time the field is modeled, in the "Relation" tab of its properties. See detail of control use.

Modeling of Graphic Elements.

Pressing this icon displays a subset of graphic elements.

Title

It is used to include a text with a highlighted format.

Label

Used to include a free text and to be able to locate it in any section.

Separator

Allows to divide sections of the form.

Space

Used to include blank lines.

Multiple Occurrence Button

Allows you to add and remove iterative. It can be used within iterative containers.

Containers Modeling

Containers are graphic elements that allow grouping other elements under certain criteria.

For more details on its configuration and attributes, see Container Properties.
Clicking on this icon displays a subset of container elements.

Row
It is the grouping used in the graphic modeling area. An unlimited amount of elements can be put within a row, although the window width is recommended not to be exceeded since the row expands by increasing the width with respect to the others.

Rows can be scrolled up or down by moving all their content.
To move a row, you must hold down the left mouse button with the cursor, focusing on the row you want to move and dragging it up or down another one.
Rows can only be ordered within the container they are in, either the general area or a created container.

To delete a row you must position the mouse over it, where the delete option is displayed on the right .

As an error prevention mechanism, a confirmation notice is displayed and if it is accepted, the row and all its content, including fields, are deleted.

If the form already contains data, deleting rows that contain fields is not allowed.

Simple Container
A rectangle containing any element of the form (fields, graphic elements and even other containers) is displayed.
It can be used to group sections of the form, to which operations are added (hide, relate rules, etc.).
The outline is not visible at the time of execution.

To differentiate it from other containers, its outline is orange.

Graphic Container
The difference with a simple container is that everything inside the graphic container is displayed in run mode as inside an accordion.
It can be used to group sections of the form, to which operations are added (hide, relate rules, etc.).
This container transformed into an accordion can be seen in the preview.

To differentiate it from other containers, its outline is blue.

Multiple Occurrence Container
It can contain any element of the form (fields, graphic elements and even other containers).

Its main functionality is that all content is defined as multiple, that is, when executing the form, copies can be generated and deleted from the icons to the right of the element. This container is created by holding down a couple of buttons, but they can be deleted if not required.

Unlike the other containers, all the fields contained within are defined as a set of multi-occurrence fields. It cannot include other iterative containers either, nor simple containers if the Field Group property is checked.

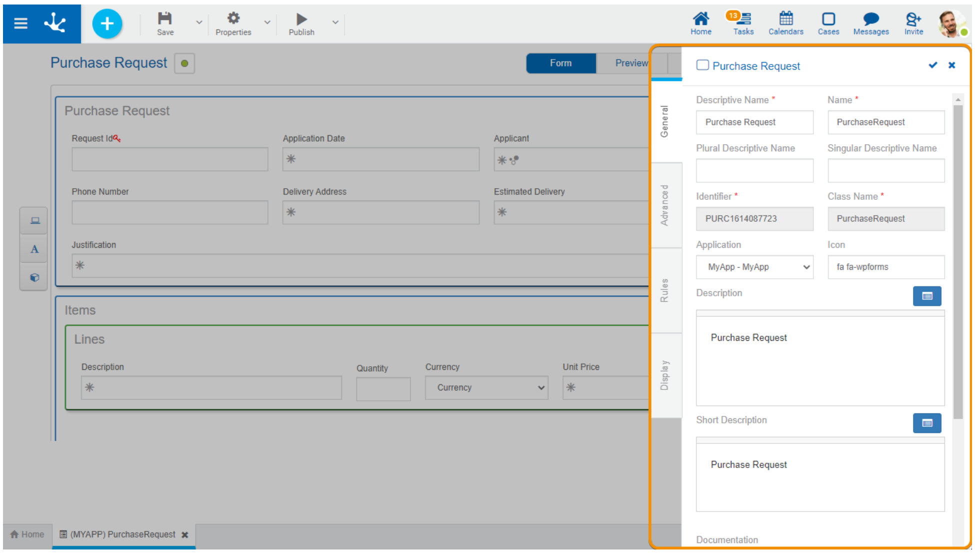
It can be used to group sections of the form, to which operations are added (hide, relate rules, etc.). The outline is not visible at the time of execution.

To differentiate it from other containers, its outline is green.

3.6.4.2. Form Properties

The properties of the forms can be entered both at the time of their creation and when modifying an existing one.

Entering the form properties panel is done using the icon which is in the top toolbar.

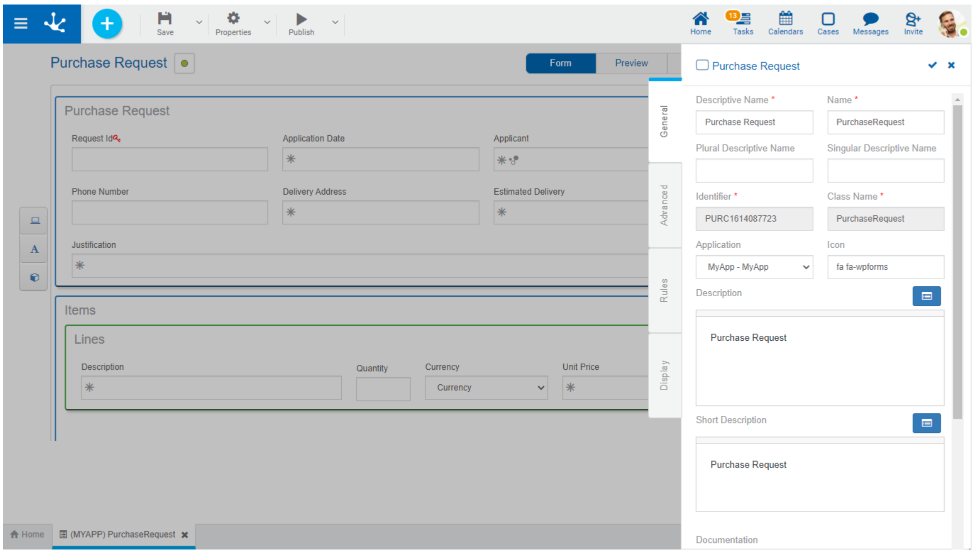


Tabs

- [General]()
- [Advanced]()
- [Rules]()
- [Display]()

3.6.4.2.1. General

The properties panel is displayed on the right side of the form modeler, where the first tab corresponds to general information.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Descriptive Name

It is the name used by users to reference the form, for example in the modeler's grid. Supports multi-language.

Name

It is used at the modeling level to reference the form, for example in rules or as a parameter. Supports multi-language.

Plural Descriptive Name

The text entered in this property is used as the title in the results grid of the form, while if it is not completed, the Descriptive Name property.

Singular Descriptive Name

The text entered in this property is used in the list of related entities, while if it is not completed, the Descriptive Name property.

Identifier

Uniquely identifies the form.

Application

Allows to define the application to which the form belongs.

Icon

Allows to assign a representative image of the form to the form.
The code to be entered corresponds to the Font Awesome standard. The identifier of the icon selected from the https://fontawesome.com standard must be preceded by the characters "fa".

Description

Defines the form describing its functionality and optionally its content.
It can include text and values of variables from each form instance, which are modeled using the variables wizard. The use of variables included in iterative containers and the use of file, image and check type variables are excluded.

In the execution of the form, the description entered is displayed in:

- The last updates, on the element that represents the form in the grid of "Forms and Tasks".
- The panel of a form instance, below the descriptive name.

Short Description

Text oriented to be a shortened description of a form instance. It can be used to identify the form in the related entities, in a friendlier way than using its identifier.
It can include text and values of variables from each form instance, which are modeled using the variables wizard. The use of variables included in iterative containers and the use of file, image and check type variables are excluded.

In the execution of the form, the identification entered in this property is displayed when using the referring entity field in:

- The form instance.
- The form grid.
- The filter panel of the form grid.

Help

Informative text displayed when pressing the icon ? using the form from the portal. Supports multi-language.

Image

An image that is displayed in the grids of forms and tasks, templates and in the upper bar when creating forms. It is recommended to be related to the functionality or information that the form represents.

Reports on the usefulness of the image.
Allows to choose an image from a file selection window.
Allows to delete the current image associated with the form.

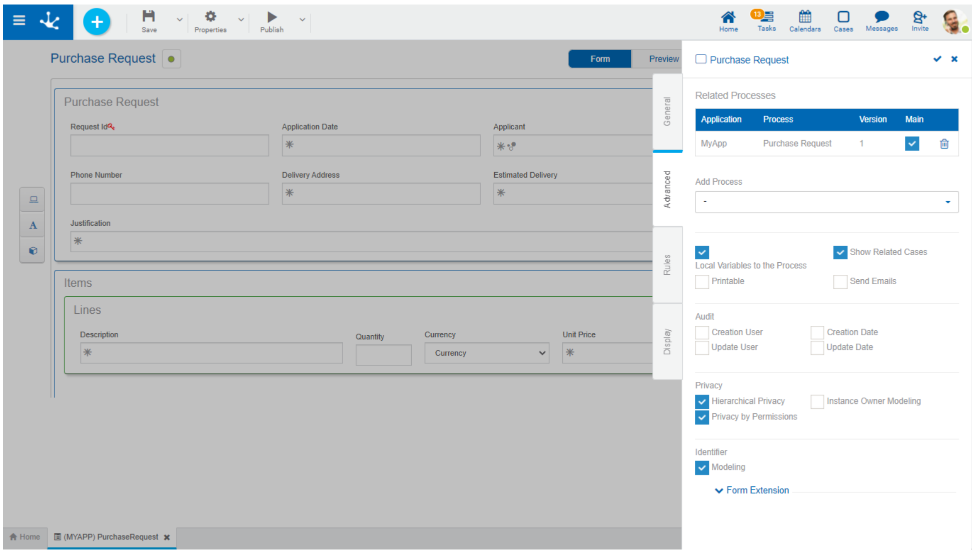
Actions

The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.4.2.2. Advanced

The second tab of the side panel corresponds to advanced information of the form.



Properties

Related Processes

Every form can be associated with one or more processes. The user can select them from the set of available processes and define form relation properties. Once selected, the processes are displayed in a grid with their corresponding properties.

- Application
- Process

- Version
- Main

  In complex processes with a large number of variables, these variables can be defined in different entities, all related to the process. If this property is checked, it means that the modeled form is the most representative for the related process. This means that in the gallery of forms and tasks, the main form is the one where the tasks are displayed, even if other forms are used in the different activities.

  A process can be related to several forms, of which only one can be indicated as the main entity. If in the Related Processes grid, the process with this property selected is already defined as main in another form, then the user receives an error message when the form is published.

Add Process

Allows to select a process from the drop-down list of available processes, each of the chosen processes is added to the grid of Related Processes.

Local Variables to the Process

Checking this property indicates that the form fields have a local scope to the related process, that is, these variables can only be accessed and modified during the execution of the corresponding case. The variables of completed cases can only be accessed by them.
Leaving this property unchecked indicates that the variables have a global scope, that is, they can be accessed and modified by the corresponding form operations, by each case of the processes using the form or by business rules.

Show Related Cases

If this property is checked, each time a form instance is created or shown in the user portal, an additional section of data is displayed, to associate the form with a case.

Printable

Allows to print the form when it has already been instantiated. Checking this property, when showing form instances, the "Print" button is enabled.

Send Emails

This property enables the send emails icon at the time of using the form, allowing to send emails that become associated to the form instance.

Audit

To indicate that audit fields will be modeled in a form, the audit properties represented by the checks listed below must be used, one for each field.

- Creation User
- Update User
- Creation Date
- Update Date

Privacy

▶ Phase 2: Forms Modeling > Advanced Tips > Entity privacy

Hierarchical Privacy

Check that indicates if the entity is private or not. If this check is indicated, the Privacy by Permissions property is displayed.

Privacy by Permissions

Mark indicating the creation of security functions: "Show Private Instance", "Modify Private Instance" and "Delete Private Instance" to be assigned in the design option "Permissions" of the form. These security functions are available if the form is in "Published" state, since they are use functionalities.

Instance Owner Modeling

Check indicating that the Instance Owner field can be modeled in the form modeling area. In case this check is not indicated, the data cannot be loaded by user interface, but by programming logic, for example through a business rule.

The instance owner can be modeled regardless of whether the form is private or not.

Identifier

Modeling

Indicates whether the identifier field is visible in the modeling area of the form. This property is displayed only for forms modeled with the default identifier. If the forms were modeled in previous versions using a key field, this property cannot be configured.

3.6.4.2.2.1. Audit Fields

The audit fields defined in a form are useful to keep track of its use. The information contained in such fields allows to know which user created or modified form data and the date and time of the operation.

Checking the audit properties causes the audit fields corresponding to the selected checks to be displayed in the design area.

Characteristics

- The "General" and "Advanced" tabs are displayed, but not the "Relation" tab of the field properties panel.

- They can only be eliminated by unchecking the audit properties in the form properties panel, that is, they cannot be eliminated like the fields defined by the user, nor the rows or the containers where they are defined.

- They cannot be defined neither a multi-occurrence container.

- They cannot be used neither within validation rules defined within form properties nor within field properties.

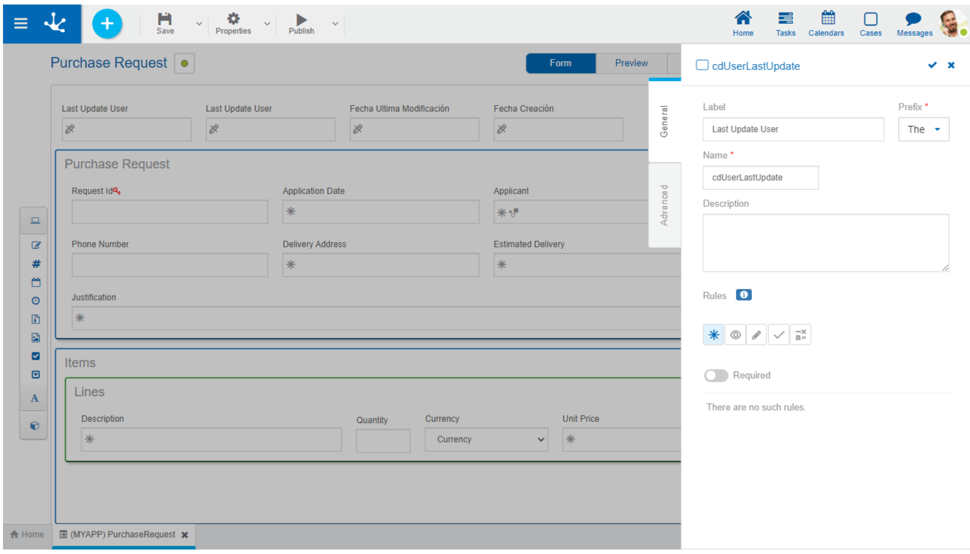
- They can be used in the definition of columns in the display grid and as search filters in the "Grid and Filters" tab in the modeling area of the form.

General Tab

Audit fields can have the same set of properties defined as a user field, defined in the "General" tab , although with some limitations, since the properties listed below are not used.

- Field identification
- Editability
- Required

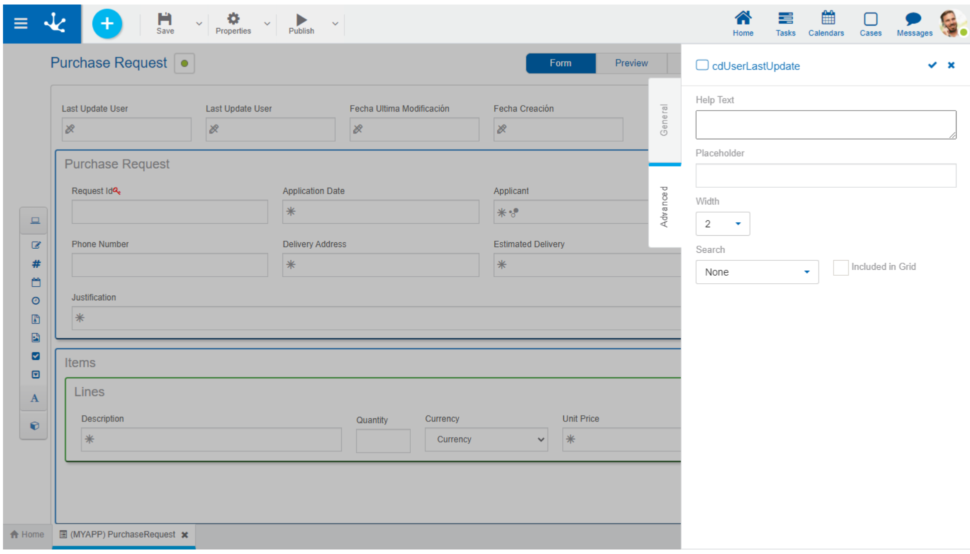
- Validation



Advanced Tab

Audit fields can have the same set of properties defined as a user field, defined in the "Advanced" tab , although with some limitations, since the properties listed below are not used.

- Multiline
- Default Value
- Data Type
- Length
- Key

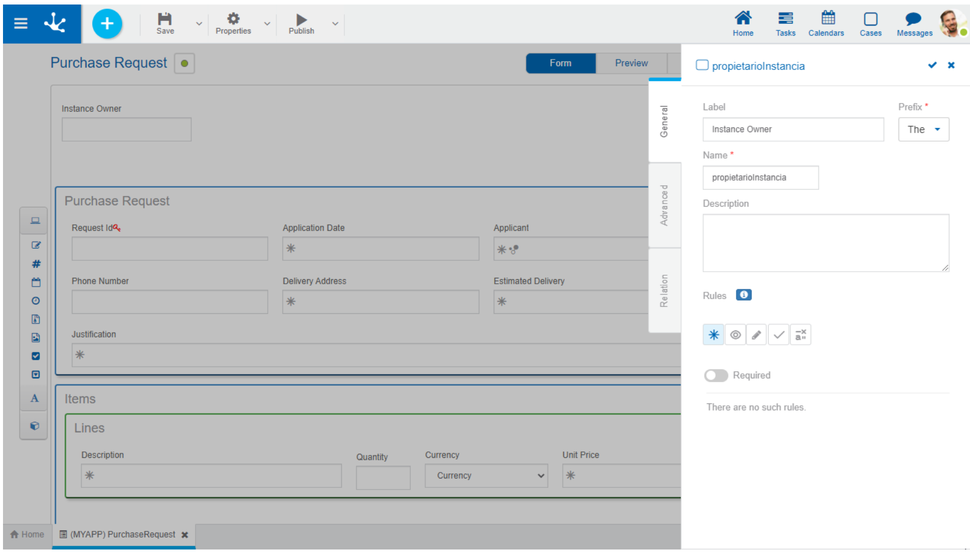


3.6.4.2.2.2. Instance Owner Field

If the property Instance Owner Modeling is checked in the “Advanced” tab of form properties, a new field labeled "Instance Owner" is included in the modeling area and it can be modeled like any other form field.

General Tab

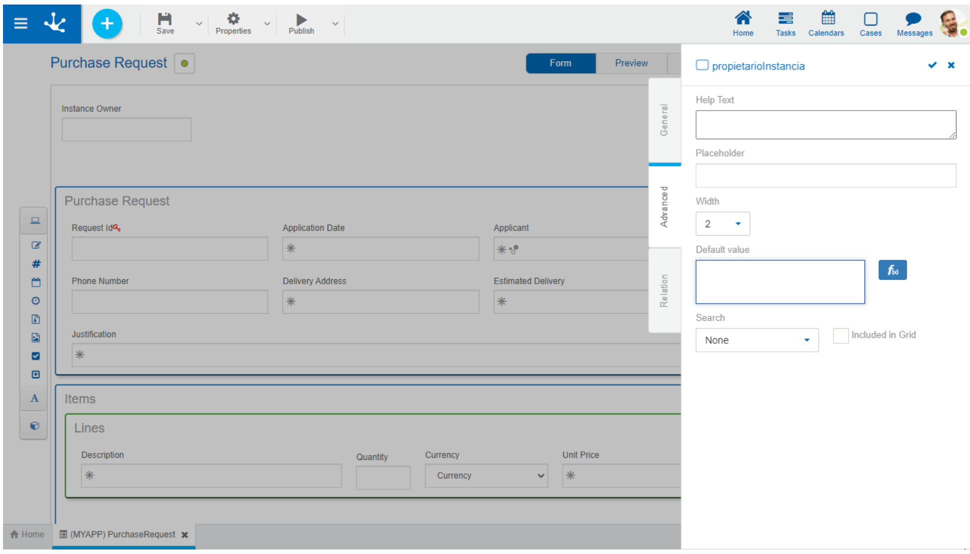
The field corresponding to the instance owner can have the same set of properties defined as a user field, in the “General” tab . The only limitation is that the Identifier property cannot be modified.



Advanced Tab

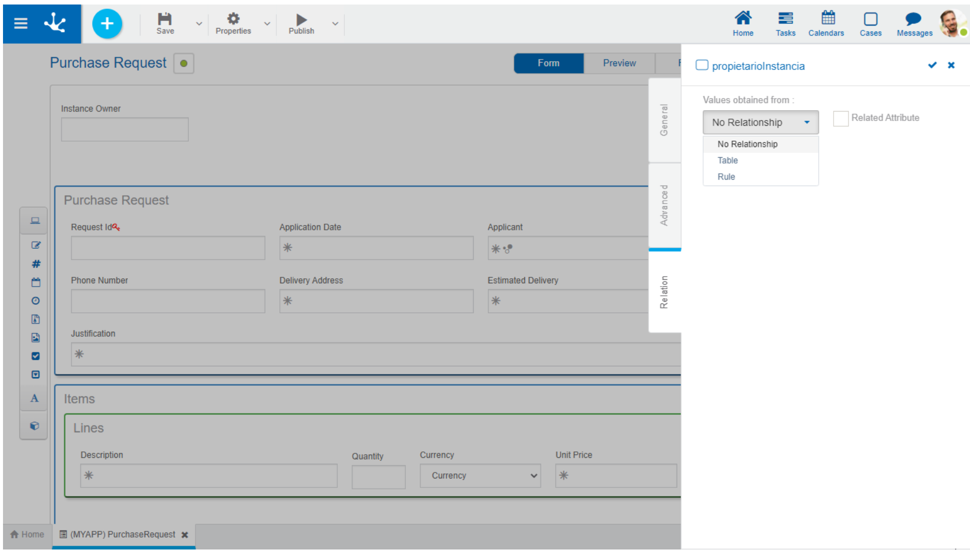
The instance owner field can have the same set of properties defined as a user field, defined in the "Advanced" tab, although with some limitations, since the properties listed below are not used.

- Multiline
- Data Type
- Length
- Key



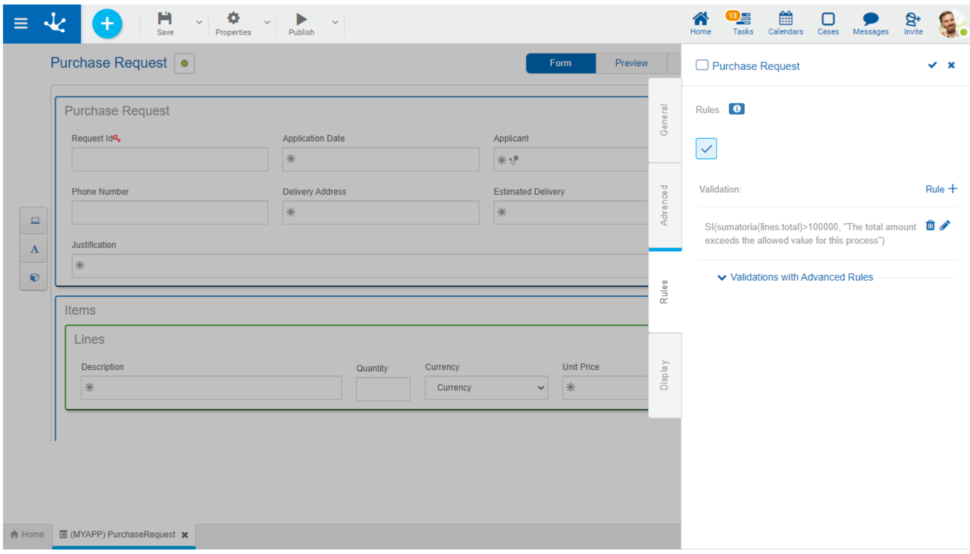
Relation Tab

The instance owner field can only define tables and rules as a source to obtain the field values, in the same way they are defined in the "Relation" tab of field properties.



3.6.4.2.3. Rules

The third tab in the side panel corresponds to the validation rules associated with the form.



Rules

It is possible to define validation rules associated with the form.

Validation

Rule + Opens an edit area where you can define the condition that determines if the form is correct or not. It is possible to define more than one rule. If rules are defined, the icon is displayed with light blue borders.

Shows syntax examples for writing the rules.

Operations

- Saves the new or modified rule
- Cancels the operation
- Edits the existing rule
- Deletes the rule

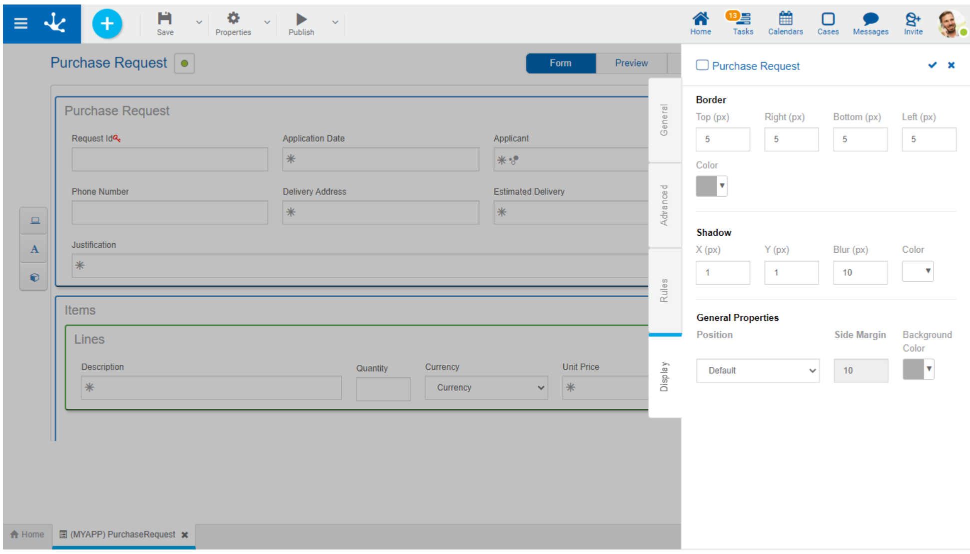
Validations with Advanced Rules

If a validation with an advanced rule needs to be incorporated, an existing rule must be selected from the drop-down list and press to add the rule to the grid. It can be selected using the options "Create", "Modify" and "Delete" when the validation is executed, either when creating a form instance, modifying it or deleting it. Through this icon you can unlink the rule from the grid.

3.6.4.2.4. Display

The last tab corresponds to information regarding the display of the form instances.

The result of indicating these properties can be seen in the design option "Preview".



An asterisk "" on the label indicates that the property is required.*

Properties

Border

Defines the width and color of the form borders. Width is measured in pixels, with 0 being the minimum value and 10 being the maximum value. The default value for each property is 0, with no border.

Top

Indicates the width of the top border.

Right

Indicates the width of the right border.

Bottom

Indicates the width of the bottom border.

Left

Indicates the width of the left border.

Color

Allows to select the border color from a palette or to enter the hexadecimal code equivalent to the desired color.

Shadow

Allows to define a shaded area framing the form. The properties X, Y and Blur are measured in pixels, with 0 being the minimum value and 10 being the maximum value.

X

Indicates the displacement of the shadow on the vertical axis with respect to the frame of the form.

Y

Indicates the displacement of the shadow on the horizontal axis with respect to the frame of the form.

Blur

Defines how sharp the shadow is displayed.

Color

Allows to select the shadow color from a palette or to enter the hexadecimal code equivalent to the desired color.

General Properties

Defines the content position and the background color of the form.

Position

Allows to display the form with margins on the left and right if the "Centered" option is selected.

Side Margin

Defines the screen percentage that is left as margin to the left and right of the form.

Background Color

Allows to select the background color of the form from a palette or to enter the hexadecimal code equivalent to the desired color.

3.6.4.3. Element Properties

The icon becomes visible when hovering the mouse over each element of the Graphic Modeling Area of the form, that allows to enter the side panel of properties that defines each of the different types of elements.

Types

- Fields
- Graphic Elements
- Containers

Side Panel

In the side panel, the properties corresponding to each type of element can be displayed and modified. In the upper right part of it you can select icons to perform the following actions:

Actions

The icon is used to confirm the modifications made in the properties panel.

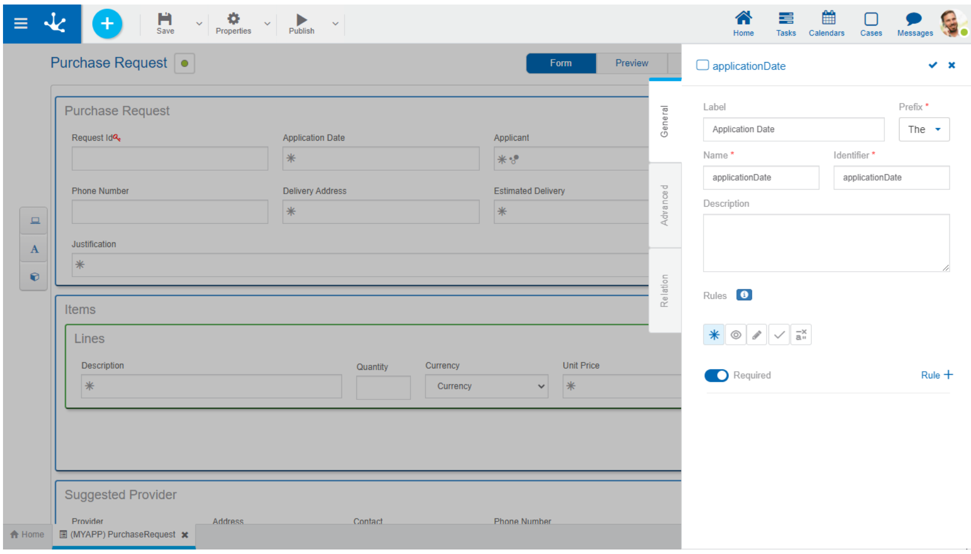
The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.4.3.1. Field Properties

Phase 2: Form Modeling > Form elements modeling

Pressing the icon on the field opens the vertical panel on the right, which contains the following tabs:

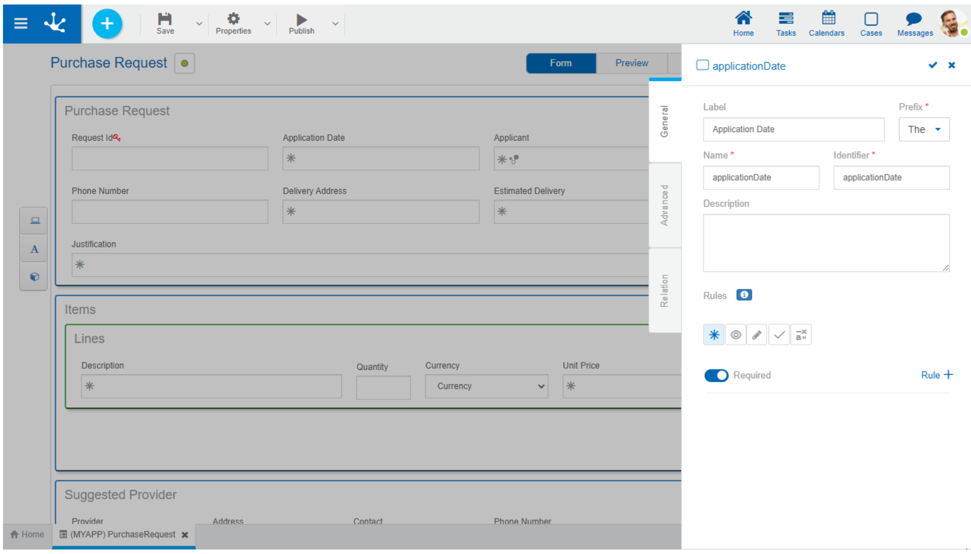
- General
- Advanced
- Relation



3.6.4.3.1.1. General

[Phase 2: Forms Modeling > Behavior modeling]

The properties panel is displayed on the right side of the form modeler, where the first tab corresponds to general information.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Label

Allows to enter the text that is displayed on the field. It works together with the prefix to reference the field in validation messages and supports blank spaces.

Prefix

This prefix is used to conform error messages during data entry. It is required. Allows to select the value: "The".

Name

Name assigned to reference a field in the modeling, allowing the field to be uniquely identified within the form. Used in rule wizards to refer to field within conditions. It generates automatically from the Label property, it can be modified by the user and does not allow spaces or special characters.

Identifier

It is the name that is assigned to refer to a field in the programming code, it is used to refer to the field within the Java code in the "Execution Code" tab of the advanced rules and in the JavaScript code in the "Advanced Editing" tab of the form modeler. Allows to uniquely identify the field within the modeled form. It can be modified by the user, as long as no data has been loaded into the form and it does not allow spaces or special characters.

Description

Text that defines the field and optionally its content. Supports multi-language.

Rules

To define rules on behavior, validation and calculation, associated with a field, by using the wizard (ctrl + space).

Shows syntax examples for writing the rules.

Required

Indicates whether the field is required when creating a new form instance or when modifying an existing one.

Required Not required (default)

Rule + Opens an edit area where a rule to determine the required condition can be defined. If a rule is defined, the icon is displayed with light blue borders.

Visible

Indicates whether the field is visible. If this property is not checked, the field is not displayed in the form instances.

Visible (default) Not visible

Rule + Opens an edit area where a rule to determine the visibility condition can be defined. If a rule is defined, the icon is displayed with light blue borders.

Editable

Indicates if the field is editable. If this property is not checked, the user cannot enter or modify values in the field.

Editable (default) Not editable

Rule + Opens an edit area where a rule to determine the editability condition can be defined. If a rule is defined, the icon is displayed with light blue borders.

Valid

Rule + Opens an edit area where you can define the condition that determines if the field value is correct or not. It is possible to define more than one rule. If rules are defined, the icon is displayed with light blue borders.

Calculation

Rule + Opens an edit area where you can define the expression to be executed to calculate the field value. If a rule is defined, the icon is displayed with light blue borders.

Operations when defining the rule:

Saves the new or modified rule

Cancels the operation

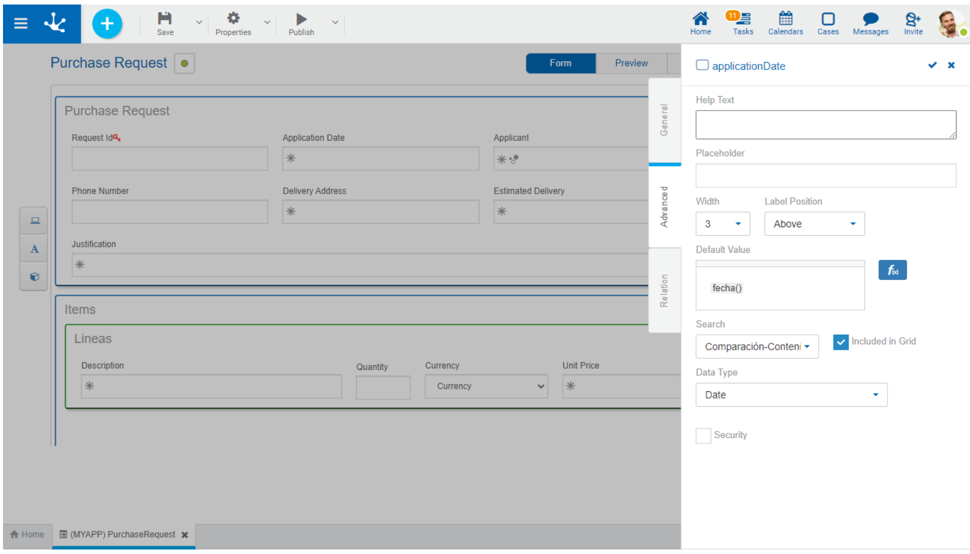
Operations once the rule is defined:

Edits the existing rule

Deletes the rule

3.6.4.3.1.2. Advanced

The second tab in the side panel corresponds to the additional properties to define the behavior and functionality of a field.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Help Text

Its function is to guide the user on the content to load in the field. The text entered as help is displayed when the user hovers the cursor over the field.

Placeholder

Its function is to guide the user on the content to load in the field. Unlike the Help Text property, the text entered as a placeholder is displayed within the field.

Width
It is used to modify the field width in the row. Values between 1 and 12 can be selected, where 12 is the total row width.

Label Position
Defines where the label is placed in the form instances, in relation to the control that it identifies. By default it is at the top and can be changed to the right or left of the control.
The result of indicating this property is displayed in the design option "Preview".

Multiline
This property determines if the field is displayed in text box mode when using the form, allowing the edition of the text in a larger area. This property is only visible if the field is text type.

Default Value
Allows to assign the value the field has by default at the time of the first data entry, to speed up the loading of values. The default values can be constant values or can be defined from the functions available for the field type. Each function returns a value when using the form and results of more than one function can be combined with text.

Search
Allows to use the field as filter when searching for instances of the form.

Included in Grid
Indicates if the field is displayed in the results grid where the form instances are shown.

Data Type
Determines the data format that can be entered in the field. The supported data set varies, depending on the type of field that has been created from the elements of the left side toolbar.

Length
Determines the maximum length of the value depending on the data type. This attribute is only visible if the field is of text or numeric type.

Key
This property is valid only for the identifier field, It allows to uniquely identify a form instance, that is, such value cannot be repeated between instances of the same form.

Autonumeric
This property is valid only for the identifier field and determines that the field value is automatically generated when creating the form instance.

Content Type
This property is valid only for text type fields. If email value is selected in this property, the field content becomes the recipient when sending an email from a form instance.

Security
This property is used to define display and editing restrictions on the field that is being modeled.
If this property is checked, the security functions of field view and editing are created and they are displayed in the use functions panel of the design option "Permissions" of the form, if they are checked,

they are incorporated into the form's security functions assigned to the created or modified permission.

Display
This property is only visible if the field is of "Check'' type. Allows to select whether the field is displayed in "Check" or "Toggle" format.''.

3.6.4.3.1.3. Relation
The third tab in the side panel corresponds to relation properties and the related attribute.

Relation Properties

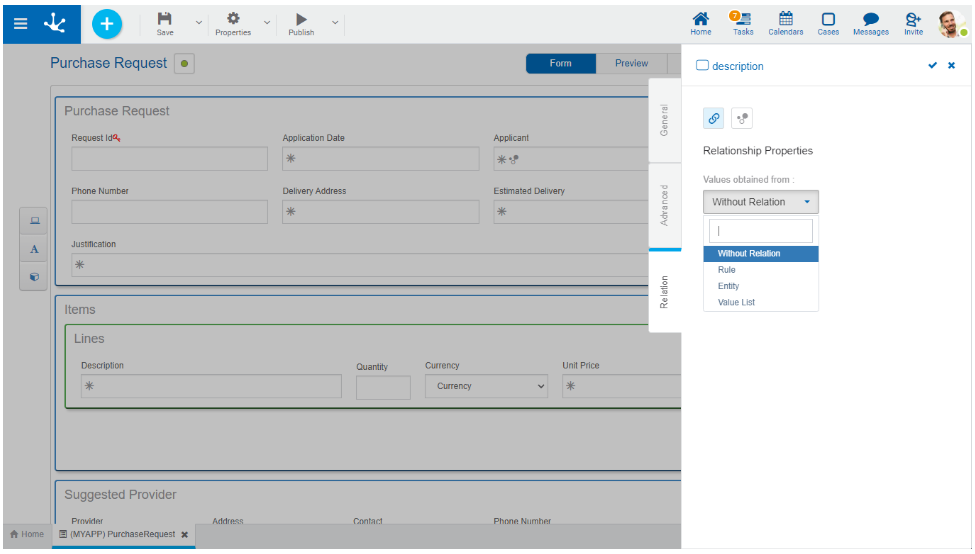
A relation allows to obtain values for the field being modeled from different sources, by selecting the Values obtained from property. If the field does not have a relation, the default option "No Relation" should be modeled.

- Rules
- Entities
- Value List

Related Attribute

This attribute indicates that the field value is retrieved from the attribute value of another entity, related when creating or updating a form instance. One of the relations defined in the form must be selected and then indicate which attribute of the related entity it is linked to.

A related attribute can be modeled regardless of the option selected in the Values obtained from property. This allows a field to have all the functionality of being related, and also to load its value automatically.



An asterisk "" on the label indicates that the property is required.*

Properties

Relation Name
The list of relations defined in the form is displayed, allowing the selection of one of them.

Entity Attribute
The list of attributes of the selected entity that have a format option compatible with the field type is displayed. Attributes can have a relation to an entity, a value list, or a rule modeled in the selected entity.

Relation Type
Reference
When this property is checked, the field value is always subject to the current value of the related attribute, that is, the updated value is automatically displayed.
Copy
When this property is checked, once the retrieved value is loaded, it is not automatically modified again even if the value of the related attribute is modified.

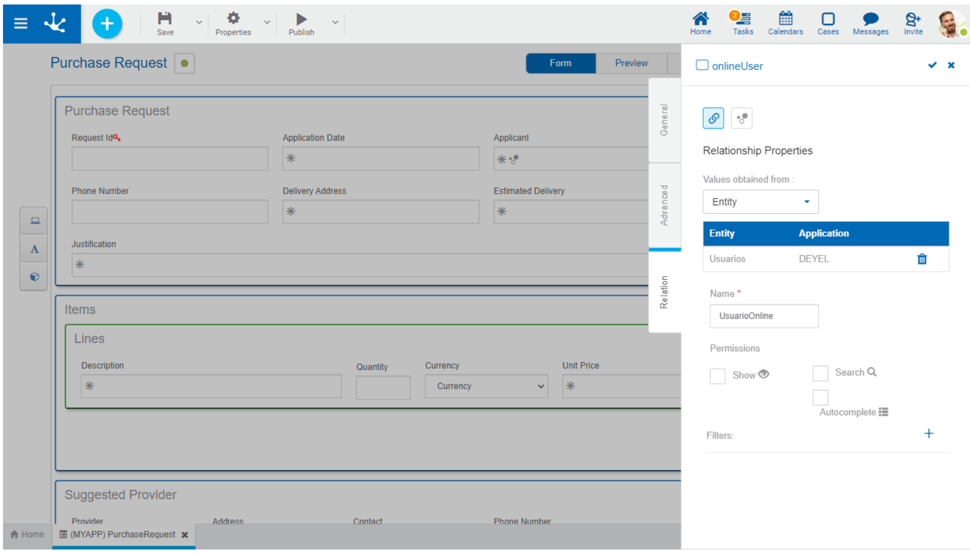
Content Type
The content of the field varies depending on the Value or Description property checked when:
- The entity attribute has a relation modeled.
- The "Entity" option of the field is selected in the Values obtained from (property).

Value
When this property is checked, if the relation is modeled with a:
- Related entity, the identifier of the entity is displayed.
- Value list, the value list code is displayed.
- Rule, the code returned by the rule's execution is displayed.

Description
When this property is checked, if the relation is modeled with a:
- Related entity, the short description of the entity is displayed.
- Value list, the value list description is displayed.
- Rule, the description returned by the rule's execution is displayed.

Entities

Through the form modeler, the business entities are modeled. It is also possible to model relations among entities to represent their interaction. The relations defined in this panel can be modeled in the referenced entity so that they are reflected when using the corresponding form.



> *An asterisk "*" on the label indicates that the property is required.*

To define a relation with an entity, the entity to establish a relation with must be selected first, and then complete a set of properties.

Properties

Name

Name of the relation between both entities, it is a modeling-oriented property. It does not allow spaces and must be unique per modeled form.

Permissions

The permissions of the relation define which functionalities are enabled in the relation control.

Show

By checking this property, the user is allowed to display the entity instance with which a relation is established in the form use.

Search

By checking this property, the user is allowed to access the results grid to find the entity instance to establish a relation with in the form use.

Autocomplete

If this property is checked, predictive text functionality is presented to users. Based on the characters that the user types, a subset of values is proposed, which coincide with all or part of the text entered. This facility is called autocomplete.

In order to use this property, the referenced entity must have the Short Description modeled. Such description must not contain date or time variables, nor can it have a variable related with another entity.

Filter

Allows to narrow the search results on the related entity.

The filter is applied both in the autocomplete of the field, as well as in the show through the magnifier that is displayed when you hover the mouse over the field.

To create a filter, click on the icon + and a panel opens to complete the following properties:

Filtered Attribute

Allows to select an attribute of the related entity.

Condition

Allows you to select a condition as part of the filter.

Type

The possible values to select are "Value" and "Field".

Value

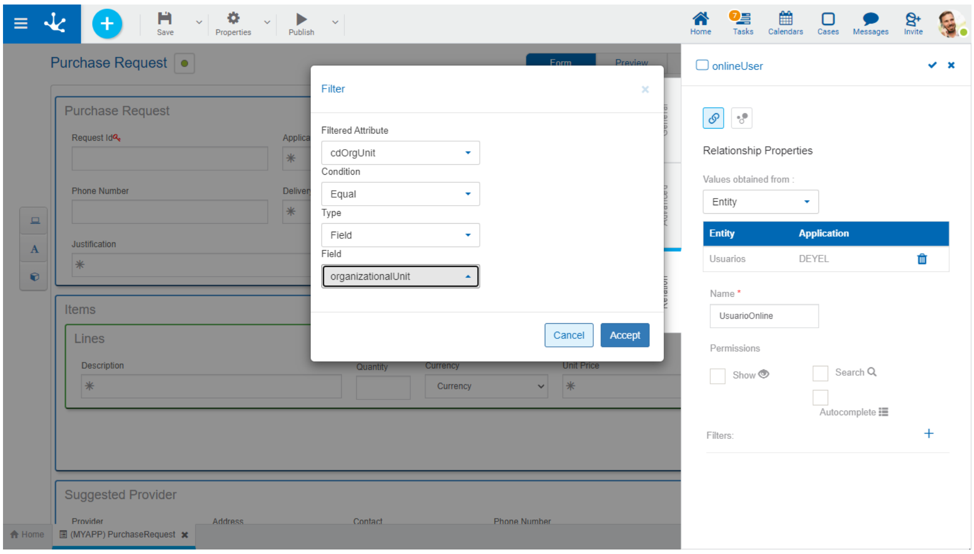
Allows to enter fixed values.

Field

Allows to select of a form field. It must be considered that its content depends on the Type of Content property of the related attribute

Example of Filtered Entities

A relation with the user entity is modeled.



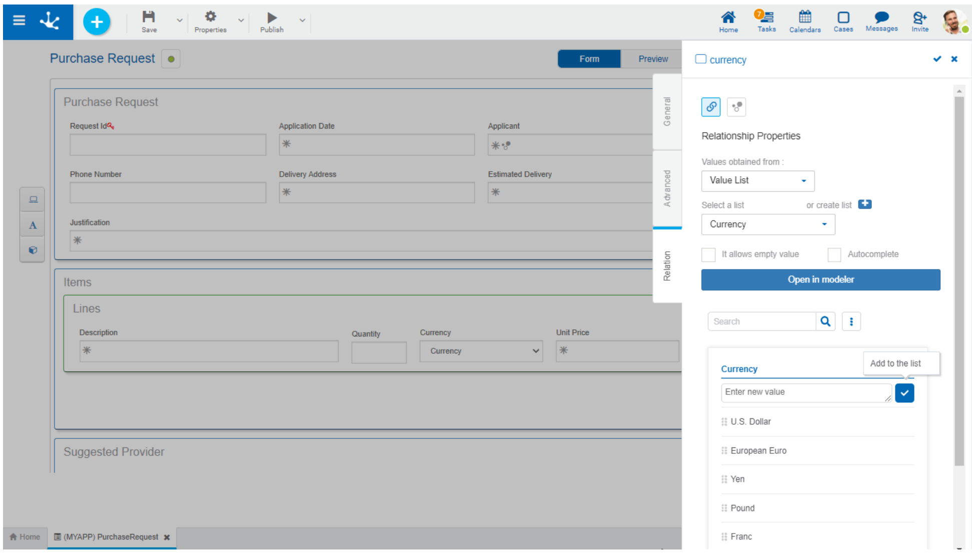
> *In this example the organizational unit field must have the Type of Content property defined as "Value". If during execution the description of this field needs to be displayed, the relation with the organizational unit entity must also be modeled.*

During execution, by clicking on the "User" field search, all users whose organizational unit is the one reported in the "Organizational Unit" field of the form are displayed.

Value List

Allows to define a set of values grouped under some criteria so that the application user knows the possible values a field can take.

New lists can be created from the modeler, then edit and relate them to form fields.



> *An asterisk "*" on the label indicates that the property is required.*

To create a new list of values, click on the icon .
A panel opens to enter the name of the list, the application to which it belongs is selected, if [alphabetical sorting]() is indicated, [descending]()order can be selected. Pressing the "Accept" button creates the list of values, subsequently allowing the entry of new values.

The list of values can be used in any other field of the same or another form.

Properties

Select a list

Allows to select a particular list from the set of already existing lists, being able to filter such set by entering text into the search field that is above the list.

Allows empty

If this property is checked, the empty value is included as the first option in the list. Otherwise the first value in the list is displayed in the field.

Autocomplete

If this property is checked, predictive text functionality is presented to users. Based on the characters that the user types, a subset of values is proposed, which coincide with all or part of the text entered. This facility is called [autocomplete]().

Other Elements

Open in modeler

Allows using [the list of values modeler]() for the definition, instead of the field properties panel.

Allows to filter values from the list based on the characters entered. If a list is very long it helps users to easily visualize the desired values.

Enables an option that allows to add the internal code to the list values.

Operations on Values

- Allows adding each entered value to the list of values.
- It is displayed if the list has the Icons property modeled. It allows to associate icons to the list values.

- Double click: Allows to modify a value in the list.
- Move: Allows to change the position of a value within the list by dragging the value with the mouse.

Hovering the cursor over each of the values entered, a set of icons is displayed and this allows to perform different operations.

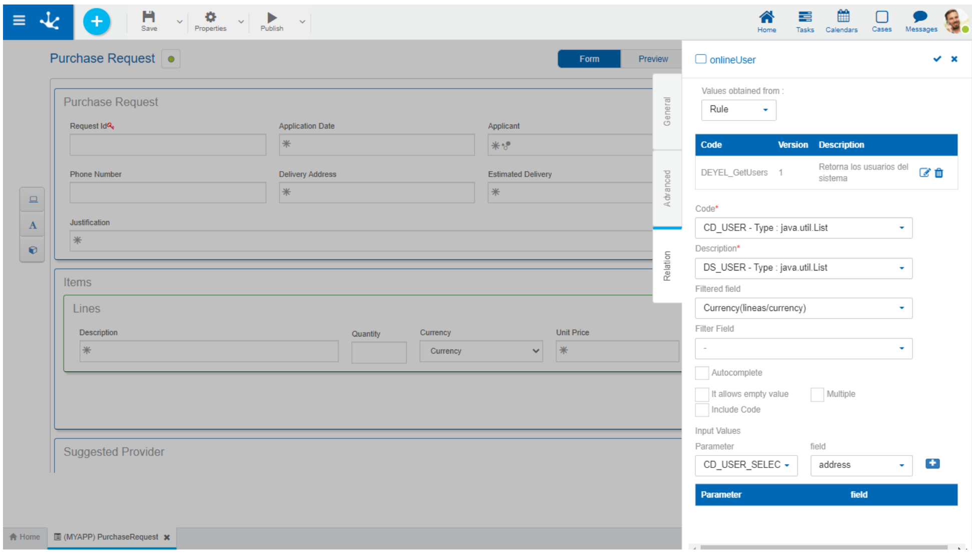
- Allows to delete a value from the list of values. Once deleted, it is displayed in gray and crossed out.
- Allows to restore a previously deleted value.

Display the Selected Line

- Hides the icons that are displayed.
- Shows hidden icons.

Rules

Through this relation, it is possible to limit the set of values to be loaded in a field to those from the indicated source.
When relating fields to rules, the possible values are retrieved from a predetermined business rule.
When establishing a relation with a rule, a list of rules is displayed to select which of them to establish the relation with the field.



An asterisk "" on the label indicates that the property is required.*

Properties

Code
Represents a business rule parameter, which allows the description to be uniquely identified. Each parameter value is related with its corresponding description.

Description
Represents a business rule output parameter. Each parameter value is related with its corresponding code.

Filtered Field
Modeling filtered fields allows to make the value lists of fields associated with rules variable when using form instances. In many cases, depending on a value loaded in a form field, the possible values of another field must be restricted.
This property is completed with the form field on which the filter is applied. See detail of property use.

Filter Field
Name of the business rule parameter whose content is used to filter the field values indicated in the Filtered Field property.

Autocomplete
If this property is checked, predictive text functionality is presented to users. Based on the characters that the user types, a subset of values is proposed, which coincide with all or part of the text entered. This facility is called autocomplete.

Search by Content
It is only enabled if the property is checked Autocomplete. Allows selection of the number of characters on which the autocomplete search begins. In this way, if the "1 character" value is selected, the autocomplete search will start after the first character is typed.

Allow empty
If this property is checked, in addition to the values that come from the rule, a value may not be selected for this field. An entry with no value is added to the rule results list. See detail of property use.

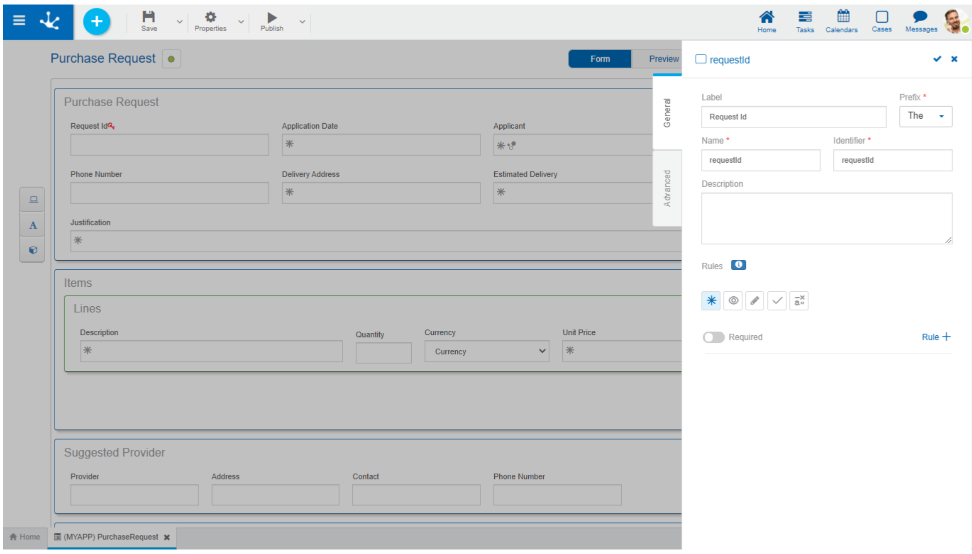
Multiple
If this property is checked, the user can select more than one value from the list, otherwise, a single element can be selected. See detail of property use.

Include Code
This property indicates how the list of possible values is displayed. The default view of the list shows only the value description. If this indicator is checked, the code for each element is also displayed.

3.6.4.3.2. Graphic Element Properties

This section explains the properties of the different types of graphic elements present in the form modeler.
Of all the elements of this type, it is only possible to edit "Title" and "Label" elements, since the rest do not have the icon available .

Pressing the icon on a graphic element opens the properties panel.



An asterisk "" on the label indicates that the property is required.*

Properties

Text

Title or label text.

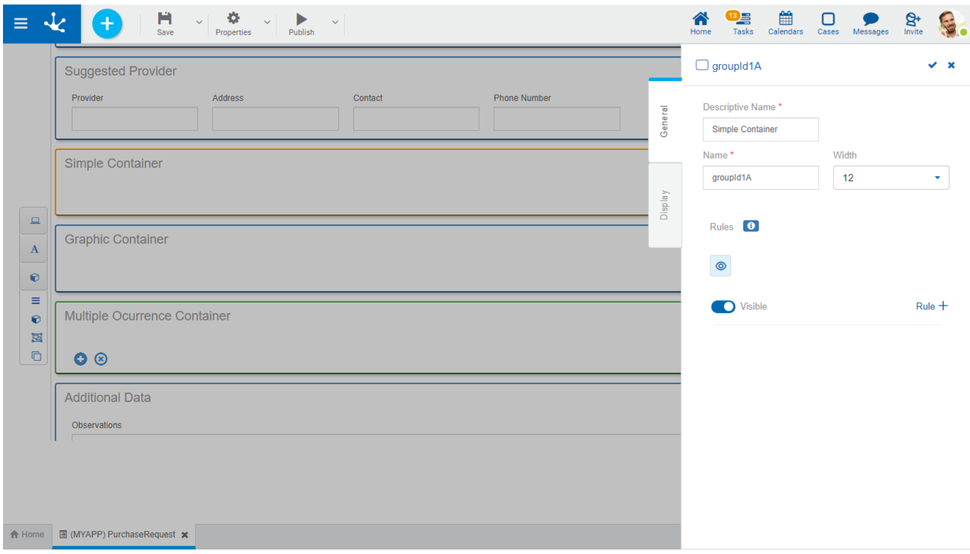
Width

Used to modify the width that the field uses in the row, being able to select values between 1 and 12, being 12 the total width of the row.

3.6.4.3.3. Container Properties

Properties are defined for different types of containers.

- Single Container
- Graphic Container
- Multiple Occurrence Container

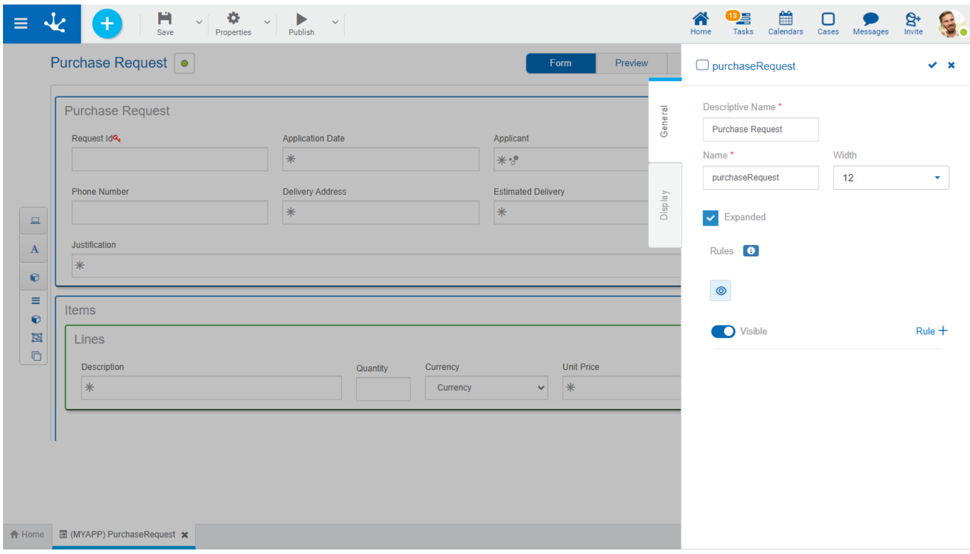


Pressing the icon on the field opens the vertical panel on the right, which contains the following tabs:

- General
- Display

3.6.4.3.3.1. General

The properties panel is displayed on the right side of the form modeler, where the first tab corresponds to general information.



An asterisk "" on the label indicates that the property is required.*

Properties

Descriptive Name
Allows to identify the container with a name oriented to the end user. Spaces and special characters are allowed.

Name
Allows to identify the container with a name oriented to the modeler user. Spaces and special characters are not allowed.

Field Group property
Indicates whether the fields that are in this container are part of a group. If a group has this property checked, it cannot include an iterative container.
It is only used for single type containers.

Width
Used to modify the container width, being able to select values between 1 and 12, being 12 the total width.

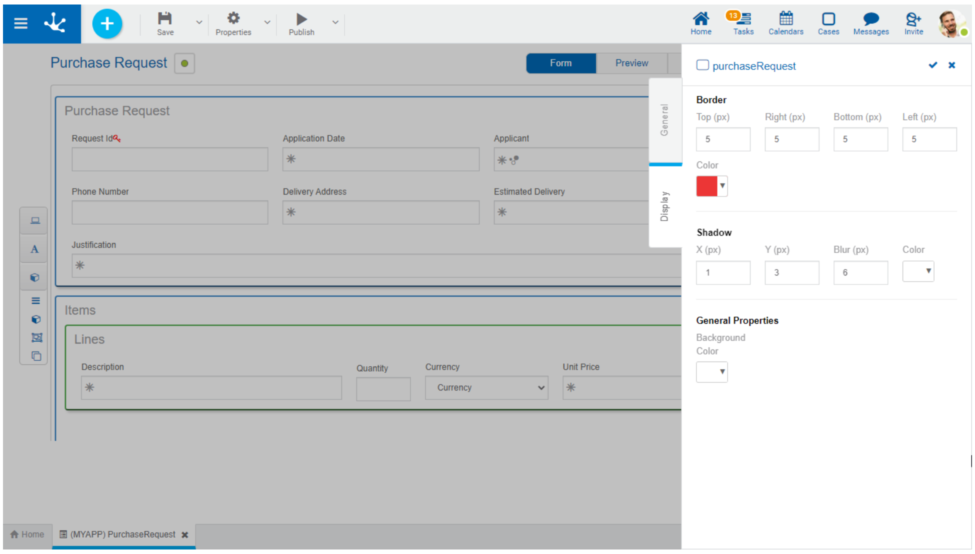
Expanded
Indicates whether the container is displayed expanded, showing its content, or closed when showing the form instance. It is used only for graphic containers.

Visible
This property indicates whether the container and its content are visible when showing the form instance. Allows the definition of visibility rules associated with the container as well as those defined for the fields.

3.6.4.3.3.2. Display

The second tab corresponds to information regarding the container display in the form instances.

The result of indicating these properties can be seen in the design option "Preview".



An asterisk "" on the label indicates that the property is required.*

Properties

Border
Defines the width and color of the container borders. Width is measured in pixels, with 0 being the minimum value and 10 being the maximum value. The default value for each property is 0, with no border.

Top
Indicates the width of the top border.

Right
Indicates the width of the right border.

Bottom
Indicates the width of the bottom border.

Left
Indicates the width of the left border.

Color
Allows to select the border color from a palette or to enter the hexadecimal code equivalent to the desired color.

Shadow
Allows to define a shaded area framing the container. The properties X, Y and Blur are measured in pixels, with 0 being the minimum value and 10 being the maximum value.

X
Indicates the displacement of the shadow on the vertical axis with respect to the frame of the container.

Y
Indicates the displacement of the shadow on the horizontal axis with respect to the frame of the container.

Blur
Defines how sharp the shadow is displayed.

Color
Allows to select the shadow color from a palette or to enter the hexadecimal code equivalent to the desired color.

General Properties
Defines the background color of the container.

Background Color
Allows to select the background color of the container from a palette or to enter the hexadecimal code equivalent to the desired color.

3.6.4.4. Modeling of Related Entities

Phase 2: Forms Modeling > Advanced Tips > Modeling related entities

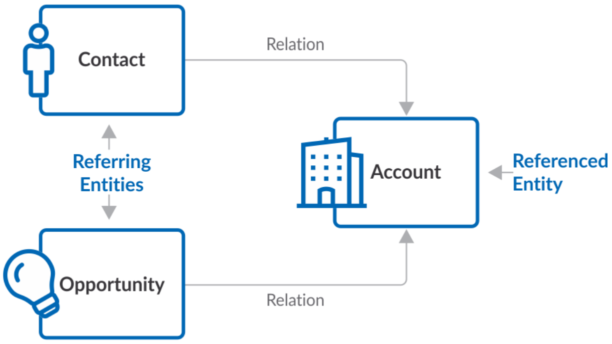
Related entity modeling allows to define visibility and navigability among entities.

When defining relations among entities, the following concepts are used:

- **Referring entity** is the one that defines the relation with another modeled entity.
- **Referenced entity** is the one that has a relation defined from another modeled entity.

- **Relation** is the one that was defined in the referring entity.

- **Referring relation** is the one that was defined in the referenced entity to a referring entity.



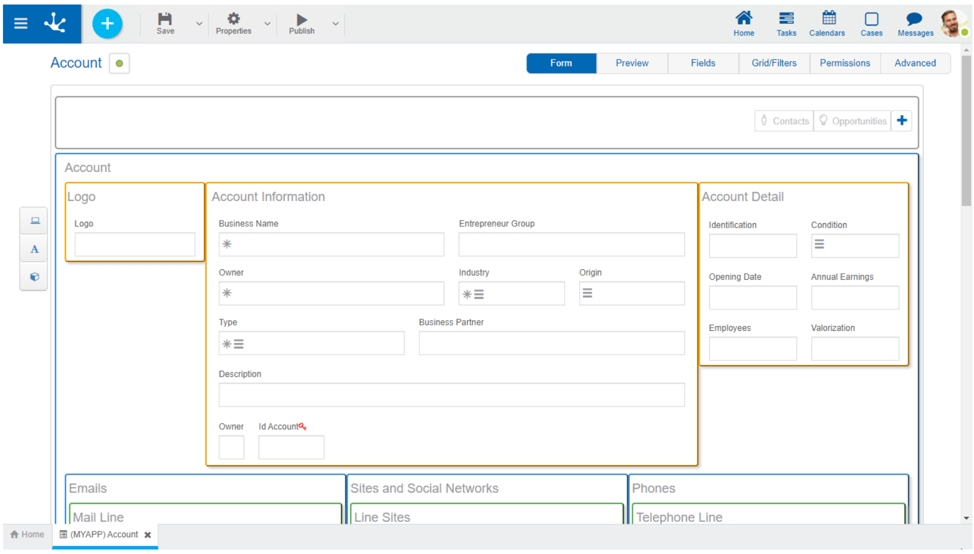
> *For the purpose of detailing the modeling of related entities, an example is used where the Contact and Opportunity entities are related to the Account entity. Such entities can be modeled from agile forms created from the templates provided as examples, after separating the forms from their respective processes.*

Relations in the Referenced Entity

Container

In the form modeler, referring relations are modeled in the first container of the referenced entity and are only displayed if there are relations defined in other forms. Within this container controls identified with the names of the relations defined in the referring entities can be included.

The icon + allows to add a list of controls to the form that represent the referring relations. By pressing this icon, a list of referring relations is displayed where you can select those you want to display at the top of the form.



The example shows the relation defined between Contact and Account and the relation between Opportunity and Account, as well as the operations and properties of both relations.

Operations

Hides the display of the relation, does not delete it.

Modifies the presentation order of relations.

Opens the properties panel of the relation.

Properties

Entity

Name of the entity where the relation was defined. Not editable.

Application

Name of the application where the entity that contains the relation was defined. Non-editable.

Relation Name

Descriptive name of the relation as defined in the referring entity when modeling the field that contains the relation. Non-editable.

Key Field

Identifier of the referring entity attribute used to define the relation. Non-editable.

Singular Relation Name

Represents the name in singular that is assigned to the relation. It is displayed if, when using the form, it has a single instance for the modeled relation.

Plural Relation Name

Represents the plural name that is assigned to the relation. It is displayed if, when [using the form](), it has more than one instance for the modeled relation.

Relation Behavior

Allows to define behavior when [using the form](), to assign values from a form instance to related form instances, by means of relations defined among entities.
The icon allows to open the value match wizard in an additional section to the right of the relation properties panel.

Correspondence

Destination

The form field where the value is received is selected. Once selected, the Value Type is displayed.

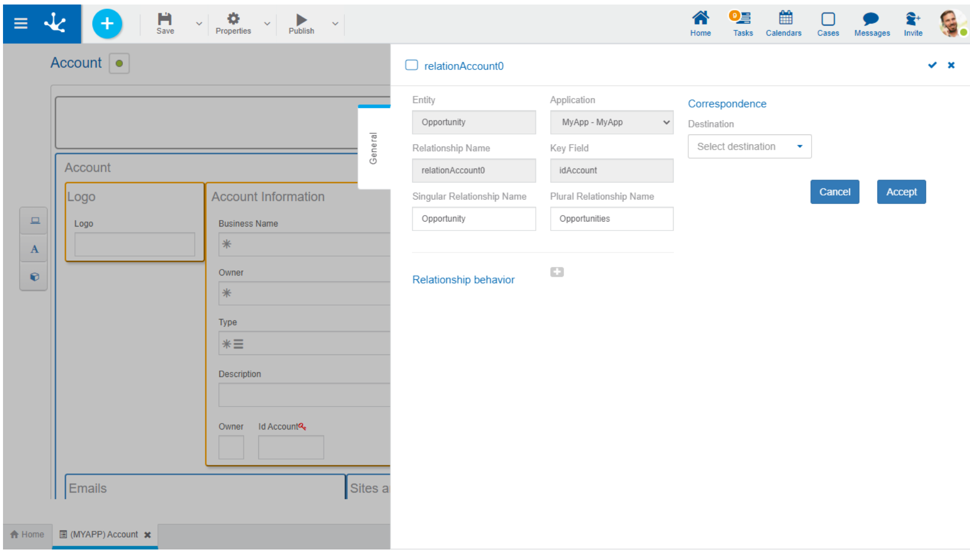
Value Type

- Constant: Indicates that the content of the field defined in the Destination property is a value entered by the IT modeler user.
- Field: Indicates that the content of the field defined in the Destination property is obtained from a form field that is being modeled.

Once the Value Type is selected, the Value is displayed.

Value

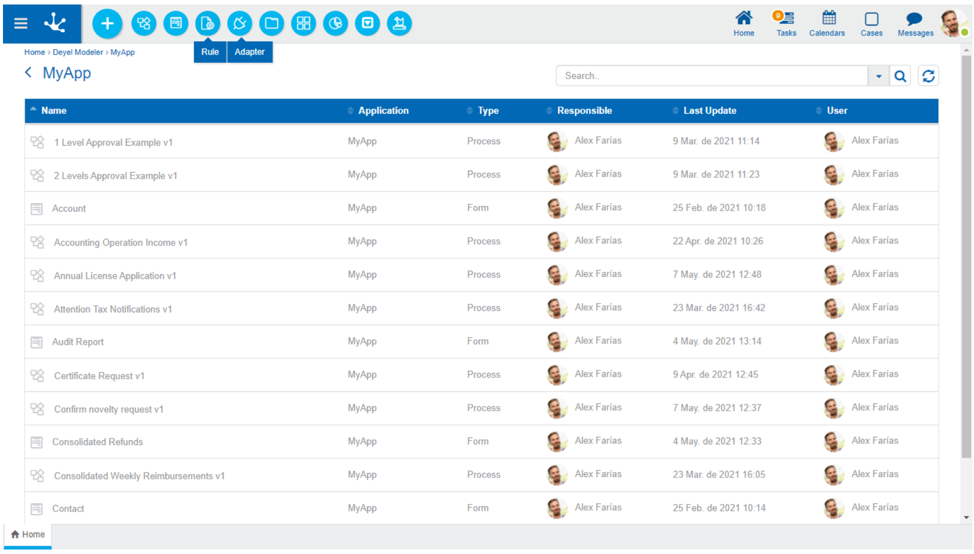
- If the value type is constant, it must be entered for matching.
- If the value type is a field, a list is displayed with all the form fields corresponding to the referring entity, for selection.



> *The example shows the properties of the Contact relation and the definition of the value match between the Industry field of the Contact entity and the Industry field of the Account entity. When the Contact entity is instantiated, the Industry field is automatically populated with the Industry field value of the Account entity.*

3.6.5. Rules Modeling

The rules modeler is a tool that allows IT users to model their own [advanced rules](), using different [adapters]().



Its main characteristic lies in its simplicity to model rules using different modeling facilities.

The general characteristics of the rules modeling environment and the main elements that compose it are described in the following topics:

- Modeling Facilities
- Rule Properties

3.6.5.1. Business Rules

A business rule allows to perform a specific task, being able to receive information, perform certain processing and inform the results obtained.

In **Deyel** there are business rules used to define the behavior of processes and forms. Rules can be used in validations, specific business logic, process flow control, integration with other applications, and field display control in forms, among other functionalities.

Types

There are rules that can be modeled without programming and others are based on Java code.

- Embedded Rules
- Advanced Rules

3.6.5.1.1. Embedded Rules

These rules are used to define form field behavior, validations, and calculations, as well as form validations. Embedded rules allow to define logical conditions and arithmetic expressions, which are evaluated using forms and their related processes.

The definition is done using a wizard integrated into the corresponding modelers. This wizard can be found in the property definition panels of fields and containers, forms and flows if they were conditional.

Unlike the advanced rules, the embedded ones are not displayed into the grid of the modeler because they can only be used in the **Deyel** object where they are defined.

Types

Behaviour

A behavior rule is used to verify the fulfillment of a condition. A logical expression is evaluated and a "True" or "False" value is returned depending on whether the condition is met or not.

Embedded rules are modeled in form fields and containers, both in the form modeler and in the process modeler when modeling the activities and in the flows if they have conditions.

They are classified according to the purpose of their use.

- Visibility
  The modeled condition defines whether a form field or section is visible to the user at the time of use.

- Editability
  The modeled condition defines whether a form field is editable for the user at the time of use.

- Required
  The modeled condition defines whether a field is required at the time of using the form.

The execution of these rules returns a logical value, "True" or "False".

Validation

A validation rule is used to ensure the proper information entry or to control incorrect situations. It can be set at field or form level.

This rule evaluates a condition and returns a message when it is met, indicating the wrong or invalid situation to the user. If no message returns, it means that the validation was successful.

Conditions involving one or multiple fields and the relations among them can be defined.

Calculation

They define arithmetic expressions that allow to perform calculations to fill in field values when using the form. The rule is defined with a calculation algorithm for the target field that is populated with the resulting value. This value must be of the same type as the field that contains it.

Conditions can also be defined to determine when to execute the calculation rule.

Use

Embedded rules are modeled within the definition panels of **Deyel** objects properties.

- Rules in Field Properties
- Rules in Form Properties
- Rules in Container Properties
- Rules in Activity Properties
- Rules in Field Properties of Agile Forms
- Rules in Properties of Agile Forms
- Rules in Container Properties of Agile Forms

The table below summarizes where the different types of embedded rules can be modeled.

Rule Type	Field	Form	Container	Flow	Activity
Behaviour	✔		✔	✔	✔
Validation	✔	✔			✔
Calculation	✔				✔

> *Only visibility behavior rules can be modeled in a container.*

3.6.5.1.1.1. Rule Elements

Embedded rules can be made up of different types of elements:

- Form fields
  Form fields are used by their names. In the wizard they are identified with ● on the left.

- Group containers
  Form containers are used by their names. Whenever a group container is used, indicate the field separated by a ".". In the wizard they are identified with ● on the left.
  Example: PersonalData.CompanyName

- Iterative containers
  Their name is displayed instead of their label. Whenever an iterative container is used, indicate the field separated by a ".". In the wizard they are identified with ● on the left.
  Example: Items.Quantity

- Functions. In the wizard they are identified with ● on the left.

- Advanced rules. In the wizard they are identified with ● on the left.

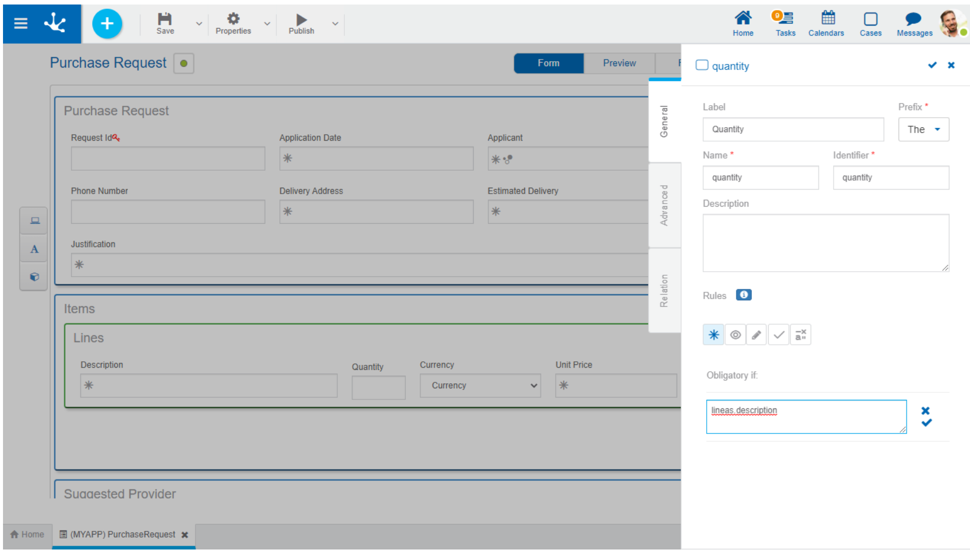
- [Form field relation](). In the wizard they are identified with ● on the left.

- Possible values of related fields. In the wizard they are identified with ● on the left.
  When modeling a related field, either to a value list, rule, or entity, the wizard displays the field, and the possible values of its relation.

In all cases, the type of data they represent and, in the case of functions or rules, the value they return is indicated on the right.

In addition to the elements proposed by the [wizard](), the user can include, in the rules, texts enclosed in double quotes and integers or decimals, the latter with separator "."

In the event of a syntax error, a message is displayed at the top of the properties panel, indicating the problem.



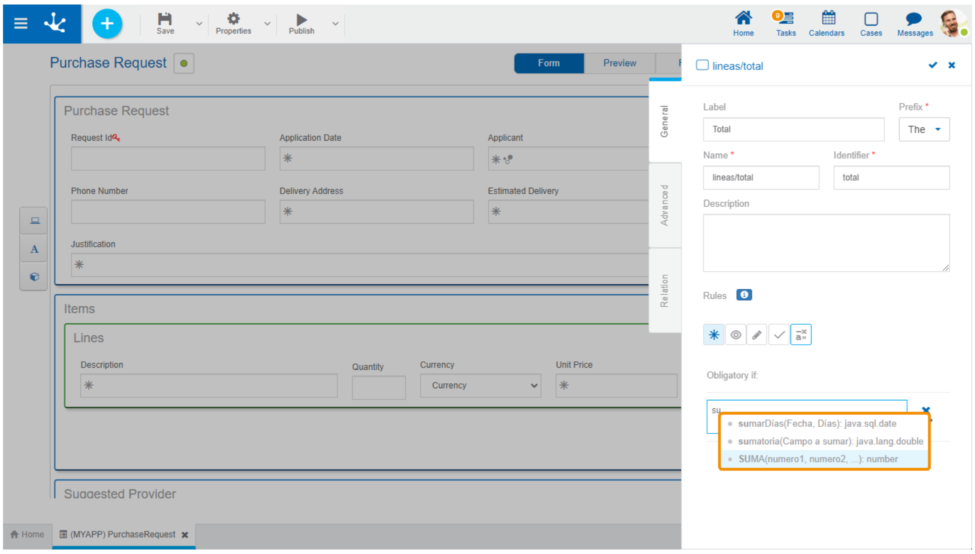
Available Operators

Operator	Description	Example
==	Compares if two operands are equal	5 == getDay()
+	Adds two operands	5 + field3
-	Substracts two operands	price - discount
*	Multiplies two operands	price * 1.21
/	Divides the first operand by the second one	10 / 2

Operator	Description	Example
!=	Compares if two operands are equal	last name != "Paz"
<	Compares if the first operand is less than the second one	1 < 3
>	Compares if the first operand is greater than the second one	4 > 1
<=	Compares if the first operand is less or equal than the second one	1 <= 3
>=	Compares if the first operand is greater than or equal to the second one	3 >= 3
%	Calculates the division remainder of the first operand by the second one (mod)	5 % 3, the result is 2
**	Raises the first operator to the power indicated on the second operator	2 ** 3

3.6.5.1.1.2. Wizard

A wizard to model the rules can be used in the rule editing area. This wizard is activated by pressing the "Ctrl + Space" keys. As text is entered in the wizard, it uses the auto-complete functionality and shows only the elements whose names begin with the text typed by the user.



3.6.5.1.1.3. Functions

A function is a software unit. It performs a specific task, receives input parameters, and returns a result.

They can be used:

From the function selection wizard in:

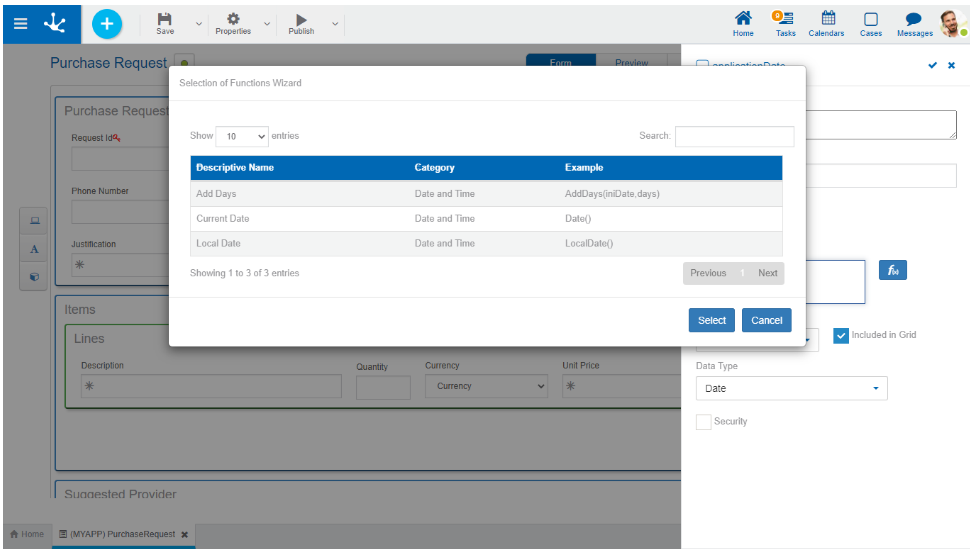
- Form fields, when defining the Default Value property.
- The processes, by defining the Case description property and in alerts and automatic activity parameters.
- The process flows, when defining the Message property.

When defining conditions in:

- Rules in form properties.
- Field Properties to verify conditions of edition, mandatory nature, visibility, validation and calculation rules.
- Gateway properties when output flow conditions are evaluated.

Function Selection Wizard

The wizard is used from the icon f(x). When pressed, a window with the list of functions opens and once the function has been selected, it is included in the description area of the form or case.



Elements

- Selection of number of records to display in the window.
- Search field to be able to filter functions, filtering can be performed by the properties Descriptive Name, Category or Example
- List of functions where properties are displayed in a grid mode.
- Buttons for paging.

Properties

Descriptive Name
It is used in the interface when it is referenced, in the functions list . Supports multi-language.

Category
Grouping by function type.

Example
Corresponds to how the function can be used in the calculation or condition areas.

Categories

Functions are grouped into categories.

- Execution
- System
- Date and time
- Math
- Validations
- Miscellaneous
- Exclusives for Rules

Execution

These functions retrieve information related to the form instance that is being used, to the process if it had one associated and from the connected user.

Descriptive Name	Description	Example
Current User Last Name	Returns the last name of the user that started the session.	currentUserLastName()
Current Activity Code	Returns the code of the activity in progress. It does not work in the first process activity because the case has not been created.	currentActivityCode()
Current Process Code	Returns the code of the process in progress. It does not work in the first process activity because the case has not been created.	processCode()
Current Activity Description	Returns the description of the activity in progress. It does not work in the first process activity because the case has not been created.	currentActivityDescription()
Current Process Description	Returns the description of the process in progress. It does not work in the first process activity because the case has not been created.	processDescription()
Email of the Executing Participant's Organizational Unit	Returns the organizational unit email of the participant responsible for executing the activity in progress, if it is a role, it returns empty. It does not work in the first process activity.	userOrgUnitEmail()
Email of the User Administrator of the Executing Participant's Organizational Unit	Returns the administration user email of the organizational unit of the participant responsible for executing the current activity. It does not work in the first process activity.	orgUnitAdminEmail()
Email of the Role Coordinator Responsible for the Current Activity	Returns the email of the role coordinator user modeled as responsible for the activity in progress, only if the person responsible is a role, otherwise it returns empty. It does not work in the first process activity.	currentRoleCoordinatorEmail()
Executing Participant Email	Returns the email of the participant responsible for executing the current activity It does not work in the first process activity. If the responsible participant is a role or an organizational unit, it returns the emails of all users belonging to the role or organizational unit.	currentUserEmail()

Descriptive Name	Description	Example
Current Activity Name	Returns the name of the activity in progress. It does not work in the first process activity because the case has not been created.	currentActivity-Name()
Name of the Current User's Organizational Unit	Returns the organizational unit name of the user who started the session.	currentUserOrgUni-tName()
Current Process Name	Returns the name of the process in progress. It does not work in the first process activity.	processName()
Current User Name	Returns the name of the user that started the session.	currentUserName()
Case ID	Returns the case id without applying the case display mask. It does not work in the first process activity be-cause the case has not been created.	caseNumber()
Executing Parti-cipant's Organi-zational Unit	Returns the organizational unit code of the participant responsible for executing the current activity. If the participant responsible is a role, it returns empty. It does not work in the first process activity.	currentOrgUnit-Code()
Code of the Cur-rent User's Or-ganizational Unit	Returns the organizational unit code of the user that started the session.	currentUserOr-gUnit()
Executing Parti-cipant	Returns the participant responsible for executing the current activity It does not work in the first process ac-tivity. It can return a user, a role or a unit: - Returns a user when the participant responsible for the activity is a user, or when it is a role and the user is assigned the activity. - Returns a role only when the participant responsible is a role and the activity is generic, until one of the us-ers is assigned the activity. - Returns an organizational unit when the participant responsible for the activity is a unit.	executingUser()
Executing User of the Current Process Activity	Returns the user that executed the activity informed by parameter. It requires the code of an activity already executed. It does not work in the first process activity.	activityExecutingU-ser(activityNo)

Descriptive Name	Description	Example
Current User	Returns the user that started the session.	currentUser()
Current Process Version	Returns the version of the process in progress. It does not work in the first process activity.	processVersion()
Last Button Pressed	Returns the last button pressed.	lastButtonPressed()

System

These functions retrieve information related to the environment where the form and the modeled application are being used, if there is one associated.

Descriptive Name	Description	Example
Web Server Address	Returns the web server address.	webServerAddress()
Workflow Engine Email	Returns the workflow engine email address.	workflowEmail()
Company Name	Returns the name of the company.	companyName()
Workflow Engine Name	Returns the workflow engine name.	workflowEngineName()

Date and Time

Retrieve information related to dates and times and carry out operations with them.

Descriptive Name	Description	Example
Current Year	Returns the current year.	year()
Difference Between Work Days	Returns the difference in business days between 2 past dates as parameters.	difBetweenWorkDays(dateFrom,dateTo)

Descriptive Name	Description	Example
Difference in Time	Returns the time difference between 2 times entered as parameters. The format must be HH:MM:SS.	difInTime(timeFrom,timeTo)
Difference in Minutes between Times	Returns the difference in minutes between 2 times entered as parameters. The format is HH:MM:SS.	difInMinutes(timeFrom,timeTo)
Difference between Days	Returns the difference in days between 2 dates entered as parameters. The format is DD/MM/YYYY.	diffBetweenDays(dateFrom,dateTo)
Current Day	Returns the current day.	day()
In between Dates	Validates that a date falls within a valid date range. The format is DD/MM/YYYY.	inBetweenDates(Datep,StartDatep,pEndDate)
Current Date	Returns the server current date.	Date()
Local Date	Returns the local date according to the user's time and time zone.	localDate()
Current Time	Returns the server current time.	time()
Local time	Returns the local time according to the user's time zone.	localTime()
Current Month	Returns the current month.	month()
Month Name	Returns the name of the month according to the number entered.	monthName(monthnumber)
Add days	Returns the date obtained as a result of adding days to a date.	addDays(StartDatep,Daysp)
Add only work days	Returns the date obtained as a result of adding days to a date. Adds only work days.	addWorkDays(pDate,pDays)

Math

These functions perform mathematical operations based on the form fields.

Descriptive Name	Description	Example
Sum	Returns the result of the sum of all the field values in a multiple-occurrence container, taken as a parameter. The field data type must be integer or decimal.	sum(field)

Validations

The functions in this category allow to confirm a question about the information used in the form.

Descriptive Name	Description	Example
Is it an Email?	Verifies that the text entered as a parameter has an email format.	isEmail(text)
Only Letters?	Verifies that the value entered as a parameter consists only of letters.	onlyLetters(Text)
Only Numbers?	Verifies that the value entered as a parameter is a valid number.	onlyNumbers(Text)

Miscellaneous

This category groups functions that return information on different topics.

Descriptive Name	Description	Example
Organizational Unit Email	Returns the email address of an organizational unit whose code is entered as a parameter.	orgUnitEmail(orgUnitId)
Organizational Unit Users Emails	Returns the email address of an organizational unit users whose code is entered as a parameter.	orgUnitUserEmail(orgUnitId)
Organizational Unit Administrator Email	Returns the email address of an organizational unit administrator whose code is entered as a parameter.	orgUnitAdminEmail(orgUnitId)
Role Coordinator Email	Returns the email address of a role coordinator whose code is entered as a parameter.	roleCoordinatorEmail(roleid)

Descriptive Name	Description	Example
Email of the Activity Responsible Participant	Returns the email address of the participant responsible for executing an activity whose code is entered as a parameter. If the participant is a role or an organizational unit, it returns the emails of all its members.	activityResponsibleEmail(activityNo)
User Email	Returns the email address of a user whose code is entered as a parameter.	userEmail(userid)
Role Users Emails	Returns the email addresses of an organizational unit users whose code is entered as a parameter.	roleUserEmail(roleid)
Case Show Link	Returns the link to the case show in progress. Requires the user to be logged in.	caseShowLink()
Activity Execution Link	Returns the link to the execution of the activity in progress, requires the user to be connected.	activityExecLink()
My Tasks Link	Returns the link to the user's task list.	myTasksLink()
Login Link	Returns the link to the user portal home panel.	loginLink()

Exclusives for Rules

Functions in this category are used in embedded rules modeling by means of their wizard.

Descriptive Name	Description	Example
IF(logical_test,value_if_true,value_if_false)	Checks if the condition indicated in "logic_test" is met. If it is true, it returns the value informed in "value_if_true", if not, it returns the informed value in "value_if_false". The "value_if_false" parameter is optional, if the condition is not met and such parameter is not defined, the function does not return a value.	IF(amount > 1000000, "Amount exceeds limit") If the amount is greater than 1,000,000, the user receives the "Amount exceeds limit" message.
AND(logical_value1, logical_value2,...)	Evaluates that all parameters return "True", in which case it returns "True" value.	AND(day() > 5, month() == "April") Returns "True" only when the day of the month is greater than

Descriptive Name	Description	Example
		5 and the month is April.
OR(logical_value1, logical_value2,...)	Evaluates all parameters and returns "False" value if all parameters return "False". If at least one of them returns "True", it returns "True" value.	OR(contact == “AFARIAS”, currentUser() == “AFARIAS”) Returns "False" only when the current user and contact are different from AFARIAS.
NO(logical_value)	IF"logical_value" is "True", it returns "False" value. IF"logical_value" is "False", it returns "True" value.	NO(5 > 1) Returns "False", since it is the logical value contrary to evaluation 5>1.
ADD(number1, number2,...)	Adds all the parameters.	ADD(AmountInvoiced, TaxAmount) Returns the value resulting from adding both amounts.
CONCAT(text1,text2,...)	Joins multiple text elements into one.	CONCAT(“Hello,”, currentUser()) Returns "Hello AFARIAS", where AFARIAS is the current user.
MAX(number1, number2,...)	Returns the maximum value from a list of parameters. Ignores logical values and text.	MAX(2, 5, customerNumber, 22) Returns 22.
ISBLANK(value)	Checks the value of the reported parameter and returns "True" if it has no content. If the parameter is an iterative field, all its occurrences must be empty for it to return true.	ISBLANK(description) Returns "False", when description has content.
isURL(text)	Indicates whether the text entered corresponds to a valid URL format. Valid Examples: • www.sitename.com ; sitename.com; https://sitename.com • 192.1.1.111; 192.1.1.111:8090 ; 192.1.1.111:8090/myfunction	IF(NO(isUrl(field)), "Must inform URL") If field is equal to "Deyel.com", the user does not receive any messages.

Descriptive Name	Description	Example
REPLACE(text to search; text to replace; original text)	Replaces in "original text", the "text to search" matches with "text to replace".	REPLACE("Supplier XX", "New Supplier", contractText) As a result, the original content of the contractText field remains with all occurrences of Supplier XX replaced with New Supplier.
REGEX-MATCH(text, regular_expression)	Returns "True" value if the first parameter meets the regular expression indicated in the second parameter. Regular expressions, also known as regex, are widely used, standardized writing patterns used mainly to process texts. They allow, for example, to validate formats, extract a part of text or replace occurrences of a character string. There are many free access sites that provide information on use and syntax and offer the possibility tu perform simulations as tests.	REGEXMATCH(myField,"^[0-9]*$") Returns "True" if myField is made up of numeric characters between 0 and 9.
equalInAllValues(iterative_field, value)	Returns "True" value if all occurrences of "iterative_field" match with "value".	equalInAllValues(customerNo, 136) Returns "True" if all occurrences of the customerNo iterative field has a 136 value.
equalInSomeValue(iterative_field, value)	Returns "True" value if any of the occurrences of "iterative_field" matches with "value".	equalInSomeValue(cus tomerNo, 136) Returns "True" if one or more occurrences of customerNo iterative field has a 136 value.
FIRSTVALUE(list)	Returns the first value in a list.	FIRST-VALUE(Items.quantity) Returns 5, the first value of the iterative quantity [5, 3, 2, ...].
QUANTITY(list)	Returns the length of a list.	QUANTITY(Items.price) Returns 3, the iterative price being [100,50,30].

Descriptive Name	Description	Example
EXTRACT(text, position, amount_characters)	Returns a subset of text characters, given an initial position and length.	EXTRACT("The user was successfully removed", 13, 13) Returns the characters "succesfully".
NUMBER(alphanumeric_value)	Transforms an alphanumeric into a number.	NUMBER("1988") Returns number 1988.
ROUND(numeric_value, decimals)	Rounds a number to a specified number of decimal places. If the digit after the specified position is greater than or equal to 5, the digit is rounded up. Otherwise, it is rounded down. This happens regardless of the sign. It is recommended to use this function when using 4- and 5-place decimals.	ROUND(49.9999, 0) Returns number 50.

> *Functions are allowed to be nested in parameters.*

3.6.5.1.2. Advanced Rules

Advanced rules can be invoked from processes, forms and scheduled tasks, to incorporate business logic.

In forms and processes they can be included using the rules wizard, whereas in scheduled tasks the reference to the rule is done manually.

Types

- Standard Rules
  These are rules developed in the Java programming language, for which there is a development and execution environment given by the adapter being use.

- Integration Rules
  These are rules that use of adapters that provide integration with external components to **Deyel**.

Integration Classification

- Relational Databases
  Access to relational databases is done through the Java JDBC protocol. The database adapters via JDBC identify the driver to use and establish the connection.
  The integration rules that use JDBC adapters allow the execution of SQL statements that interact with any database.

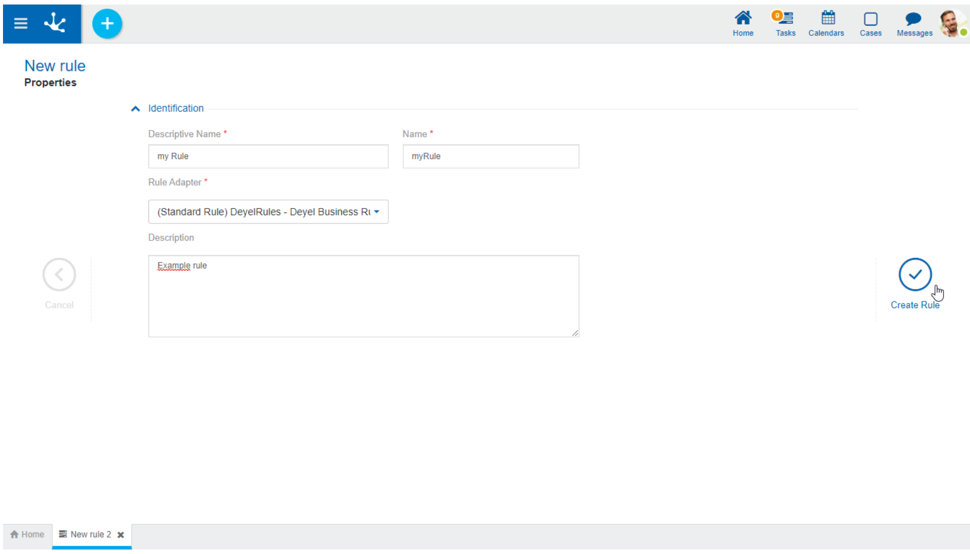
- Web Service
  The Web Service type adapters allow to define access to web services published by a specific provider.
  The integration rules that use Web Service adapters allow to use such web services.

3.6.5.1.2.1. Modeling Facilities

The advanced rules modeler is a tool that allows to easily design business rules, allowing the addition of the necessary logic to make them work when they are executed.

New Rule

The modeler user can define new rules, which after being published are available to be used in the portal.



Steps to Create a Rule

Step 1: Open the Rules Wizard

A new rule can be created from the icon corresponding to the context menu.

- From the icon
- From the menu displayed with the "Rule" option

An existing rule is modified by selecting it from the grid with the "Open" button.

Step 2: Enter the Rule Properties

Properties are organized under the container Identification, which contains information common to all the rules.

Descriptive name
Name used by the modeler to refer to the rule, display it in the rules gallery and in the object tree. Supports multi-language.

Name
Used internally to refer to the rule within forms, embedded rules, processes or as parameters of other advanced rules. Unlike other objects, the rule name also acts as a unique identifier. Not multi-language.

Adapter
Used to determine the adapter to be used by the rule. A list of adapters available for selection is displayed.

Operation
Used to choose the operation to be executed and is only displayed when the chosen adapter type is web services.

Description
Text that defines the rule describing its functionality and optionally its content. Supports multi-language.

Step 3: Close the Rules Wizard

Cancel
Allows to return to the Deyel modeler to display the objects in the gallery.

Create Rule
Moves to the rule workspace.

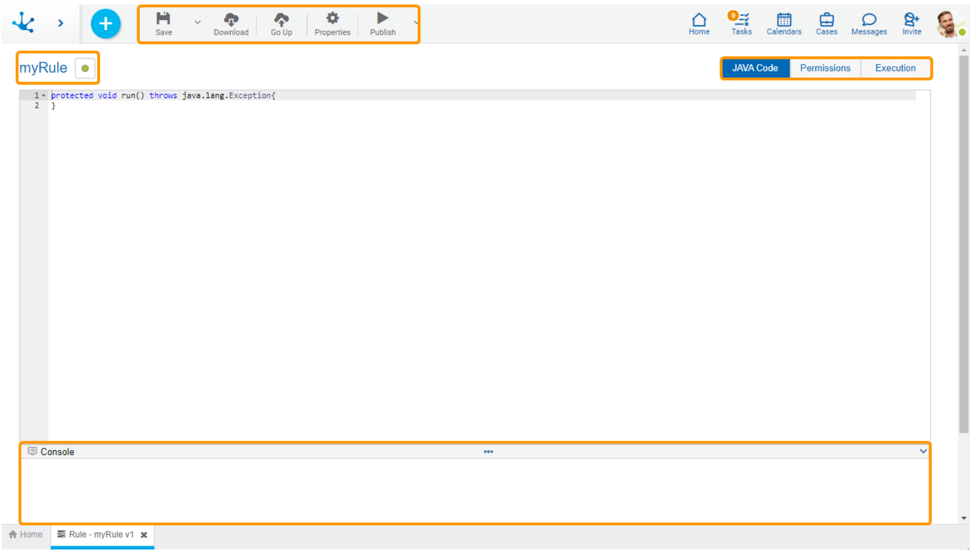
Workspace Sections

- Top Toolbar

- Rule Information
  - Name
  - State
  - Locking

- Design Options

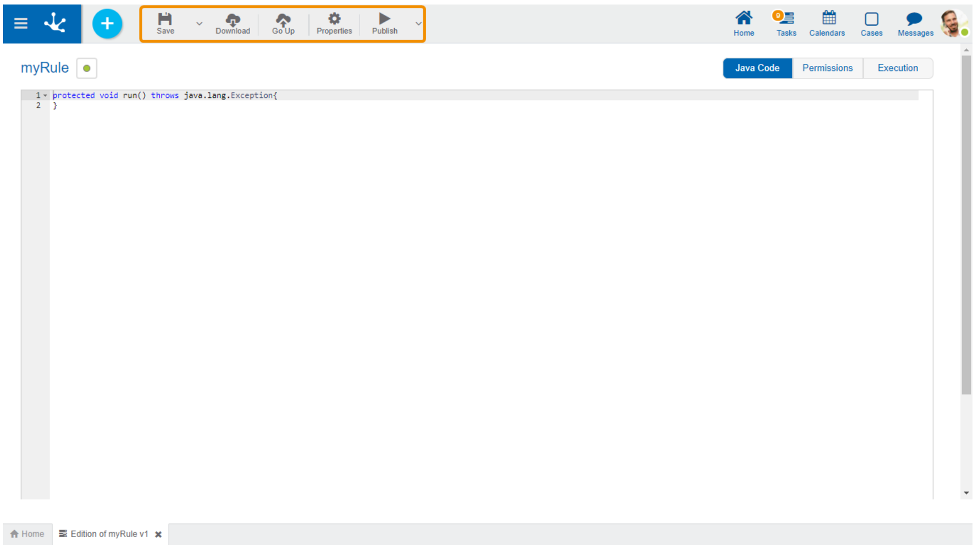
- Console



Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on a rule. Depending on the state of the rule, some options may be disabled.

The bar is displayed on **Deyel's**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The object must not be locked by another user,
- There must be an adapter that uses the rule.

To the right of the icon, the option to open the submenu.

Download

Allows to download the Java rule and the model and service classes of the objects related to the object wizard. A compressed file (.zip) containing the classes to edit later in an IDE for Java is generated. This icon is displayed for rules with all types of adapters with the exception of SOAP rules

Increase

Allows to upload a source file to update the Java rule. Such operation updates the window displaying the imported source code in the Java code editing area, but it is not saved until the user saves or publishes the rule. The code must be compilable, otherwise the load operation throws a compilation error. This icon is displayed for rules with all types of adapters with the exception of SOAP rules

Properties

Opens the rules properties.

Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.
In the event of an exception due to a failed compilation of the rule code, the error is displayed in the design option “Compilation errors”.

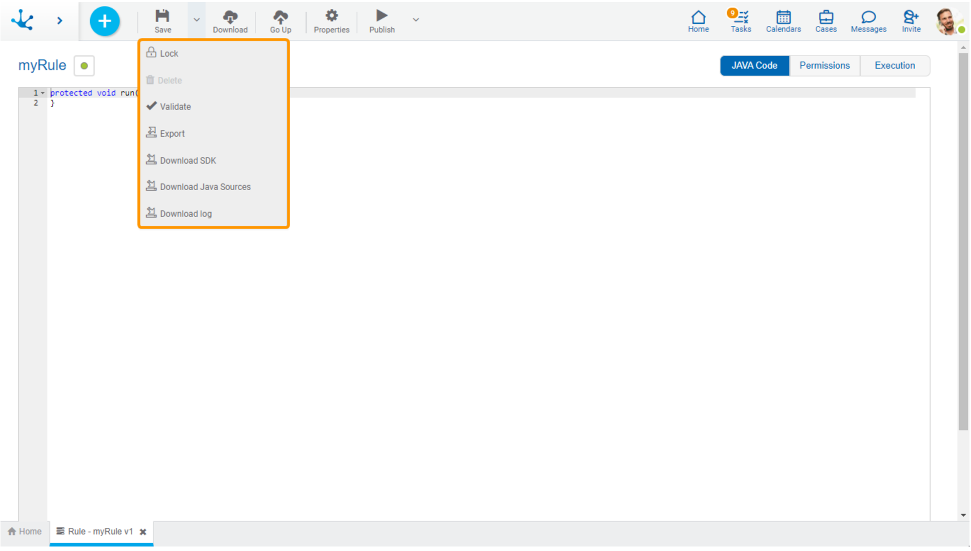
Main Conditions

- The packages corresponding to Java objects included in the rule code must be known to **Deyel**.
- The related objects in the rule must be previously published.

To the right of the icon, the option to open the submenu.

Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".



/ Lock/Unlock

An advanced rule can only be modified by a modeler user.

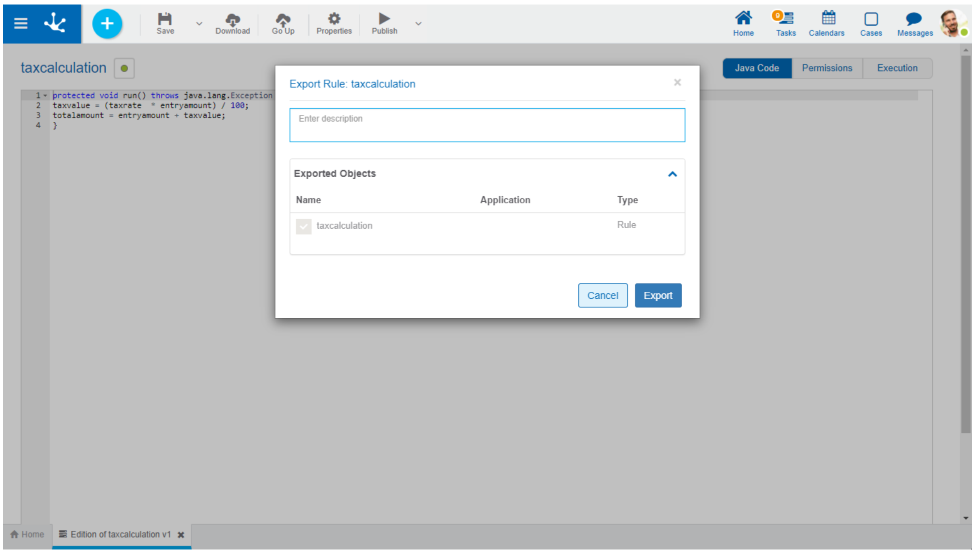
- It allows to block an advanced rule so that no one can modify it until the person who is using it unlocks it, that is, releases it.
- Allows to unlock an advanced rule so that another modeler user can modify it.

Validate

This icon validates if the rule is ready to be published, that is, validations performed at the moment of publication are applied and the result of the same is reported.

Export

This icon opens a window for the user to select and confirm the export of the object.



Description

In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the export record.

Exported Objects

By expanding the container, the object being exported is shown.

Press the "Cancel" button to undo export or press the "Export" button to finish.

Delete

Allows to delete the advanced rule only if it is in “Draft” state , closing the tab it is located in and deleting it from the modeler's grid.

Download SDK

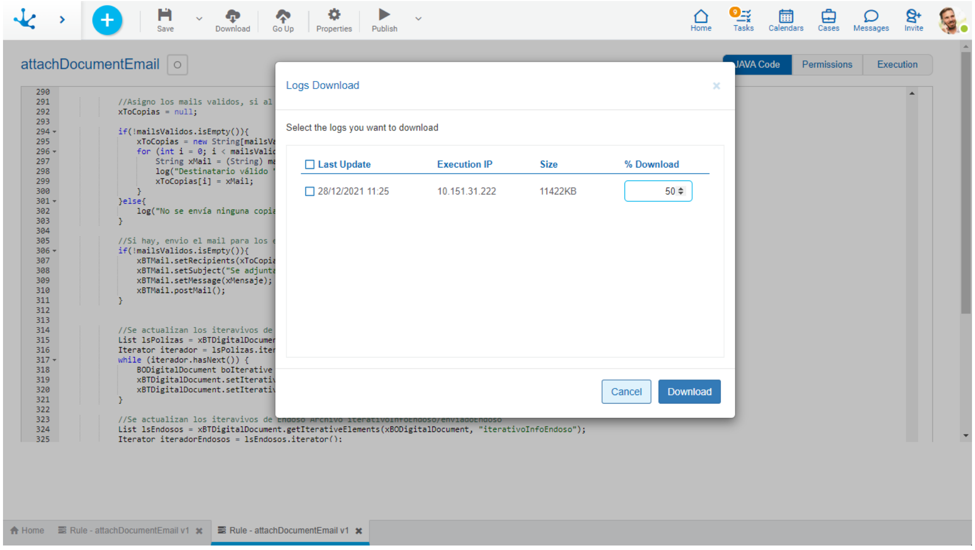
This icon allows to download the JAR file that represents Deyel’s SDK.

Download Java fonts

This icon allows to download the Java files that represent the object's model and service, so that it can be used in advanced rules.
Pressing the icon displays a message to confirm file download.

Download logs

Allows to download all the logs generated for the rule.



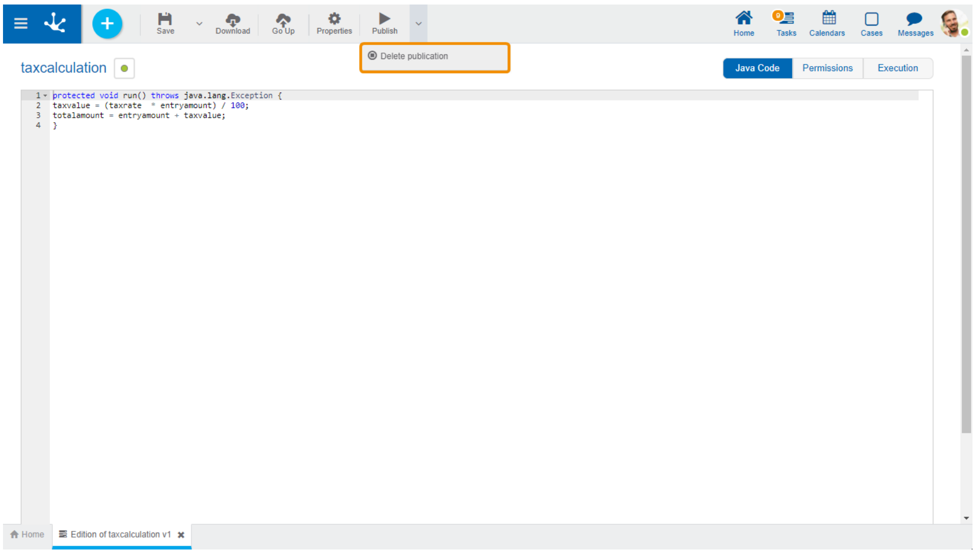
In the wizard, a row is displayed for each log file, with the following information:

- Last update of date and time.
- Execution IP.
- file size.
- percentage of the file to download.

If the percentage is added, that part is downloaded, considering the last portion of the log.

Publish Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".



Delete Publication

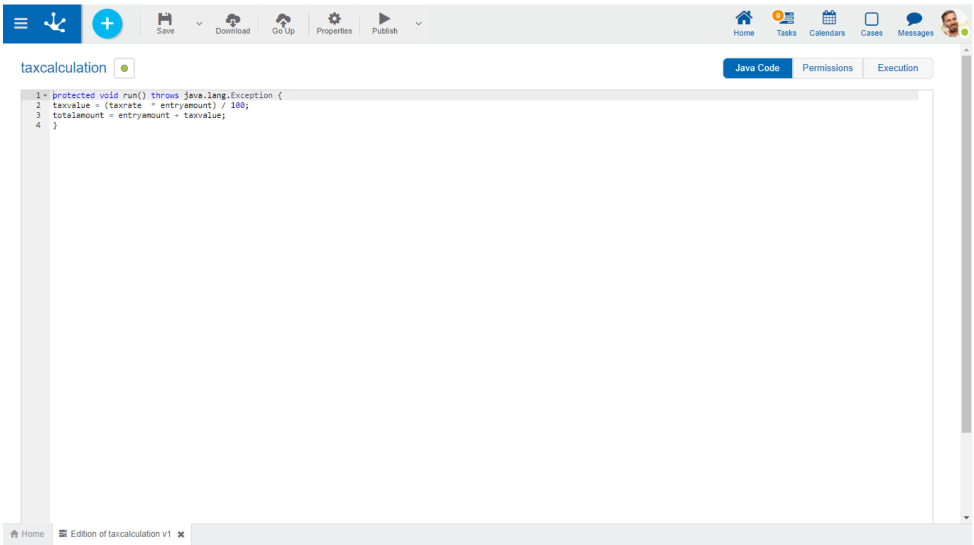
Allows to remove the advanced rule of use, returning it to the "Draft" state.

Modeling Area

The modeling area is the space where the rulers are designed and modeled. Within this area we can find the different design options which depend on the type of rule.

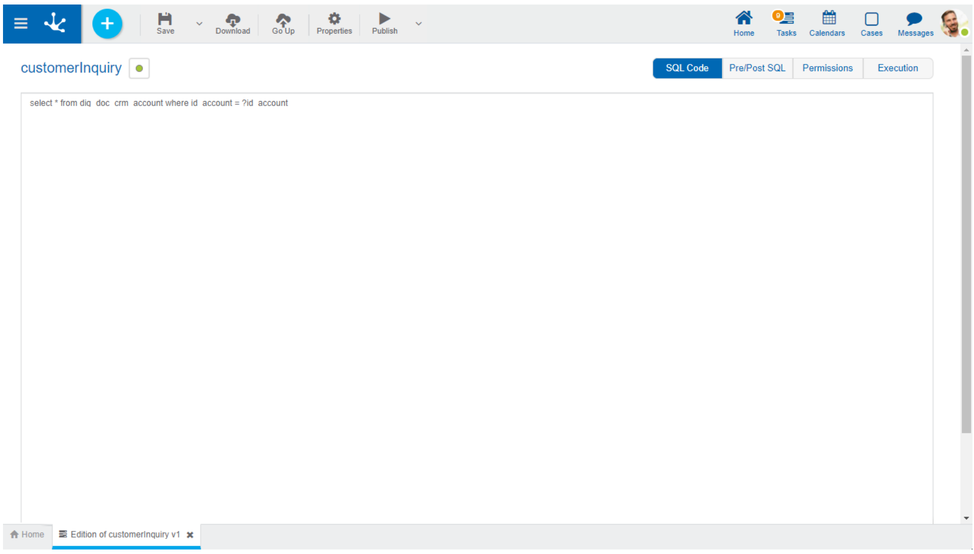
Standard Rule

Standard type rules use Java code to implement business logic. They use "Standard Rule" type adapters.



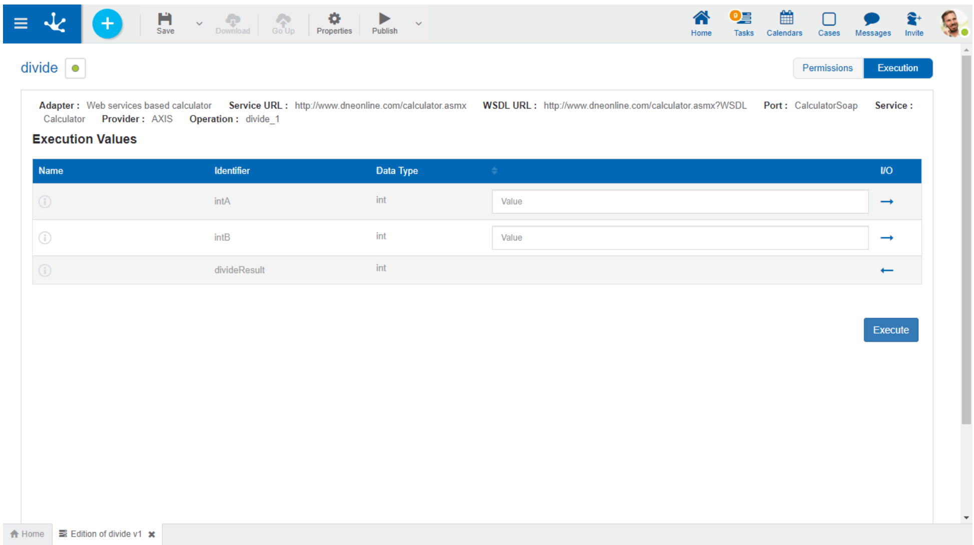
JDBC Rule

JDBC type rules are those used to perform operations related to databases, using a previously defined "JDBC" adapter. From database shows to the execution of store procedures can be performed.



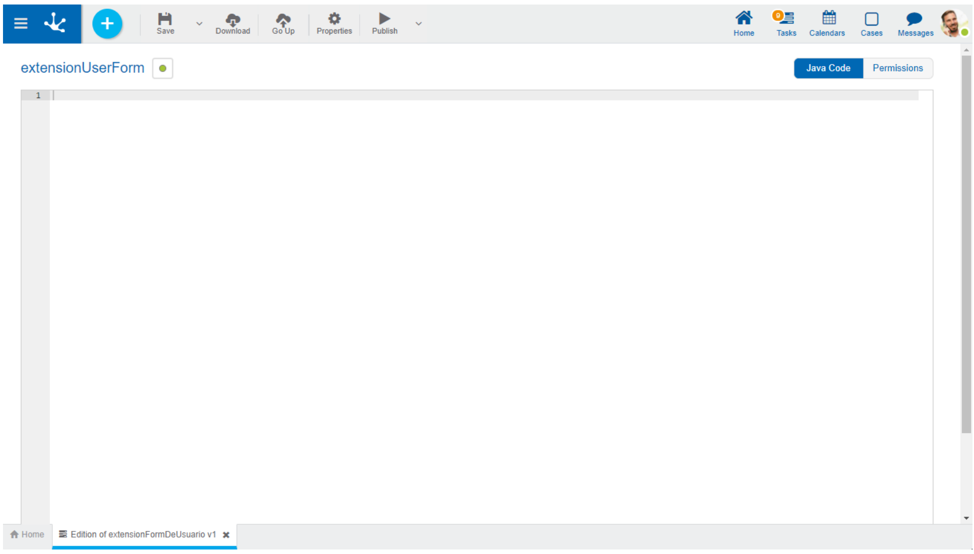
SOAP Rule

SOAP web service type rules are used to use external SOAP services in order to achieve integration with them. They use SOAP Rule" type adapters.



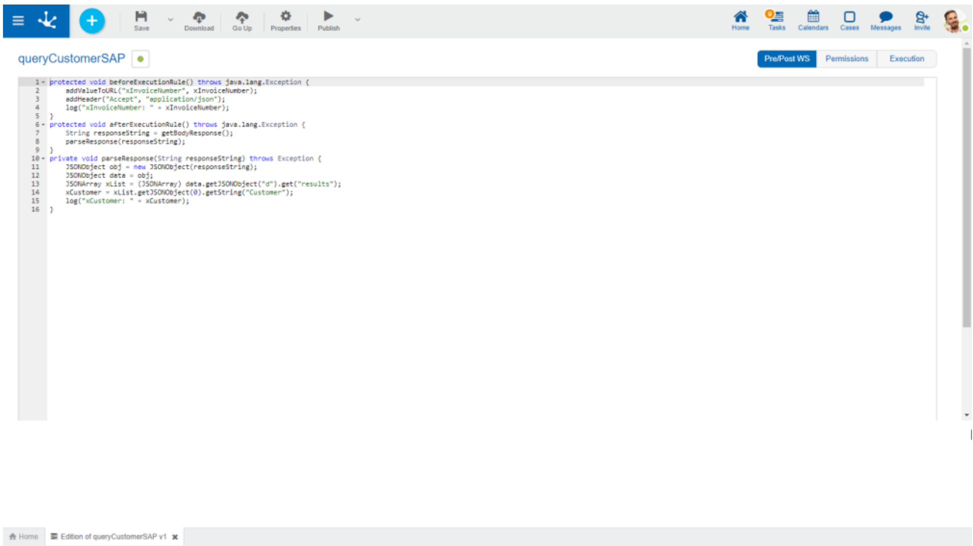
Forms Extension Rule

Forms extension type rules allow to use logic that cannot be done in the form modeler. They use the "Forms Extension" adapter.



Rest Rule

REST type rules are used to invoke ApiRest services external to **Deyel**.
They use Java code in their Pre/Post section to execute business logic before and after the ApiRest service call. They use "Rest Rule" type adapters.



Design Options

Creating or updating an advanced rule, allows to write the Java code or SQL code as applicable, to test the rule and review its compilation errors, viewing them in the console.

Depending on the type of advanced rule, one or more design options are displayed.

- Standard Rule
  The design options available are: “JAVA Code”, "Permissions" and "Execution”.

- JDBC Rule
  The design options available are: “SQL Code”, “Pre/Post SQL”, "Permissions" and "Execution”.

- SOAP Rule
  The design options available are: “Permissions" and "Execution”.

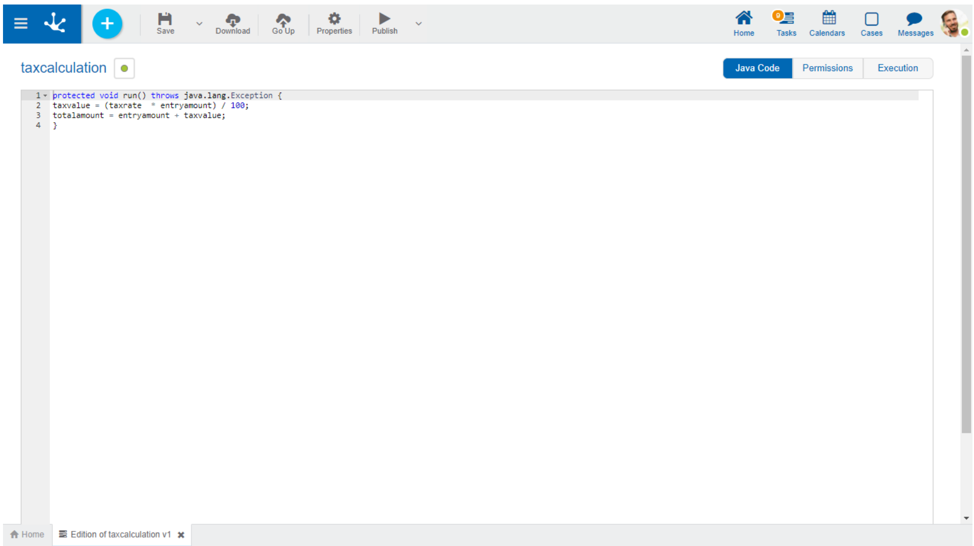
- Forms Extension Rule
  The design options available are: “JAVA Code" and "Permissions".

- Rest Rule
  The design options available are: “Pre/Post WS" and "Execution”.

Java Code

The Java code area is displayed when the modeler is started for a standard type rule that uses a "Standard Rule" type adapter.

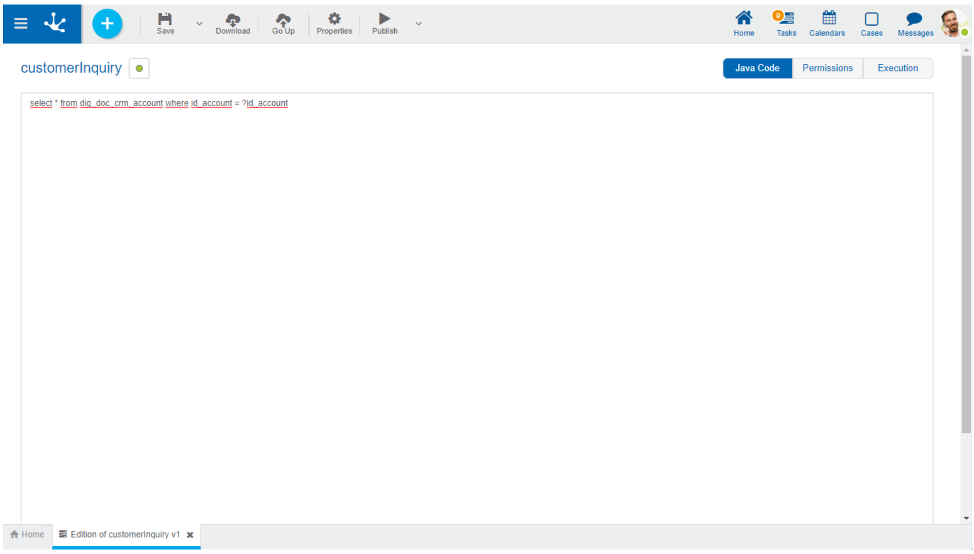
The Java code that executes the rule is written in this area.



Sql Code

The SQL code area is displayed when the modeler is started for a rule that uses a "JDBC" adapter.

The SQL show that the rule will execute is written in this area.



Permissions

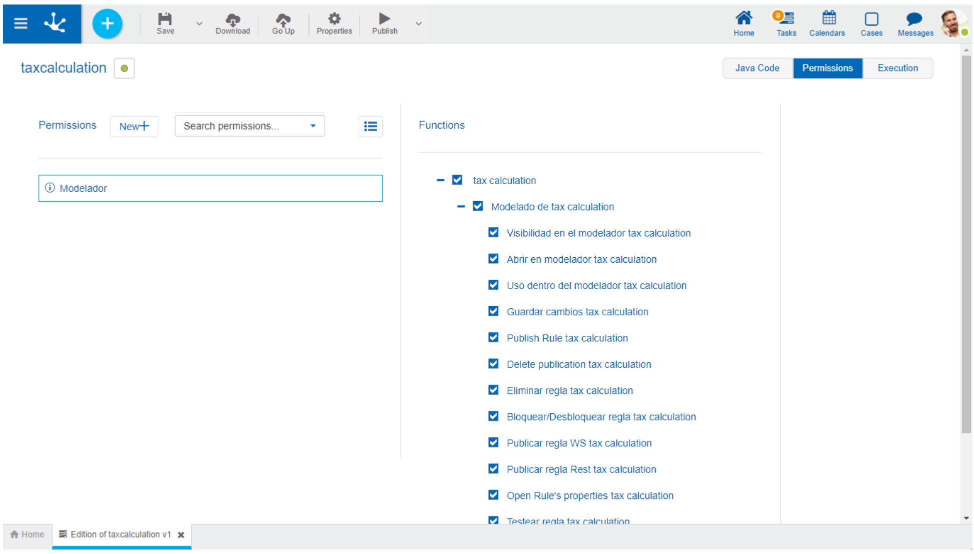
Allows to assign the [security functions](#) for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the [permission](#) settings option from the menu.

Sections

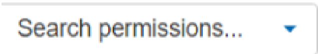
- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission [Modeler](#).

Users who are assigned the permissions have access to the functions included in it.



Opens a panel to create a new permission and once created, the security functions included in it must be selected .



Allows to select a permission from a list and enables the input of characters to filter the values in the list.


Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon ✖. If there are functions selected for that permission, they must be unchecked in order to delete it.

Security Functions to Model the Rule

- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Use within the modeler: Allows the use of the object from another modelable object.
- Save rule changes: Enables the save, download rule and upload rule operations.
- Publish rule: Enables the publish rule operation.
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete rule: Enables the delete rule operation.
- Lock/unlock: Enables the lock/unlock operation, only the user who locks it can modify it.
- Publish WS rule: Enables the publish rule operation as SOAP Web Services.
- Publish Rest rule: Enables the operation to publish the API Rest type rule.
- Open rule's properties: Allows to consult the rule properties panel.
- Test rule: Enables the operation to test the rule execution from the "Execution" option.
- Export rule: Enables the operation to export the rule definition.

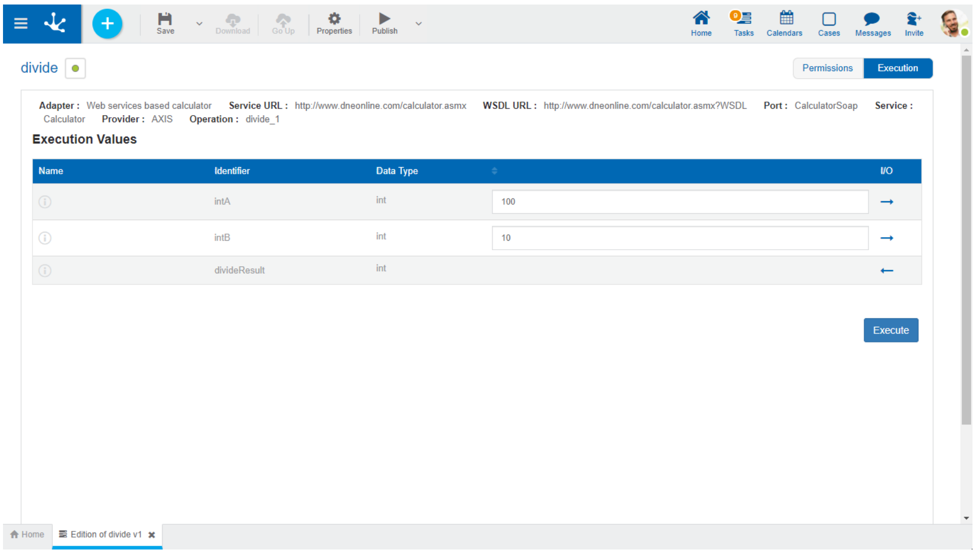
Security Functions to Use the Rule

- Execute rule via Rest: Allows the smart thing type user (API Rest type "Client") to execute the end-points of the [rules API Rest](#).

Execution

This area is displayed for all types of rules except for the forms functionality extension rules.
In the case of web services type rules, this area is displayed when starting the modeler.

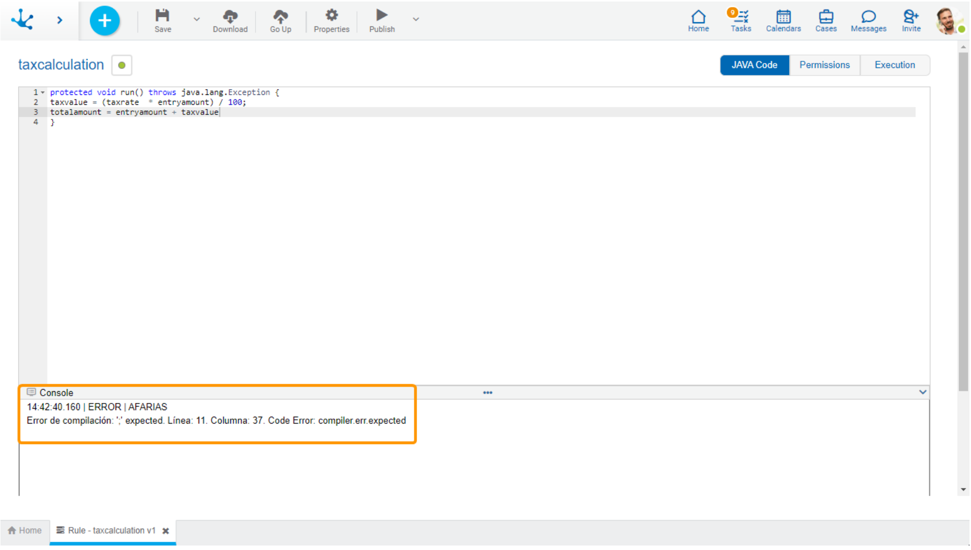
The parameters defined in the rules are displayed. For JDBC and web services SOAP type rules, the information of the adapter used is displayed.
Test values can be loaded on the defined input parameters to test the rule.



Compilation Errors

This area is displayed for all types of advanced rules, only if when executing a rule or publishing it, a compilation error occurs that prevents its correct operation.

The area has a space in which the corresponding compilation error is displayed.



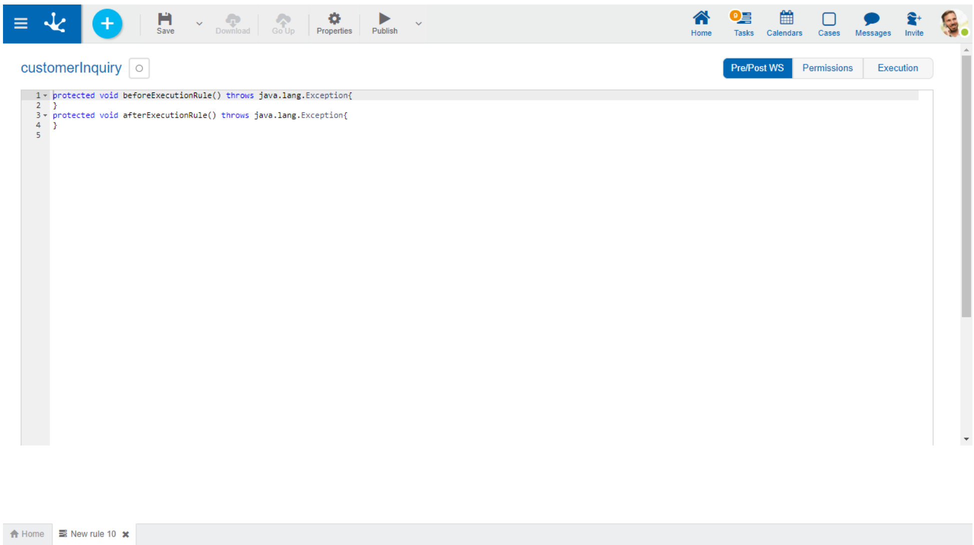
Pre/Post

When starting the modeler for a rule that uses the “Rest” type adapter, the area displayed is Pre/Post WS, and for a “JDBC” type rule is Pre/Post SQL.

Two required initial methods must be coded:

- **protected void beforeExecutionRule() throws java.lang.Exception{}**
  It allows adding logic before the ApiRest service call or the JDBC invocation.
  Example: An object can be read using the Deyel SDK and the result used as an input parameter in the JDBC invocation.

- **protected void afterExecutionRule() throws java.lang.Exception{}**
  It allows adding logic after the ApiRest service call or the JDBC invocation.
  Example: The result of the JDBC invocation can be received, processed, and saved in a form.



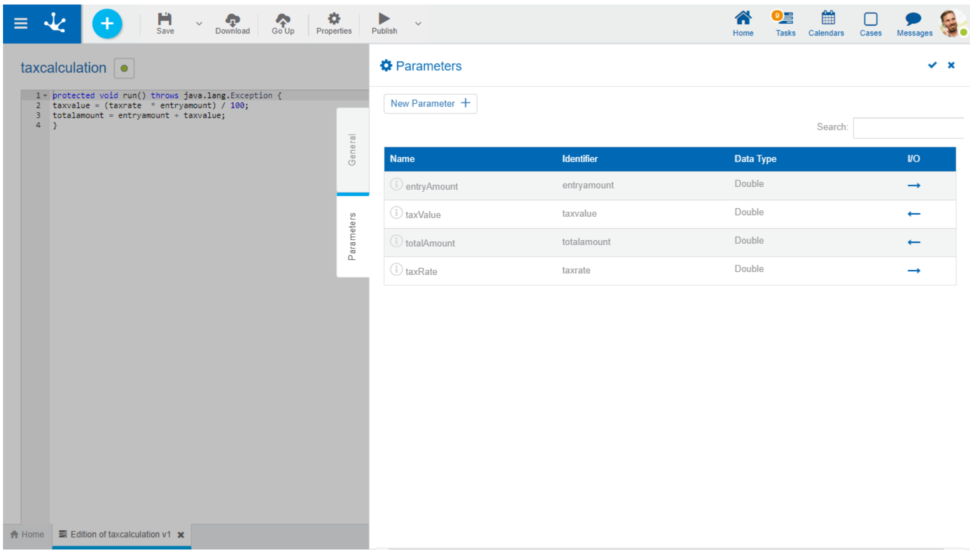
Additionally, in the “Rest” type rule, the following methods can be invoked:

Before Execution (beforeExecutionRule)	**After Execution (afterExecutionRule)**
setBody(String body): Allows to define the body parameter of the request.	String getBodyResponse(): Allows to get the body of the response.
addHeader(String key, String value): Allows to add a heading to the request.	Integer getHTTPStatus():Allows to get the HTTP state of the response.
addQueryParam(String key, String value): Allows to add a parameter query to the request.	List getHeadersResponse (); It allows to obtain a list of the headers of the HTTP request executed. This list is made up of objects of org.apache.http. header type.
addValueToURL(String key, String value): Replaces the text indicated in the first parameter with the value of the second parameter in the url of the service to call.	

3.6.5.1.2.2. Rule Properties

The advanced rule properties can be entered both when they are created while using the wizard, as well as when modifying an existing one.

To enter the rule properties panel, use the icon in the top toolbar.



Tabs

Entering the properties panel, one, two or three tabs are displayed, depending on the type of rule.

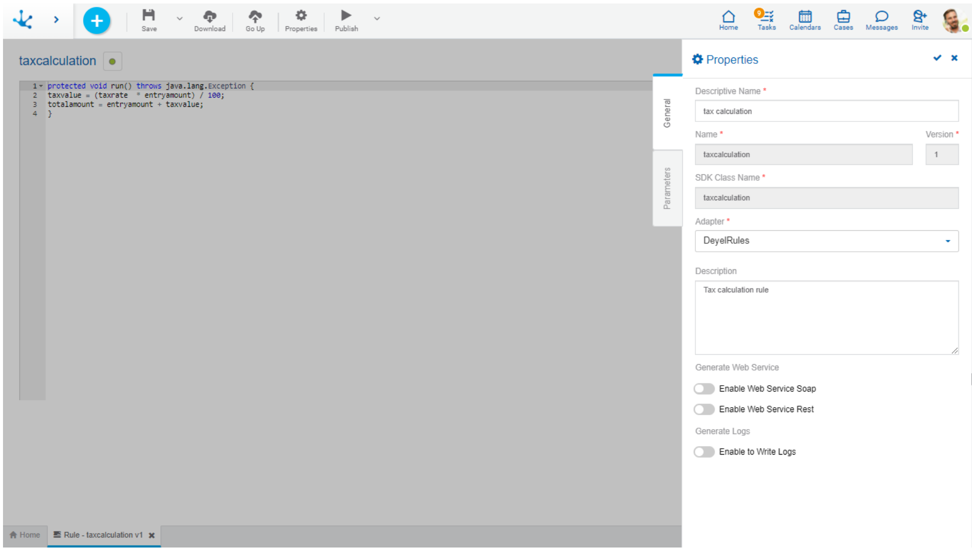
- [General](#)
  It is available for all types of rules.

- [Parameters](#)
  It is available for all rules except those of the form extension type.

- [Advanced](#)
  It is available for all rules except for standard rules, SOAP rules and form extension type rules.

General

The properties panel is displayed on the right side of the advanced rules modeler, where the first tab corresponds to general information.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Descriptive Name
Name used by the modeler to reference the rule, display it in the rules gallery and in the object tree. Supports multi-language.

Name
Used internally to reference the rule within forms, embedded rules, processes or as parameters of other advanced rules. Unlike other objects, the rule name also acts as a unique identifier to identify a rule. Not multi-language. Once saved, the rule cannot be changed.

Version

Used internally with the rule name to reference the rule within forms, embedded rules, processes or as parameters of other advanced rules. Once saved, the rule cannot be changed.

SDK Class Name

Name that represents the object in the SDK service and model classes.

Adapter

Used to determine the adapter to be used by the rule. Only it is displayed on this screen.

Operation

Used to choose the operation to be executed. This property is only displayed when the chosen adapter type is "Web Services". It is displayed in this section, it is necessary to go to the "parameters" tab in order to change it.

Description

Text that defines the rule describing its functionality and optionally its content. Supports multi-language.

Generate Web Service

Enable Web Service Soap

Used to publish the rule as a SOAP web service to be consumed from outside **Deyel**. This property is only displayed when the chosen adapter type is either “Standard Rule” or "JDBC”.

Enable Web Service Rest

Used to publish the rule as a Rest API to be consumed from outside **Deyel**. This property is displayed only when the chosen adapter type is “Standard Rule”.

Generate Logs

Enable to Write Logs

It allows to display in the console the compilation and execution errors, as well as the logs added in the rule code.

> When a rule is imported in test or production environments, log writing is automatically disabled.

Specific Properties

Rules with a "Rest" adapter type add specific properties for this type of execution.

HTTP Method

Configures the HTTP method to use.

Context Type

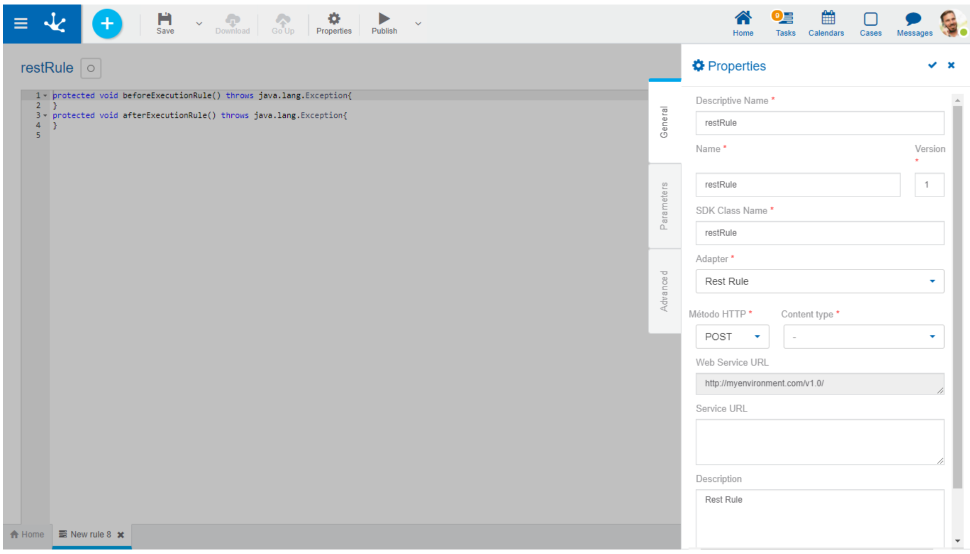
Configures the content type of the request.

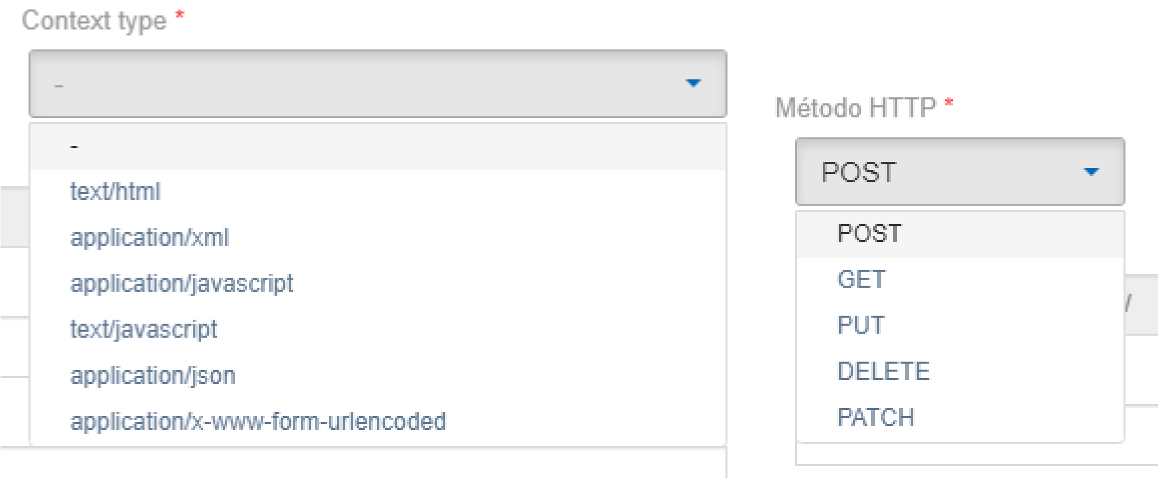
Web Services URL

Url entered in the adapter, displayed in a reading mode to facilitate the correct writing of the final url.

URL Service

Url of the service to consume, the final url is the concatenation of the Web Services URL and the URL Service. The addValueToURL(String key, String value) method can be used within the Pre/Post WS section to replace a part of the url (determined by the key) with a new value (determined by the value).





Actions

The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

Parameters

The second tab of the side panel corresponds to the rules parameter. In this tab, the input and output parameters are defined, which are the communication channel between rules and the processes that use them.

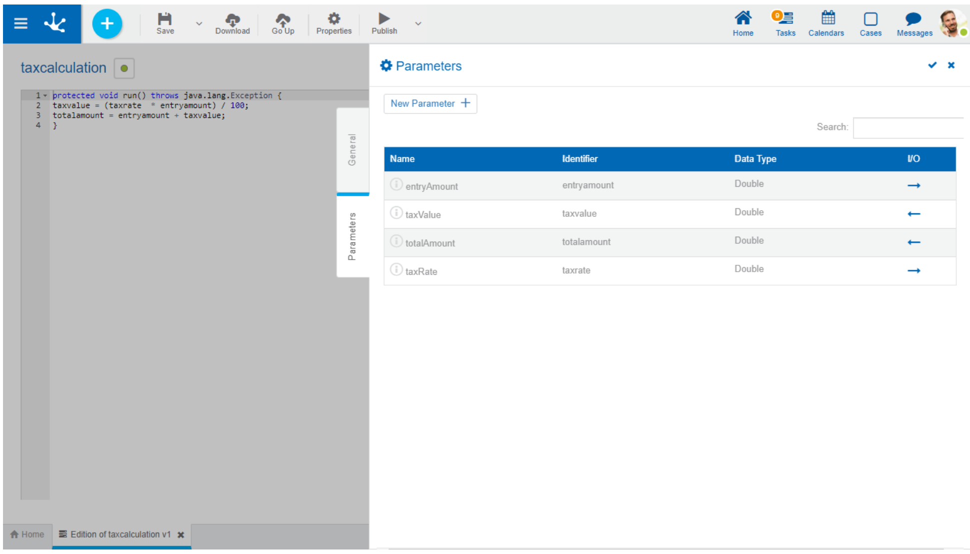
Parameters can be configured in any advanced rule except those of [forms extension](#).

Parameter Grid

The grid columns identify the properties of each parameter.

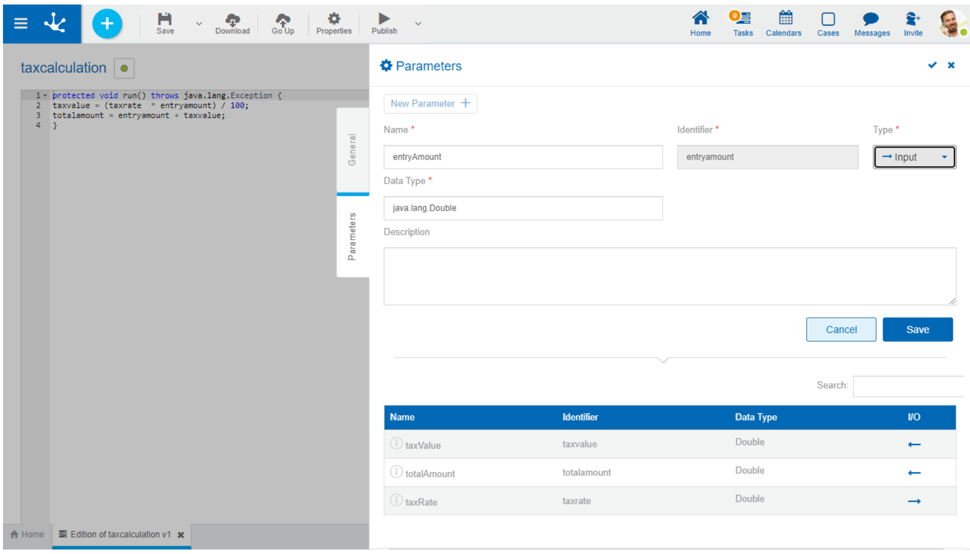
By placing the mouse over the grid, the following operations are enabled:

Allows modifying an existing parameter.
Allows deleting a parameter.



Allows Creating a Parameter

Allows adding a new parameter to the grid, completing all its values.



.

Properties

Name

Name the modeler uses to refer to the parameter.

Identifier

Uniquely identifies the parameter. It is used within Java programming code.

Type

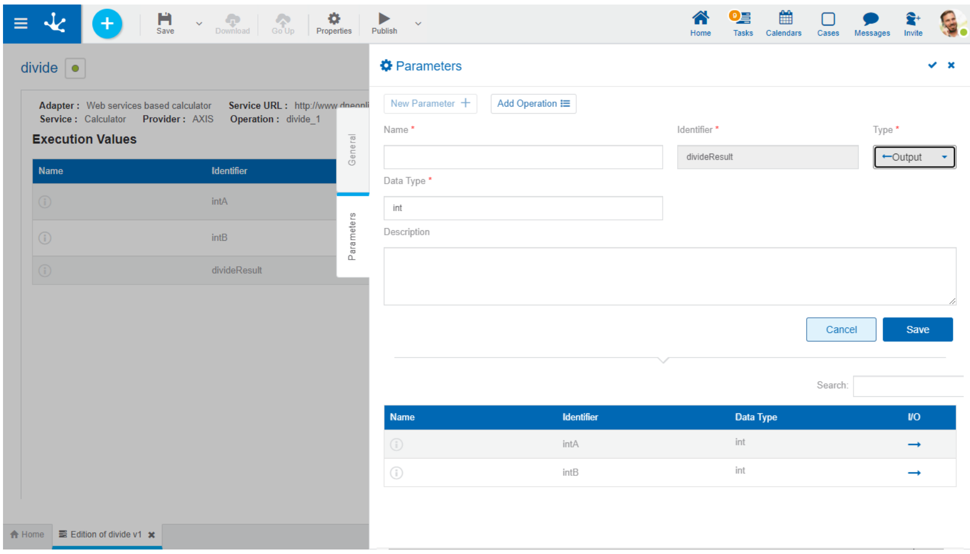
Specifies whether the parameter is input or output .

Data Type

It can be any type of Java object allowed in **Deyel**, either a primitive (integer) or an array.
The type wizard, while typing, gives the most common data type values to use.
By placing the mouse over the data type in the grid, the complete data type can be displayed, to help.

Description

Describes the parameter use. Its writing when modeling the parameters is optional.
If it was entered, the colored icon is displayed in the grid, in the Name column , otherwise the icon is colorless .
Placing the cursor over the icon shows the help.



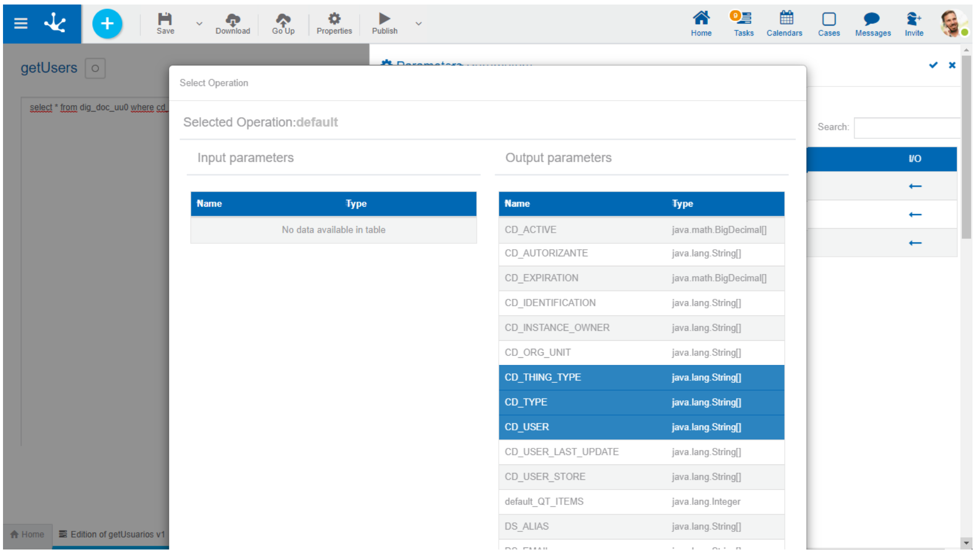
An asterisk "" on the label indicates that the property is required.*

Wizard to Create Parameters in JDBC Rules

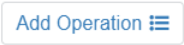
New Parameter + Allows to invoke the wizard available for JDBC type rules.

This wizard allows to select the parameters defined in the SQL statement as input parameters and the columns resulting from the query execution as output parameters.
In this way, the probability of errors is minimized by not having to manually transcribe the names of columns and parameters.

For the wizard to return results, it is necessary to define the SQL statement to execute before invoking it. If it were a Select statement, each input parameter should be preceded by a “?” mark. If executing a store procedure, the output parameters can also be specified, each of them should be preceded by an "@" character.



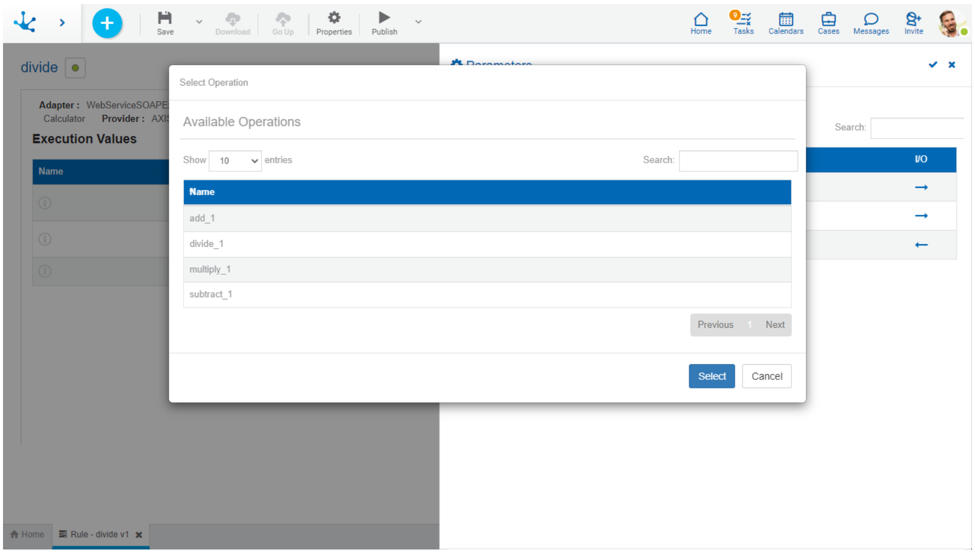
Wizard to Add Operations in SOAP Rules



Allows to invoke the wizard available for SOAP type rules.

The wizard analyzes the adapter used and shows the operations available for such object, along with the input and output parameters for each one.

It allows to select the operation that is executed by default and its parameters, to transfer them to the rule interface. In this way, the probability of errors is minimized by not having to manually transcribe the names of operations and parameters.



Advanced

The third tab of the side panel corresponds to the objects wizard. When entering the modeler, it is displayed for all rules except for standard rules, SOAP rules and form extension rules.

This tab lists the objects to be used in the rule.

Creating a relation using the object wizard allows to:

- Work with the model and service classes of the related object from the rule modeler without having to depend on a Java IDE.
- Always keep the Java imports statements of related objects up to date in the rule, regardless of whether the object has been modified after having created the relation.

If significant changes are made to the related objects used in the rules, when they are published:

- Java imports statements of the rules that use them are updated. Rules remain in the same state they were in, with updated modification date.
- Verify that the rule using them is not in a modified state. If modified, it will be requested to be published or unpublished.

Related Objects Grid

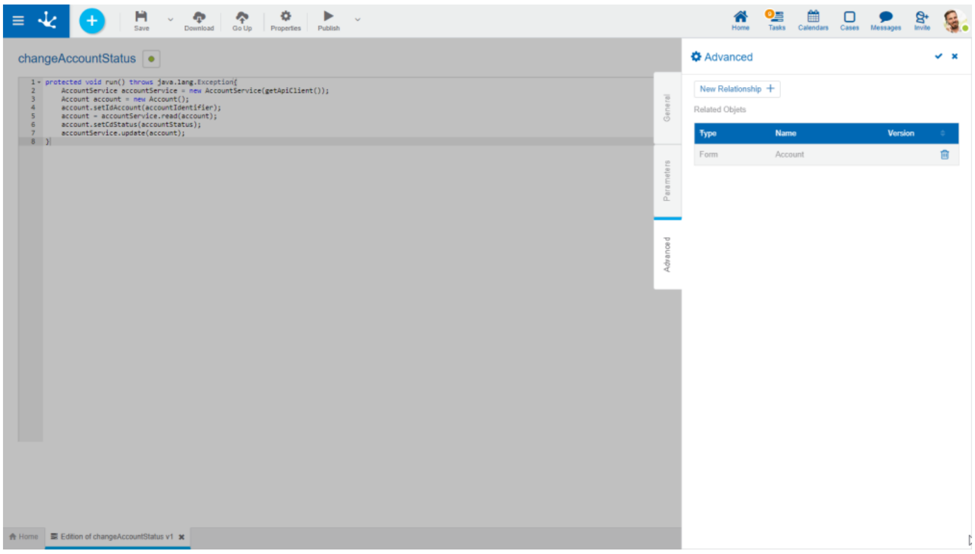
The grid columns identify the related object.

Type
Indicates the object type. It can be a form, process or rule.

Name
It is used at the modeling level to refer to the object.

Version
Indicates the object version for processes and rules.

By hovering the mouse over each related object in the grid, the delete operation is enabled.



Opens a panel with the forms, processes and rules that the user can select according to their security permissions. Once selected, it is displayed in the grid of related objects.

3.6.5.1.2.3. Deyel SDK for Java

By using the Deyel SDK (Software Development Kit) **Deyel** incorporates the ease of developing advanced and integration rules that interact with the platform objects and developed applications, in an easy and intuitive way.

These rules can be developed in the advanced rules modeler in the case of those that require low code or when they are more complex in a Java IDE, inheriting all its advantages.

Tools to Develop Advanced Rules with SDK

Deyel SDK allows to use **Deyel** objects in advanced rules, by using one class with the model and another one with the object's service.

Model Class

The model class corresponds to the properties that each object has.

For example, the "Account (CRM_ACCOUNT)" form model class of the CRM application contains the Identifier, Company, Opening, Industry, Source and Status fields, among others. It also contains the getter and setter methods for each of these fields.

The model includes:

- Object builder.
- Set of getter and setter methods for each object attribute.
- Internal classes if necessary. For example, the representation of iteratives for forms.

Service Class

A service class contains the operations to manage the model. For example, the service class of a form allows to perform the create, update, delete, query, and find operations.

The service class includes:

- CRUD (Create, Read, Update, Delete) of the object.
- Searches
- Specific methods to work on the model.

Each object service class has a common method available to initialize all objects.

Operation	Description	Parameters
getAPIClient()	Initializes the service to be able to use it.	

Interaction with Application Objects

In order to interact with **Deyel** objects from a Java IDE, the model and service classes corresponding to each object must be downloaded.

These classes are included when downloading the rule that interacts with such **Deyel** objects, in the "Download" option available on the top toolbar of the rule modeler.

By using the model and service classes, Deyel SDK allows to use the following objects:

- Forms

- Cases
- Rules
- Users
- Organizational Units
- Calendars
- Email Sending

Forms

The model class contains the properties with its getter and setter methods, while the service class contains the operations to be performed with the model.

For example, if the "Account (CRM_ACCOUNT)" form from the CRM application is used, when downloading the form Java sources, an account.java file is obtained, representing the model and another accountService.java file with the available operations of the service.

Model Class Content

A form model contains:

- Model builder.
- Set of getter and setter methods of its fields.
- Inner classes that represent the “Multiple occurrences” containers model, if any.

Data Type

Model properties for a form can have the following data types.

Equivalence between form field data types and Java model is shown.

Control	Data Type	Java
Text	Alphanumeric (length) Alphanumeric Uppercase (length) Long alphanumeric Rich Text	String String String String
Number	Number Large Integer Decimal	Integer Long Double

Control	Data Type	Java
Time	Time Local time	java.sql.Time java.sql.Time
Date	Date Date and Time Local Date Date and Local Time	java.sql.Date java.sql.Timestamp java.sql.Timestamp java.sql.Timestamp
Image	Image in Folder Image in Database	String String
File	File in Database	String
Check	Boolean	Boolean

Service Class Content

The service allows to perform the following CRUD (Create, Read, Update, Delete) and search (search) operations, as well as containing specific methods, for example to retrieve files from the form.

Operation	Description	Parameters
create(entity)	Create a form instance.	**entity**: Form model class
read(entity)	Reads a form instance.	**entity**: Form model class
update(entity)	Updates a form instance.	**entity**: Form model class
delete(entity)	Deletes a form instance.	**entity**: Form model class
search(searchCriteria)	Allows to retrieve the form instances that meet the search criteria.	**searchCriteria**: Class that allows defining a set of criteria

Operation	Description	Parameters
		and search configuration parameters.

Examples of Use

The examples use the "Account (CRM_ACCOUNT)" form of the CRM application and each example contains the use of "Account" model class and "AccountService" service class.

1. Service creation

This service is created only once in the rule and is reused in different operations.

```
AccountService accountService = new Ac-
countService(getApiClient());
```

2. Create a form instance

An instance of “Account” model class is created, values are assigned to its properties. Using the “AccountService” service class, the new account is saved with the assigned values through the create (account) method.

```
Account account = new Account() ;
account.setNuIdentifNum-
ber("010000123");
account.setDsIndustry("1");
// 1 = Agriculture
account.setDsSource("7");
// 7 = Social Networking
account.setDsCompany("Trees Company");
account.setDtOpening((Date) new
java.util.Date());
account.setFlLogo(new
File("/photo.png"));
account.setCdStatus("1");
// 1 = Active
Integer accountNumber = accountSer-
vice.create(account);
```

```
log("Account created with account num-
ber:"+ accountNumber);
```

3. Read a form instance

To obtain data from an existing account, an "Account" model class instance is created, an identifier chosen through the corresponding setter method is indicated and such instance is read using the read(account) method of the “AccountService” service class. The instance contains all its properties which can be queried using the corresponding getter methods. The example reads the dsCompany, dtOpening, dtStore, and dtLastUpdate properties.

```
Account account = new Account();
Integer readAccountNumber = 50000 ;
account.setIdAccount(readAccountNum-
ber);
account = accountService.read(account)
;

// Once read, continue working
String dscompany = account.getDsCom-
pany();
Date dtopening = account.getDtO-
pening();

// Audit data
Timestamp dtStore = ac-
count.getDtStore();
Timestamp dtLastUpdate = ac-
count.getDtLastUpdate();
```

4. Modify a form instance

To modify data from an existing account, an "Account" model class instance is created, an identifier chosen through the corresponding setter method is indicated and such instance is read using the read(account) method of the “AccountService” service class. The dsCompany property is then modified using the corresponding setter method and the update(account) method of the service is invoked to update the account.

```
Account account = new Account();
account.setIdAccount(50000);
```

```
account = accountService.read(account);

// Once read, update
account.setDsCompany("Trees Company");
accountService.update(account);
```

5. Delete a form instance

To delete an existing account, an instance of the "Account" model class is created, indicating its identifier by means of the corresponding setter method. The delete(account) method of the service is then invoked to delete the instance.

```
Account account = new Account();
account.setIdAccount(50000);
accountService.delete(account);
```

6. Use of file and image type fields

To retrieve a file related to a form instance, use the corresponding get+<fieldname>+(entity) method of the "AccountService" service class.
In this example, the getFlLogo(account) method of the "AccountService" service class is invoked, which allows to retrieve the file corresponding to a logo associated with a File object.

```
Account account = new Account();
account.setIdAccount(50000);

// Account reading
account = accountService.read(account);

// Logo image reading
File logo = accoountService.getFl-
Logo(account);

// Assign a new logo to the account
account.setFlLogo(new File("Path"));
accountService.update(account);
```

7. Use of internal objects

Internal objects represent the set of fields modeled in iterative containers.

In this example, two new “Account.PhoneLine” internal objects are instantiated and values are assigned to their nrPhone and tpPhone properties.
A new list of “Account.PhoneLine” objects can be saved with the setPhoneLine(lsPhones) method or by adding two instances of the “Account.PhoneLine” object to the current list.

```
Account.PhoneLine phones= new Ac-
count.PhoneLine();
phones.setNrPhone("01149834589");
phones.setTpPhone("Line phone");

Account.PhoneLine phones1= new Ac-
count.PhoneLine();
phones1.setNrPhone("0115123987");
phones1.setTpPhone("Cell phone");

List<Account.PhoneLine> lsPhones = new
ArrayList();
lsPhones.add(phones);
lsPhones.add(phones1);
account.setPhoneLine(lsPhones);

// Another option is
account.getPhoneLine().add(phones);
account.getPhoneLine().add(phones1);
```

Searchs

Searches on form instances can be performed using the following objects.

Criteria- represents search criteria on form data. It is made up of elements that can be fields and values, connected by operators.

Operator	Description
eq	Equal
neq	Different

Operator	Description
gt	Greater
gte	Greater equal
lt	Less
lte	Less equal
between	Between
betweene	Between and admits equals
nbetween	Out of range
like	Contains
nlike	It does not contain
startsWith	Starts with
nstartsWith	It does not start with
in	Included
nin	Not included
ew	Ends with
new	Does not end with

SearchCriteria: object that groups search criteria (Criteria object), it also allows parameterizing the order of the result, the size of the reading page and the number of pages to be retrieved. Reading by pages is used since the data volume on a form can be very large.

Form Service: service class of the form on which the search is being carried out. Contains the search(searchCriteria) operation that must receive the SearchCriteria object as a parameter and returns the SearchResult object.
Example:
SearchResult searchResult = accountService.search(searchCriteria);

SearchResult: object that contains the search results. Contains a list of form instances, which are instances of the corresponding model, for example "Account". This object allows to know the total number of reading pages resulting from the search, the size of each page and the number of pages to retrieve.

Examples

1. Searchs

This example retrieves a list of accounts with active state, where such state corresponds to code "1". A quantity of 15 lines per reading page and the number of pages to retrieve are defined. The results are ordered by company name in ascending order.

```
 SearchCriteria searchCriteria = new
SearchCriteria();
 Criteria criteria1 =
          Criteria.eq("CdStatus","1");
 searchCriteria.addCriteria(criteria1);
 searchCriteria.setPageSize(15);
 searchCriteria.setPage(1);
 searchCriteria.addOrderAsc("DsCom-
pany");


SearchResult searchResult =
             accountSer-
vice.search(searchCriteria);
 List<Account> instancesResult =
searchResult.getResult();
```

2. Constructor types for search criteria

This example creates a Criteria object and defines different search conditions using the equal, different, greater, greater equal, less, less equal, between, among, and allows equals, out of range, and contains operators.

```
// Equal cdStatus= 1 corresponds to an
active account
 Criteria criteria = Crite-
ria.eq("CdStatus", "1");

// Different cdStatus= 1 corresponds to
an active account
// Criteria criteria =  Criteria.neq
("CdStatus","1");
```

```
// Greater
// Criteria criteria = Criteria.gt
("qtScore", 20) ;

// Greater equal
// Criteria criteria = Criteria.gte
("qtScore", 20) ;

// Less
// Criteria criteria = Criteria.It
("qtStore", 50) ;

// Less equal
// Criteria criteria = Criteria.Ite
("qtStore", 50) ;

// Between
// Criteria criteria = Criteria.between
("dtOpening",
// Date.valueOf("01/01/1990"),
Date.valueOf ("01/01/2020"));

// Between and admits equals
// Criteria criteria = Criteria.be-
tween("dtOpening",
// Date.valueOf("01/01/1990"),
Date.valueOf ("01/01/2020"));

// Out of range
// Format YYYY-MM-DD is used
// SimpleDateFormat format =
// new SimpleDateFormat("yyyy-MM-dd");
// Date dateFrom =
// new Date (format.parse( "1990-01-01"
).getTime());
// Date dateTo =
// new Date(format.parse( "2020-01-01"
).getTime());
//
Criteria criteria =
// Criteria.nbetween ("dtOpening",
dateFrom, dateTo );
```

```
// Contains In an internal object
// Criteria criteria = Crite-
ria.like("eMailLine/dsEmail",
// yahoo.com.ar");
```

> ***Deyel*** *uses the data type java.sql.Date for "date" type fields, so the transformation from java.util.Date to java.sql.Date must be done, when it is required to create an object with this type of data.*

```
// Contains
// Criteria criteria = Crite-
ria.like("dsCompany","Inc.");

// It does not contain
// Criteria criteria = Crite-
ria.nlike("dsCompany","Inc.");

// Starts with
// Criteria criteria = Criteria.starts-
With("dsCompany","The");

// It does not start with
// Criteria criteria = Crite-
ria.nstartsWith("dsCompany","The");

// Included dsIndustry = 6 is Communi-
cations, 8 is Education
Criteria criteria =
// Criteria.in("dsIndustry", Ar-
rays.asList("6", "8" ));

// Not Included dsIndustry 6 is Commu-
nications, 8 is Education
Criteria criteria =
// Criteria.nin("dsIndustry", Ar-
rays.asList("6", "8" ));
```

3. Operations on the results object

The SearchResult object is an iterative object and as such can be scrolled through in different ways. The example uses a FOR statement to iterate over each of the instances that meet the search conditions of the dsIndustry and qtScore properties, retrieving the idAccount and dsCompany properties.

```
SearchCriteria searchCriteria = new
SearchCriteria();
 searchCriteria.setPageSize(15);
 searchCriteria.addOrderDesc("idAc-
count");

 // Accounts with industry equal to
communications
 searchCriteria.addCriteria
    (Criteria.eq("dsIndustry", "6"));

// Accounts with a score greater than
20
 searchCriteria.addCriteria
 (Criteria.gt("qtScore", 20)   );

 // Scrolls through all the accounts in
the search result
 String stringData1 = "";
 for (Account account: searchResult) {
 stringData1 += " - " + ac-
count.getIdAccount()
                  + " - " + ac-
count.getDsCompany();
 }
 // If I only need the first results
sheet
 SearchResult<Account> resultFirstPage
=
         accountSer-
vice.search(searchCriteria);
 List<Account> firstList = result-
FirstPage .getResult();

 String stringData = "";
 stringData += " Amount of data " +
firstList.size();
```

```
 stringData += " Pages " + result-
FirstPage .getPages();
 stringData += " Actual Page " +
 resultFirstPage .getCurrentPage();
```

Navigation between Related Entities

In the CRM application, the “Contact (CRM_CONTACT)” form has a relation with the “Account (CRM_ACCOUNT)” form and the related account can be retrieved from a business rule, from a contact.

An instance of the “Contact” model class is created and the account identifier is retrieved using the corresponding getter method.
Next, an instance of the "Account" model class is created indicating the identifier retrieved from the contact in the setter method and the account instance is read using the read(myAccount) method of the "AccountService" service class.

```
Contact contact = new Contact() ;
Integer idAccount = contact.getIdCom-
pany();
// Retrieve the id of a contact account
// and I read the account with that id

Account myAccount = new Account();
myAccount.setIdAccount(idAccount);
myAccount = accountService.read(myAc-
count);
```

Cases

The model class contains properties with their getter and setter methods, while the service class contains operations to be performed on the model.

For example, when downloading the Java sources of the process, if using the "Request Payment" process, a requestPayment.java file is generated with the model methods and also another requestPaymentService.java file with the available service operations.

Model Class Content

A case model contains:

- Model builder.

- Getter and setter methods of the case properties.
- Getter methods to get the related forms.
- Getter methods to get the activities in progress.
- Getter methods to get the process corresponding to the case.

Getter and setter methods of the case properties

The case model class contains a set of getter and setter methods for the case properties.

Operation	Description	Parameters
getCdCase()	Gets the identifier of the case.	
setCdCase(casenumber)	Allows to set the case identifier value.	String **casenumber**: Case number
getCdState()	Gets the state of the case. Possible values: **ACTIVE** - Active **CANCELLED** Cancelled **ENDEDCASE** - Ended:	
getDsCase()	Gets the description of the case.	
getDtEnded()	Gets the end date of the case.	
getDtExpiration()	Gets the expiration date of the case.	
getDtInitiated()	Gets the start date of the case.	
getPriority()	Gets the priority of the case. Possible values: **1** - Urgent **2** - High **3** - Medium **4** - Low	
setLastPressedButton(button)	Allows to set the last button pressed.	String **button**: Name of the last button pressed.
getLastPressedButton()	Gets the last button pressed.	

Operation	Description	Parameters
get + <Nombre de la clase del formulario> + Entity()	Gets an instance of the form class related to the process.	
getLsVinculatedForms()	Gets a list of form instances related to the case.	
getVinculatedFormByIdEn-tity(idEntity)	Gets a form instance related to the case.	String **idEntity**: Identifier of the form instance
getProcess()	Gets the process correspond-ing to the case.	
getLsExecutedActivities()	Gets the executed activities of the case.	
getLsCurrentActivities()	Gets the activities in progress of the case.	

Getter method to get the related forms

Given a case, the values of the form fields related to it can be used, in the same way as if the activities were executed manually.

The model class has a getter method for each form related to the process, with a “get + <Nombre de la clase del formulario> + Entity()” structure. Once an instance has been retrieved, it is used in the same way as for forms.

Example
If the "Request Payment" process related to the "Payment" and "Report" forms is modeled, the RequestPayment class has the following methods:

- getPaymentEntity(): Gets an instance of the Payment class that corresponds to the "Payment" form related to the case.
- getReportEntity(): Gets an instance of the Payment class that corresponds to the "Payment" form related to the case.

> *The case cannot have forms associated with the same class name, even if they belong to different applications.*

Getter methods to get the activities in progress

Given a case, the list of its activities in progress can be accessed, using the getLsCurrentActivities() case properties method of the model class, which returns a list of "ExecutedActivity" objects with their methods.

Operation	Description	Parameters
getCdActivity()	Gets the code of the activity.	
getDsNameActivity()	Gets the activity name.	
getCdState()	Gets the state of the activity. Possible values: **EXEC** - In execution **CANCELLEDACT** - Cancelled **ENDEDACT** - Ended	
getPriority()	Gets the activity priority. Possible values: **1** - Urgent **2** - High **3** - Medium **4** - Low	
getDtEnded()	Gets the end date of the activity.	
getDtExpiration()	Gets the expiration date of the activity.	
getDtInitiated()	Gets the start date of the activity.	
getCdUserExec()	Gets the code of the user that executed the activity.	
getCdUserInit()	Gets the code of the user that started the activity.	
getNuDurationSeconds()	Gets the duration in seconds of the activity execution.	
getTpActivity()	Gets the activity type. Possible values: **TP_GATEWAY** - Gateway	

Operation	Description	Parameters
	TP_STANDARD - Standard **TP_ABSTRACT** - Abstract	
getTpParticipant()	Gets the type of participant for the activity. Possible values: **USER** - User **ORG_UNIT** - Organizational Unit **ROLE** - Role **THING** - Userthing	
getLsExecutedActions()	Gets a list of actions executed by the activity.	

Getter method to get the process corresponding to the case

The process corresponding to a case can be obtained through the getProccess() method of the model class, which returns an instance of the "Process" class with its methods.

Operation	Description	Parameters
getCdProcess()	Gets the code of the process.	
getCdVersion()	Gets the version of the pro-cess.	
getIdApplication()	Gets the application identifier of the process.	
getCdFirstActivity()	Gets an Activity object with the first process activity,	
getDsComment()	Gets the comment of the pro-cess.	
getDsDescription()	Gets the description of the process.	
getDsName()	Gets the name of the process.	

Service Class Content

The service allows the following operations to be performed on the cases:

Operation	Description	Parameters
startCase(case) startCase(case, user)	Starts a case, executing the initial activity of the related process. Returns the code of the created case.	Case **case**: Model of the case to start. Related form fields must have values Case **case**: Case model with the values assigned to the related form fields String **user**Code of the user that executes the activity. It must be specified when the participant responsible for the activity is a role
execute(case) execute(case, user)	Executes the current activity of a case. Returns the state of the updated case.	Case **case**: Model of the case with assigned case number Case **case**: Model of the case with assigned case number String **user**Code of the user that executes the activity. It must be specified when the participant responsible for the activity is a role
read(case)	Reads a case.	Case **case**: Model of the case with assigned case number
cancelCase(case, observation)	Cancel a case.	Case **case**: Model of the case with case number to be cancelled. Cancellation is done with the online user executing the sdk rule. String **observation**: Reason for cancellation

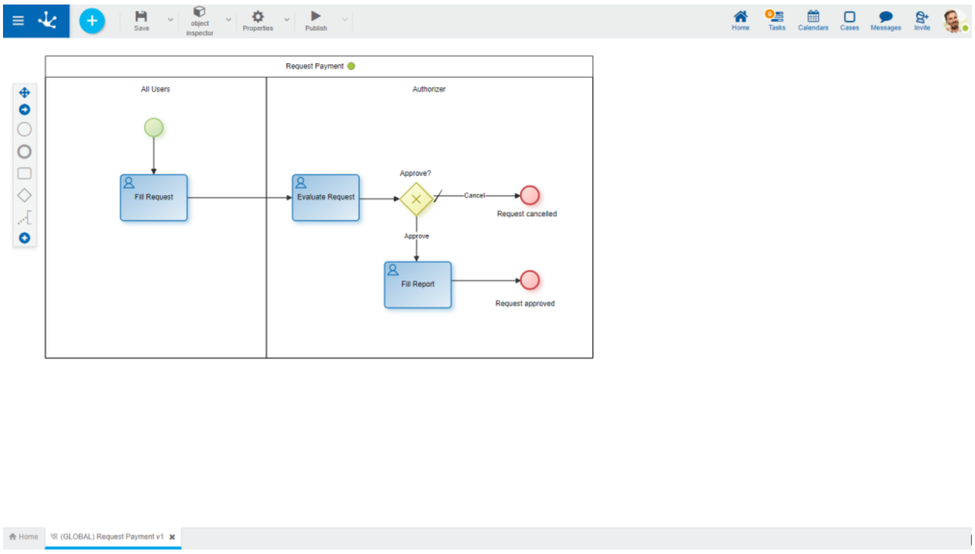
Examples of Use

The examples use the “Request Payment” process and each example contains the use of the “RequestPayment” model class and the “RequestPaymentService” service class.

In addition, “Request” and “Report” classes are used, which represent models of forms related to the “Request Payment” process.

The examples detail how to start a case, read it, execute its activities, finish and cancel it.

Process Diagram



1. Starting a case

To start the case, the first activity "Fill Request" is executed. The case moves to the “Evaluate Request” activity under the responsibility of “Afarias” user, configured in the “Authorizer” lane

Executing the “Fill Request” activity performs the “Create” operation on the “Request” form with the values assigned to its fields.

An instance of the "RequestPayment" model class is created, in the "Request" form obtained through the getRequestEntity() method, values are assigned to its fields with the corresponding setter methods. The case is started using the "RequestPaymentService" service class with the startCase(myFirstPaymentCase) method.

```
RequestPayment myFirstPaymentCase
     = new RequestPayment() ;
```

```
myFirstPay-
mentCase.getRequestEntity().setA-
mount(new Double(200));

SimpleDateFormat format
        = new SimpleDateFormat("yyyy-MM-
dd");
myFirstPay-
mentCase.getRequestEntity().setDueDate(
new Date(format.parse("2020-06-
28").getTime()));
myFirstPay-
mentCase.getRequestEntity().setMes-
sage("This is my first payment request
.. i need to buy more coffee !!");

RequestPaymentService myService
        = new RequestPaymentService(getA-
piClient());
String cdCase =
myService.startCase(myFirstPay-
mentCase);
```

2. Reading the case

An instance of the "RequestPayment" model class is created, it is assigned a case number generated by the startCase(myFirstPaymentCase) method of the "RequestPaymentService" service class, in the previous example.

The case is read with the read(myFirstPaymentCase) method of the "RequestPaymentSercice" service class and the case number.

```
RequestPayment myPaymentCase = new Re-
questPayment();
myPaymentCase.setCdCase(cdCase);
myPaymentCase = myService.read(myFirst-
PaymentCase);
```

3. Activity execution defining modeled buttons

The case is in the “Evaluate Request” activity, which has two modeled buttons. The next activity to be executed depends on the button selected, in this example “Approve” is selected. If no button is specified, the modeled flow is followed as default.

The “Approve” button is assigned to the “Request Payment” model class using the corresponding setter method. The “Evaluate Request” activity is executed with execute(myPaymentCase) method of the “RequestPaymentService” service class.

As a result, the case is in the “Fill Report” activity and its state is “ACTIVE”,

```
myPaymentCase.setLastPresedButton("Ap-
prove");
myService.execute(myPaymentCase);
```

4. Activity execution not defining modeled buttons

The case is in the “Fill Report” activity. This activity execution creates the “Report” form. This form has a field called "request" that is related to the "Request" entity.

The “request” field is completed by means of the corresponding setter method, with the identifier of the “Request” entity related to the case, which is obtained by means of the getRequestEntity() method.

The rest of the fields are completed and the “Fill Report” activity is executed with the execute(myPaymentCase) method of the “RequestPaymentService” service class.

The case is sent to the “Request approved” end event and its state is ended.

```
Integer requestId
       = myPay-
mentCase.getRequestEntity().GetReques-
tId();

myPay-
mentCase.getReportEntity().setRequest(r
equestId.toString());
myPaymentCase.getReportEntity().setPay-
mentMethod("Credit");
myPaymentCase.getReportEntity().set-
Summary("Filling the report using the
SDK.");
myService.execute(myPaymentCase);
```

5. Cancellation of a case

An instance of the “RequestPayment” model class is created, it is assigned the case number to be canceled.
The cancellation reason is entered in the “observation” parameter and the case is canceled with the cancelCase(myPaymentCase, observation) method of the “RequestPaymentService” service class.

```
RequestPaymentService myService
      = new RequestPaymentService(getA-
piClient());
RequestPayment myPaymentCase = new Re-
questPayment();
myPay-
mentCase.setCdCase("0000000091120000");
myService.cancelCase(myPaymentCase,"Du-
plicate case");
```

Rules

The model class contains getter and setter methods for each of the parameters defined in an advanced rule, while the service class contains the operation to be performed with the model.

The model name as well as the service name are determined by the property SDK Class Name specified when modeling the advanced rule.

For example, if the "taxCalculation" advanced rule is used when downloading the Java sources of the rule, you get a taxCalculation.java file that represents the model and another taxCalculationService.java file with the available operation of the service.

Model Class Content

An advanced rule model contains:

- Model builder.
- General getter method.
- Set of getter and setter methods of its parameters. The output parameters only have getter methods.

General getter method

Operation	Description	Parameter
getCdRule()	Returns the identifier of the rule.	

Data Type

The parameters of an advanced rule have their equivalence with the data types of form fields.

Service Class Content

Service allows the following operations to be performed:

Operation	Description	Parameter
execute(rule)	Executes an advanced rule.	Rule **rule**: Model of the rule to be executed

Example of Use

The example invokes the "taxCalculation" advanced rule, using the model and service classes.

Values for "amount" and "taxRate" input parameters are defined in the model using its setter methods. Next, the execute(myRule) method of the service is executed and a VAT value is obtained from the getter method of the "taxValue" parameter.

```
// Calculation of 21% VAT on the Amount
Received
taxCalculationService myService =
        new taxCalculationService (get-
ApiClient());
taxCalculation myRule = new taxCalcula-
tion() ;
myRule.setAmount(new Double(100.12));
myRule.setTaxRate(new Double(21.00));

myRule = myService.execute(myRule);
// Gets the Amount of VAT Applied
Double doubleResult =
```

```
myRule.getTaxValue();
log("The result of the tax value is:"
 + doubleResult);
```

Users

The model class contains the properties with its getter and setter methods, while the service class contains the operations to be performed with the model.

Content of the Model Class

A user's model contains:

- Model builder.
- Set of getter and setter methods of its attributes.

Getter methods to get user attributes

The model class for a case contains a set of getter methods for the attributes of the case.

Operation	Description	Parameters
getFirstName()	Gets the user name.	
getLastName()	Gets the user last name.	
getEmail()	Gets the user email.	
getUserCode()	Gets the user code.	
getAlias()	Gets the user alias.	
getOrganizationalUnit()	Gets the user organizational unit.	
getAuthorizedUserCode()	Gets the authorizing user code.	
getCalendar()	Gets the user calendar.	
getJobs()	Gets the job positions.	

Operation	Description	Parameters
getDelegates()	Gets the user delegated users.	
getDelegatesOf()	Gets the users where the user is defined as a delegate.	
getActive()	Gets the user state. Possible values: **1** - Active **0**- Inactive	
getExpiration()	Gets the user expiration date.	
getUserDurationDays()	Gets the number of days the password expires since the user was created. Possible values: **0** - Never **30** - 30 days **60** - 60 days **90** - 90 days	
getLicenses()	Returns a list of licensed products for the user.	
getPermissions()	Returns a list with the user permissions.	
getRoles()	Returns a list with the user roles.	
getIdentificationType()	Gets the identification type of the user personal data.	
getIdentificationNumber()	Gets the identification number of the user personal data.	
getPhone()	Gets the user phone number.	
getExtensionNumber()	Gets the user phone extension number.	
getNationality()	Gets the user nationality.	

Operation	Description	Parameters
getBirthday()	Gets the user birthdate.	
getCountry()	Gets the user country.	
getState()	Gets the user state	
getCity()	Gets the user city.	
getZipCode()	Gets the user zip code.	
getStreetName()	Gets the user street name.	
getStreetNumber()	Gets the user street number.	
getDepartament()	Gets the user department code.	
getLinkedinAccount()	Gets the linkedin user code.	
getTwitterAccount()	Gets the twitter user code.	
getFacebookAccount()	Gets the facebook user code.	
getYouTubeAccount()	Gets the youtube user code.	
getSkypeAccount()	Gets the skype user code.	
getObservation()	Gets the user observations.	

Service Class Content

The service allows the following operations to be performed:

Operation	Description	Parameters
read(user)	Reads an instance.	User **user**: User code to read
getUserImage(user)	Gets the user profile image.	User **user**: User code to read
getThumbnail(user)	Gets the thumbnail image of the user profile.	User **user**: User code to read

Operation	Description	Parameters
verifySecurity(user,function)	Returns true if the user has the security function specified as a parameter in his permissions, and false if otherwise.	User **user**: User code to read String **function**: Code of the specified safety function
search(searchCriteria)	Returns a list of instances of the model class with specified search criteria	SearchCriteria **searchCriteria**: Search criteria

Example of Use

The examples use the **Deyel** user object and each example contains the use of the "User" model class and the "UserService" service class.

1. Service creation

This service is created only once in the rule and is reused in different operations.

```
UserService userService = new UserServ-
ice(getApiClient());
```

2. User reading

In this example, a user with the userCode property with "JPAZ" value is read, using the read(user) method of the "UserService" service class. The value of the lastName property is obtained with the getter method of the "User" model class.

```
User user = new User();
user.setUserCode("AFARIAS");
user = userService.read(user);
```

3. Get the user profile image

In this example, a user with the userCode property with "AFARIAS" value is read and its profile image is obtained through the getUserImage(user) method of the "UserService" service class.

```
User user = new User();
```

```
user.setUserCode("AFARIAS");
userService.getUserImage(user);
```

4. Get user profile image

In this example, a user with the userCode property with "AFARIAS" value is read and its profile image is obtained through the getUserImage(user) method of the "UserService" service class.

```
User user = new User();
user.setUserCode("AFARIAS");
userService.getThumbnail(user);
```

5. Security check

In this example it is verified if a user with the userCode property with “AFARIAS' value has the “DUU0C001” security function defined. The verifySecurity((user, “DuU0C001”) method of the “UserServ-ice” service class is used with a user that has been read using the read(user) method and the specified security function, as parameters.

```
User user = new User();
user.setUserCode("AFARIAS");
user = userService.read(user);
boolean userHasAccess = userServ-
ice.verifySecurity(user, "DUU0C001");
```

6. Search

This example retrieves a list with users whose dsEmail property contains the word "gmail" and the cdOrgUnit property has the "0000000007" value. The results are sorted by last name in ascending order. The list is scrolled displaying the first and last names of the users. Same criteria as for form searches are used.

```
SearchCriteria searchCriteria = new SearchCriteria();
Criteria criteria1 = Criteria.like("dsEmail", "gmail");
Criteria criteria2 = Criteria.eq("cdOrgUnit", "0000000007");
searchCriteria.addCriteria(criteria1);
searchCriteria.addCriteria(criteria2);
searchCriteria.addOrderAsc("dsLastName");
```

```
List list = userService.search(searchCriteria);
Iterator it = list.iterator();
while (it.hasNext()) {
 User user = (User) it.next();
 log(user.getFirstName() + " " + user.getLastName());
}
```


The model class contains the properties with its getter and setter methods, while the service class contains the operation to be performed with the model.

Model Class Content

A user's model contains:

- Model builder.
- Set of getter and setter methods of its attributes.

Getter methods to get the organizational unit attributes

The model class of a case contains a set of getter methods for the organizational unit attributes.

Operation	Description	Parameters
getDisplayName()	Gets the descriptive name of the organizational unit.	
getName()	Gets the name of the organizational unit.	
getManager()	Gets the manager user of the organizational unit.	
getSuperiorOrganizationalUnit()	Gets the superior organizational unit of the organizational unit.	
getDescription()	Gets the description of the organizational unit.	

Operation	Description	Parameters
getEmail()	Gets the email of the organizational unit.	
getCalendar()	Gets the calendar of the organizational unit.	
getManagerCanReadPrivateData()	Returns true if the organizational unit manager has permission to read private data, false otherwise.	
getManagerCanUpdatePrivateData()	Returns true if the organizational unit manager has permission to update private data, false otherwise.	
getManagerCanDeletePrivateData()	Returns true if the organizational unit manager has permission to delete private data, false otherwise.	
getUserCanReadPrivateData()	Returns true if the organizational unit users have permission to read private data, false otherwise.	
getUserCanUpdatePrivateData()	Returns true if the organizational unit users have permission to update private data, false otherwise.	
getUserCanDeletePrivateData()	Returns true if the organizational unit users have permission to delete private data, false otherwise.	

Service Class Content

The service allows the following operations to be performed:

Operation	Description	Parameter
read(orgUnit)	Reads an instance.	User **OrgUnit**: Code of the organizational unit to read

Example of Use

The **Deyel** organizational unit object is used. It contains the use of the “OrganizationalUnit” model class and the “OrganizationalUnitService” service class.

1. Service creation

This service is created only once in the rule and is reused in different operations.

```
OrganizationalUnitService organizationalUnitService = new OrganizationalUnitService(getApiClient());
```

2. Reading of the organizational unit

This example retrieves the manager property value of an organizational unit identified with the "000000008' code, using the read method (organizationalUnit) of the "OrganizationalUnitService" service class. The manager property value is obtained through the corresponding getter method of the "OrganizationalUnit" model class.

```
OrganizationalUnit organizationalUnit = new
OrganizationalUnit();
organizationalUnit.setOrganizationalUnit("0000000008");
OrganizationalUnit xOrganizationalUnitReaded =
organizationalUnitService.read(organizationalUnit); log("Manager: "
+ organizationalUnitReaded.getManager());
```

Calendars

For the calendar object, only service class operations are defined to work with dates, the model class is not necessary because the **Deyel** data types are used. The service class is predefined in the Deyel SDK and does not need to be downloaded.

Service Class Content

The service allows the following operations to be performed:

Operation	Description	Parameters
worksDays(start, end)	Obtains work days between dates, using the current user's calendar or another one specified as a parameter.	Timestamp **start**: Period start date Timestamp **end**: Period end date
worksDays(start, end, calendar)	Obtains work days between dates, using the calendar specified as a parameter.	Timestamp **start**: Period start date Timestamp **end**: Period end date Integer **calendar**: Code of the specified calendar
convertToTimeZone(date, calendar)	Converts a date into a specified time zone.	Timestamp **date**: Date to convert Integer **calendar**: Calendar code with specified time zone

Example of Use

Examples contain the use of "CalendarService" service class.

1. Service creation

This service is created only once in the rule and is reused in different operations.

```
CalendarService calendarService =
new
```

```
    CalendarService(getApi-
Client());
```

2. Calculation of work days between dates

In this example, a budget number is read and the number of work days between the budget entry date and the budget due date is calculated.

A budget with the dsNumber "100234" property value of the "Budget" model class is read, using the read(budget) method of the "BudgetService" service class.
With the workDays(start, end) method of the "CalendarService" service class, the number of work days between the dtQuote and dtDue properties values is obtained, from the corresponding getter methods of the "Budget" model class.

```
BudgetService budgetService = new Budg-
etService(getApiClient());
 String dsNumber = "100234";
 Budget budget = new Budget();
 budget.setDsNumber(dsNumber);
 budget = budgetService.read(budget);
 Timestamp start = new
Timestamp(budget.getDtQuote().get-
Time());
 Timestamp end = new
Timestamp(budget.getDtDue().getTime());
 calendarService.worksDays(start, end);
```

3. Time calculation with another time zone

This example converts local time to Mexico time, set by calendar 2 time zone, using the convertToTimeZone(localTime, 2) method of the "CalendarService" service.

```
Timestamp localTime = Timestamp.val-
ueOf(LocalDateTime.now());
    Timestamp timeMexico =
calendarService.convertToTimeZone(lo-
calTime, 2);
   log("Local Time: " + localTime + "
Time Mexico: " + timeMexico);
```

For email sending, only the service class operation is defined, the model class is not necessary because **Deyel** data types are used. The service class is predefined in the Deyel SDK and does not need to be downloaded.

Service Class Content

Service allows the following operation to be performed:

Operation	Description	Parameters
sendmail(message, from, listTo, subject)	Sends an email.	String **message**: Email text String **from**: Sender email String[] **listTo**: List of recipient emails String **subject**: Email subject

Example of Use

The example contains the use of "EmailService" service class.

Standard email sending

In this example an email is sent where the body of the email, the subject, who sends it and those who receive it is specified.

The "EmailService" service is created to then execute the mail sending method sendMail(), using the required parameters.

```
EmailService emailService = new
EmailService(getApiClient());
emailService.sendMail ("Message of
email",
                       "emailFrom@op-
taris.com",
                             new
String[]{"emailTo@optaris.com"},
                       "My Email" );
```

To develop an advanced rule using an IDE, a series of steps must be followed.

Once the rule is created in the advanced rules modeler, it is downloaded to be included in the IDE project, it is developed and, once finished, it is imported from the context menu into the Deyel modeler.

Example of Use

This example describes the steps to develop the "getCostsWithTax" rule in the IDE.

A rule named "getCostsWithTax" is created. It receives a list of amounts as input parameter. Such list is added and the VAT cost is obtained. Returns the total VAT and the total amount of the sum as output parameter.

The “getCostsWithTax'' rule invokes the "taxCalculation" rule, which receives the sum of amounts as an input parameter, in the "inputAmount" field. Returns the VAT value as an output parameter, in the "taxValue" field.

> *For the example, the "taxCalculation" rule is assumed to be available within the environment.*

Step 1: Create the "getCostsWithTax" rule

In the rule modeler, a rule is created with the "getCostsWithTax" descriptive name.
The previously created adapter is selected, enter a description and press "Create Rule".

An input parameter is defined:

Name	**Data Type**
"amountList"	Double[]

Defined as output parameters:

Name	**Data Type**
"totalAmount"	Double
"AmountOfTaxApplied"	Double

This rule should be related to the "taxCalculation" rule using the wizard to include related objects, from the advanced properties tab.

Once the parameters have been entered and the new relation has been added, select the "Save" option from the top toolbar.

Step 2: Download the "getCostsWithTax" rule

From the top toolbar of the rule modeler, select the “Download” option.
The rule download includes the Java sources for developing and testing the rule.

Step 3: Setup the local environment

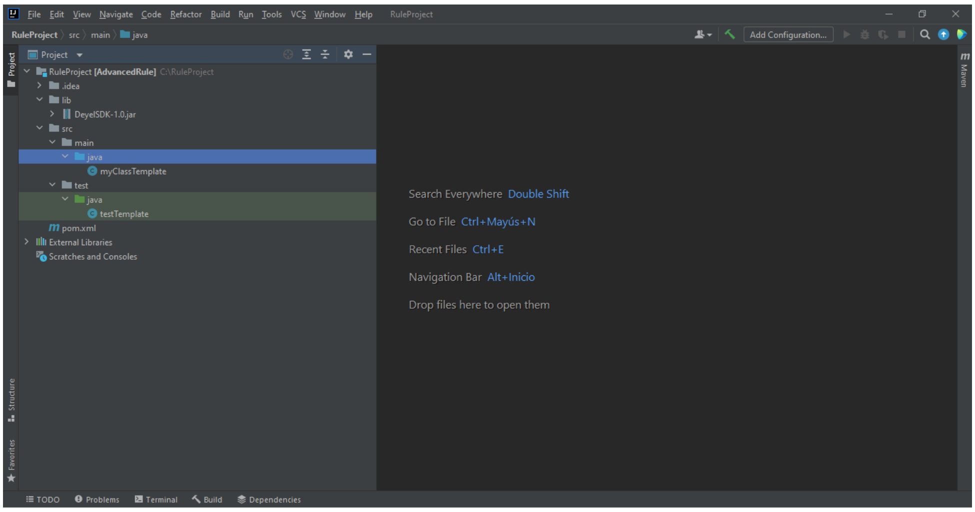
To develop the rule you need to have a local environment to work with Java.

Step 4: Include the "getCostsWithTax" rule in the Java IDE project

The rule download generates a file with a zip extension containing a "src" folder that respects the structure of Maven projects.

The file with zip extension should be copied to the project folder and decompressed in the same folder.

The structure of the project already configured is shown:



Step 5: Rule development

When the “getCostsWithTax” rule is included in the Java IDE project, two classes are obtained:

Name	Description
getCostsWithTax_1	Includes the rule logic
getCostsWithTax_1_Test	Includes the values to test from the IDE

The following code is defined in the getCostsWithTax_1 class:

```
   public class getCostsWithTax_1 ex-
tends
 getCostsWithTax_1_abstract{
   protected void run() throws
java.lang.Exception{
   // The sum of the amounts is calcu-
lated
   totalAmount = 0.0 ;
   for (Double amount: AmountList
       totalAmount += amount;
   }
   // 21% VAT on the amount entered is
calculated
 taxCalculationService myService =
          new taxCalculation-
Service(getApiClient());
 taxCalculation myRule =new taxCalcula-
tion();
 myRule.setInputAmount(totalAmount);
 myRule.setTaxRate(new Double(21.0));
 myRule = myService.execute(myRule);
   // Gets the amount of VAT applied
   amountOfTaxApplied =
myRule.getTaxValue() ;

   }
}
```

Setup of the Local Environment

The steps necessary to setup the local environment to work with Java are described below. After completing these steps, the rule can be included in the Java IDE.

> *For projects created in a version earlier than 7.7, it is recommended to build a new project with the Maven project structure.*

Step 1: Install the Java JDK

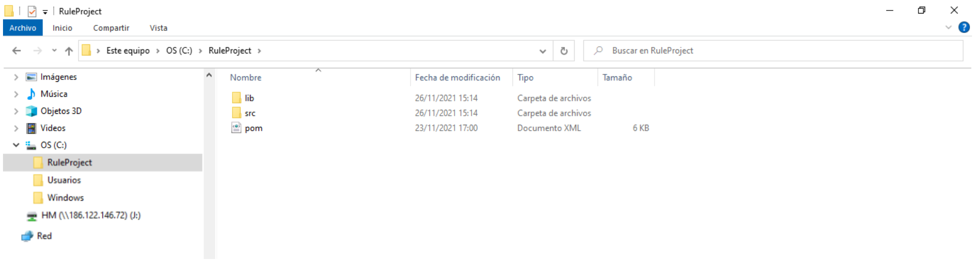
Download and install the Java JDK (Java Development Kit).

Step 2: Install an IDE of preference to work with Java

Download and install a Java IDE.

Step 3: Download the Maven Project

From the top toolbar in the [save submenu of the rule modeler]() select the option "Download SDK". Downloading the Maven project, a file with a zip extension is obtained, once it is unzipped into a folder, it is subsequently imported into the project defined in the IDE.



Step 4: Create the project in a Java IDE

In order to create a project in a Java IDE it is necessary to:

- Import from the IDE the Maven project previously downloaded in the folder in Step 3. Folders will automatically be associated with the project in the IDE used.

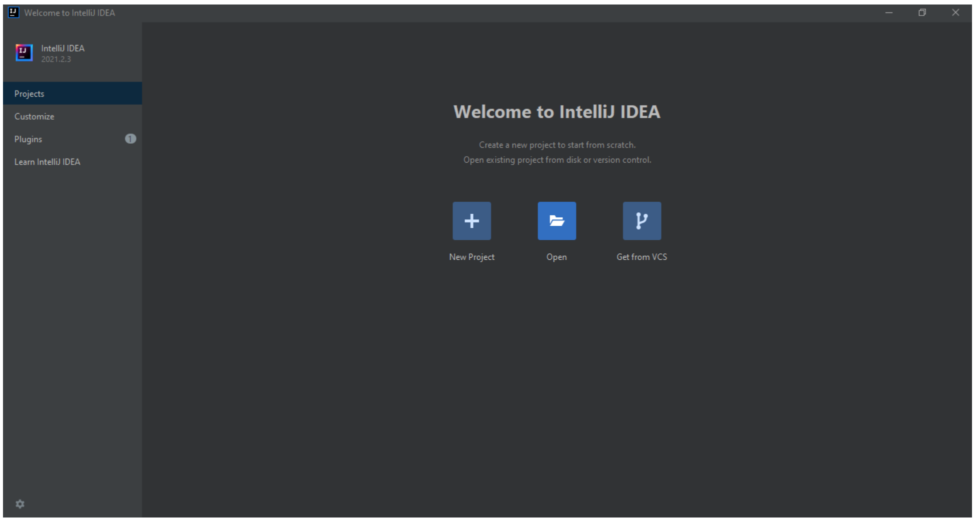
[Guide to create the project in the IntelliJ IDE]()

[Guide to create a project in Eclipse IDE]()

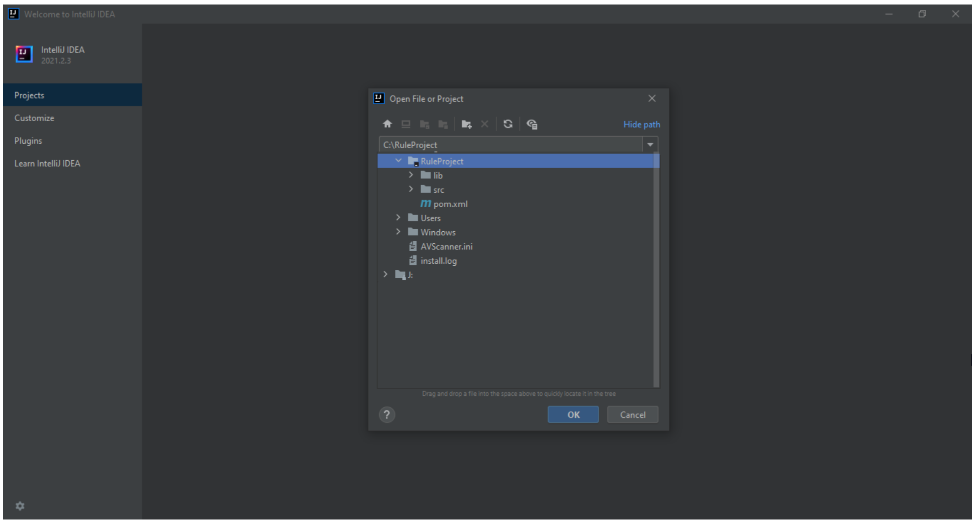
Guide to create the project in the IntelliJ IDE

The steps required to create the project in the Intellij IDE are described below.

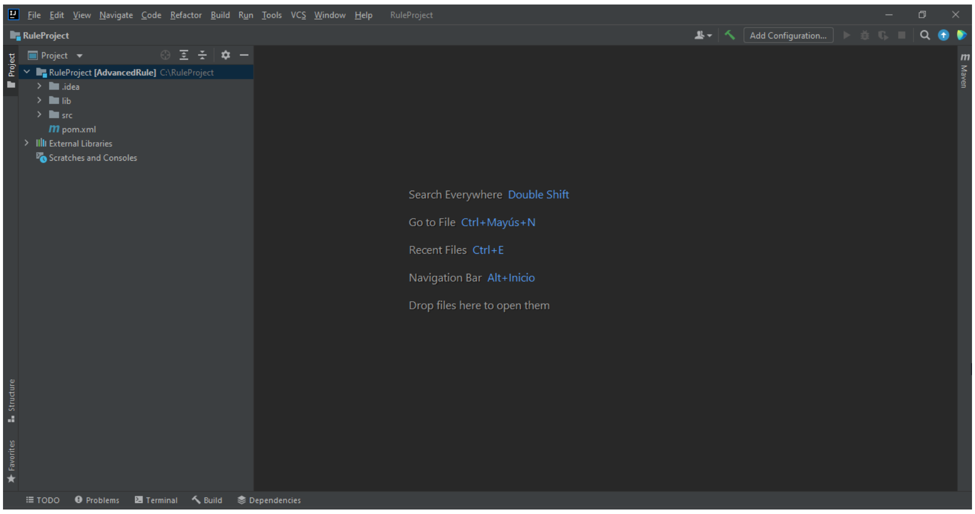
1. Press the button corresponding to open.



2. Select the folder in which the Maven project downloaded from **Deyel** was unzipped. Press the button corresponding to accept.



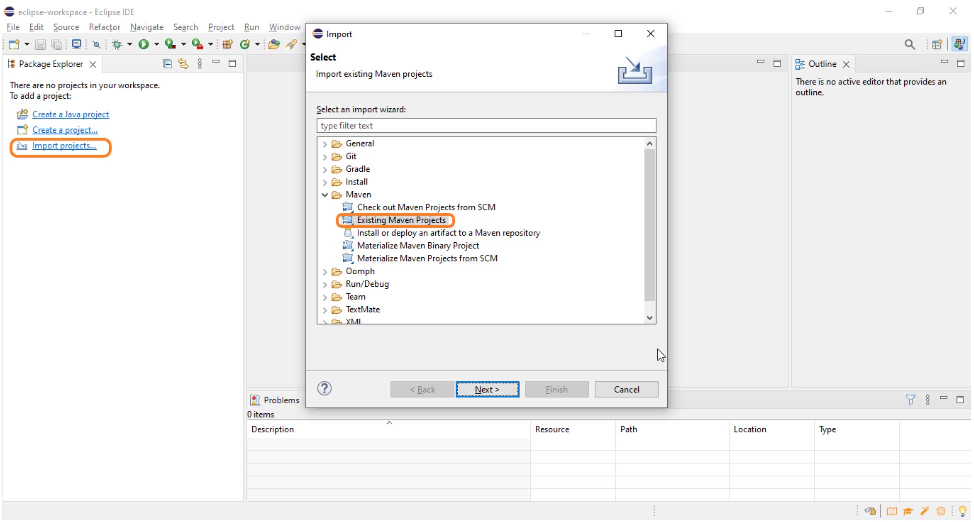
3. End of installation, the project has already been imported.



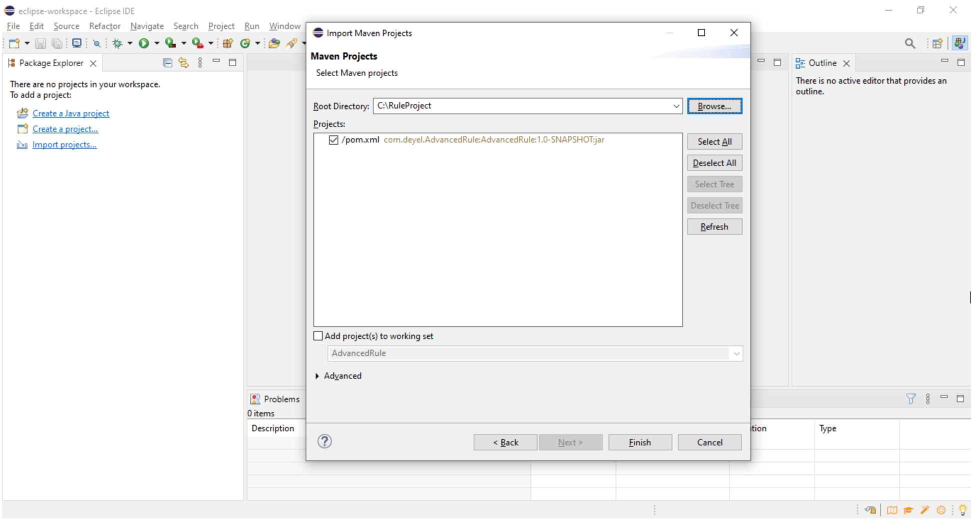
Guide to create a project in Eclipse IDE

The steps required to create a project in Eclipse IDE are described below.

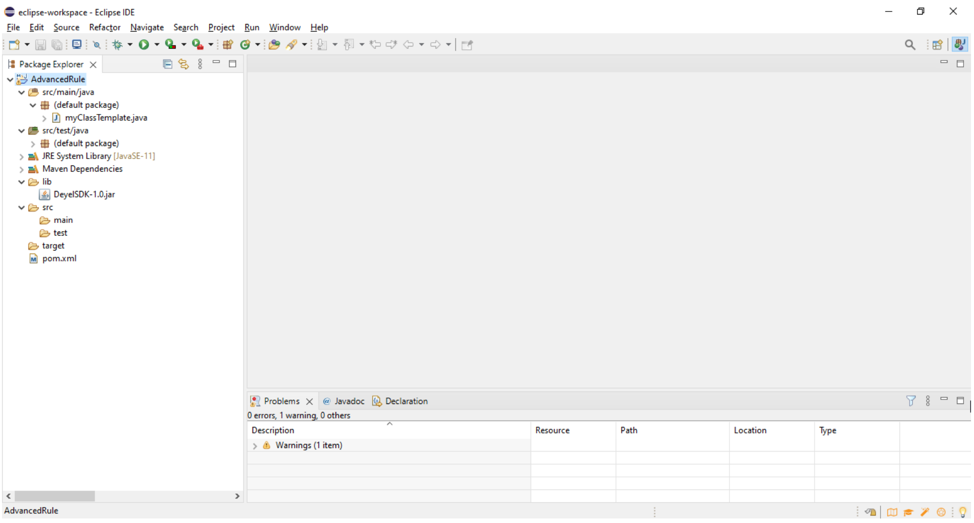
1. Select "Import Projects". Choose the option "Existing Maven Projects'' and press the button corresponding to next.



2. Select the folder in which the Maven project downloaded from **Deyel** was unzipped. Press the button corresponding to end.



3. End of installation, the project has already been imported.



3.6.5.2. Adapters

Adapters are defined in **Deyel** and they allow integration with different applications and platforms through the use of advanced business rules. Its purpose is to exchange data and share behaviors.

An adapter encapsulates the complexity of communicating with an external component. It allows different advanced rules to use it to invoke the operations that such component exposes.

When an adapter is defined, the following is configured:

- The attributes that identify the platform with which you want to interact.
- The way to establish communication.
- The operations the software component exposes.

The definition of adapters is done using the [modeling facilities](#) property.

Types

Default

These adapters are defined with **Deyel** and they are available in the modeler's grid. There can only be one of each type.

- Twitter
- Mercado Libre
- Tienda Nube
- Deyel SDK
- Docusign
- AwsTextract
- GoogleDrive
- OneDrive

For each of the above adapters, with the exception of AwsTextract and Deyel SDK, an application must be created on each of the platforms, which is the one that establishes the relation between the platform and the environment of **Deyel**. When creating this application, each platform provides the necessary values to set the connection credentials of the corresponding adapter.

The Deyel SDK adapter, for development and execution of business rules, allows the rules that use it to make use of the Deyel SDK facilities.

Standard

These adapters allow access to web services from external providers, in their different communication architectures:

- Rest API
- SOAP

The rules used by these adapters make invocations to specific endpoints, made up of the service URL and information about the operation to be performed. These calls can use different types of authentication, which depend on the security settings implemented by the provider.

Database

Adapters that allow to define access to relational databases through the Java JDBC protocol.

Deyel provides custom adapters for the most popular database engines on the market, facilitating configuration and optimizing interaction with such engines.

The adapters available are:

- IBM/DB2
- Informix
- MySQL
- Microsoft SQL Server
- ORACLE

The rules used by these adapters can execute SQL statements to get and write data to and from any database.

Application

These adapters allow to define access to market applications that expose services to interact with them, integrating operation between **Deyel** and such applications. Thus, the rules that use these adapters can do it safely and encapsulated.

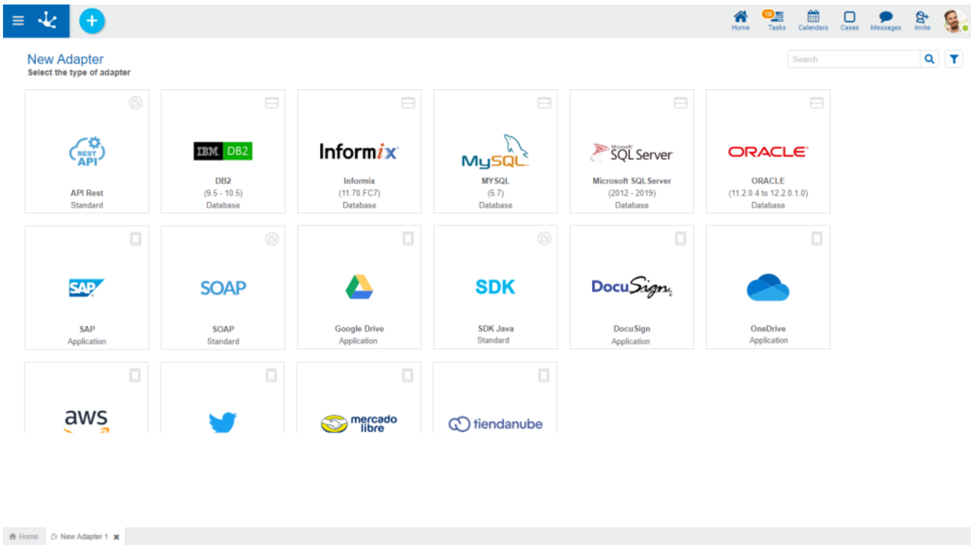
The adapters available are:

- SAP

3.6.5.2.1. Modeling Facilities

New Adapter

To define a new adapter, the modeling user must select its type from a gallery.



In the gallery, for each adapter, the type it belongs to is displayed, and its version is displayed only if applicable. Once the type is selected, go to the properties panel of each one to define its own characteristics.

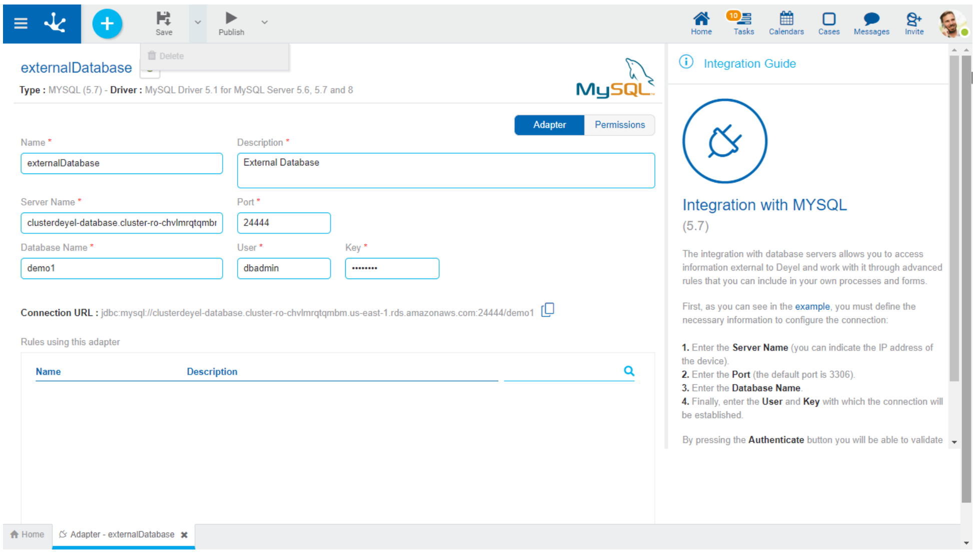
Workspace Sections:

- Top Toolbar
- Adapter Definition Area

3.6.5.2.1.1. Top Toolbar

This toolbar contains icons and submenus from which operations on the adapter can be performed.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". It is verified that certain conditions are met.

Main Conditions

- The name must be unique.
- All the fields indicated as required must be complete.

Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation.
As for integration adapters with services from other platforms, authentication is performed. On the other hand, if it is a database integration adapter, the connection is tested.

Main Conditions

- Integration adapters with services from other platforms require valid URLs, authentication methods and other attributes of the connection such as user, token or keys.
- Database integration adapters require valid specified values for the server name, database, schemas, users, and user password used to establish the connection.

Delete

Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid. This operation is not available for predefined adapters.

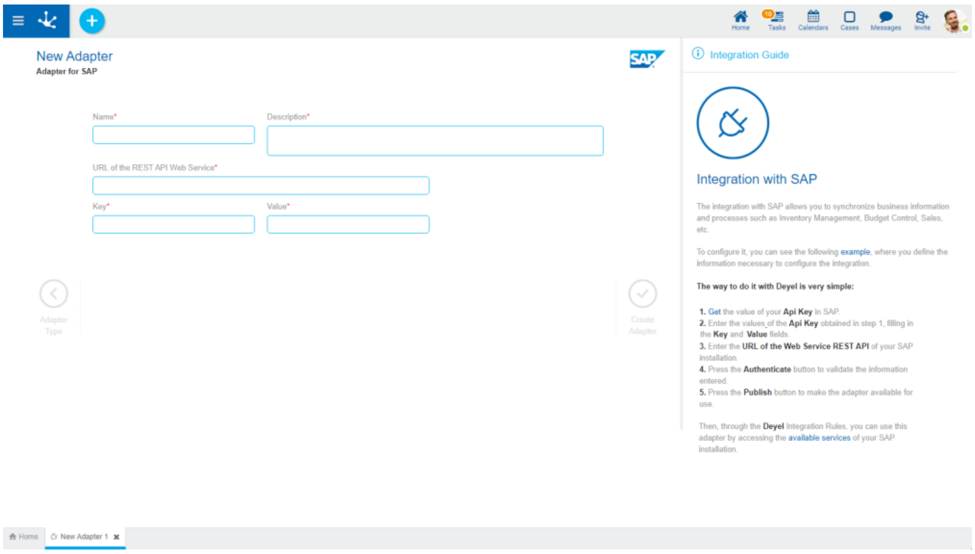
Delete Publication

This icon allows to remove the adapter from use by returning it to the state "Draft".

3.6.5.2.2. Definition Area

The definition area consists of a panel with the adapter properties and an integration guide that assists and guides the modeler. Depending on each adapter, it may contain examples of use or references to external sites that facilitate configuration.

The adapter properties can be entered both at the time of their creation and when modifying an existing one. Each adapter allows configuration of specific properties, although they share some, for example the name that identifies them.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

In addition to these shared properties, each type of adapter has specific properties.

Name

Name of the adapter that uniquely identifies it. It is mandatory. Identifier that is displayed in the modeler's grid and selecting the adapter when creating an advanced rule.

Description

Text that defines the adapter describing its functionality. It is mandatory. This description is displayed along with its name by selecting the adapter when creating an advanced rule.

Predefined Adapters

- Twitter
- Mercado Libre
- Tiendanube
- Deyel SDK
- DocuSign
- AwsTextract

- GoogleDrive
- OneDrive

Standard Adapters

- Rest API
- Soap

Database Adapters

- IBM/DB2
- Informix
- MySQL
- Microsoft SQL Server
- Oracle

Application Adapters

- SAP

3.6.5.2.2.1. Twitter

Deyel allows integration with the Twitter platform through this adapter. In it, the connection credentials are registered and the interaction of the network users of **Deyel** with Twitter can be centrally managed.

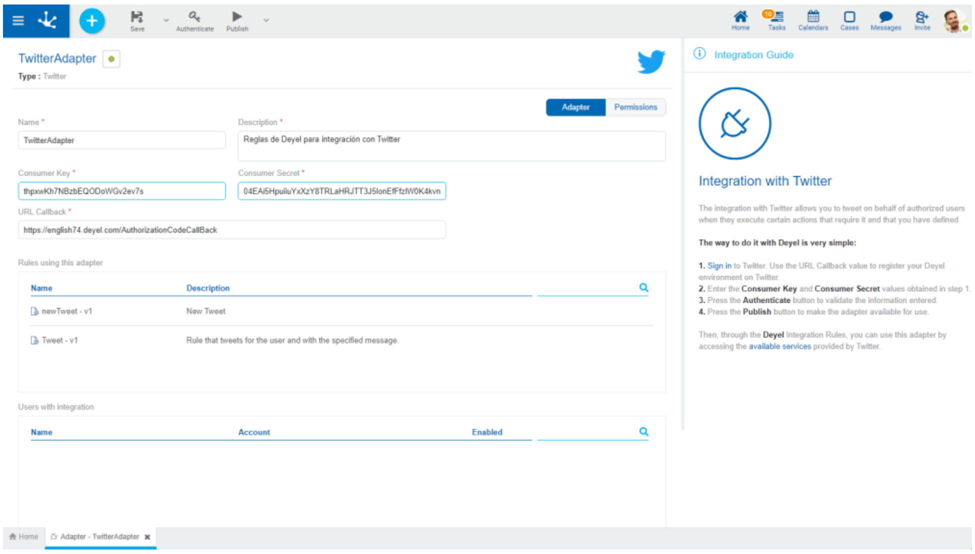
From their profile, each user can enter their credentials to access their Twitter account so that **Deyel** uses them when connecting on its behalf, for example, to publish a post.

Steps for Integration with Twitter

- Register an application on Twitter that identifies the instance of **Deyel**.
- Model the properties of the Twitter adapter detailed below.
- Users must authorize **Deyel** to use the Twitter account from their profile.

Properties

Apart from properties shared by adapters those specific to Twitter are added.



An asterisk "" on the label indicates that the property is required.*

Consumer Key

Identification key of the service that Twitter issues when creating an application on its platform.

Consumer Secret

Secret key associated to the property Consumer Key, are used together when requesting access to the resources provided by the platform.

URL Callback

This property must be defined when creating the application on Twitter and corresponds to the URL that handles the return of requests for services that are made from the **Deyel** environment to the Twitter platform.
The value for this property must be composed with the name of the environment Deyel https://.deyel.com/AuthorizationCodeCallBack.

Rules using this adapter

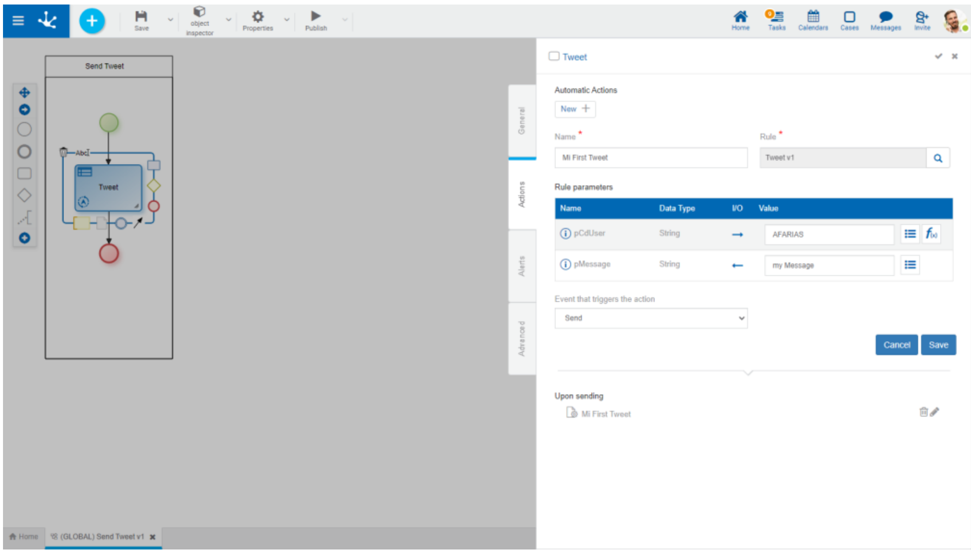
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

Users with integration

This grid shows users who have configured the integration with Twitter in their profile and the state of each one, which can be enabled or disabled. The state can be modified from each line.

Example of Use

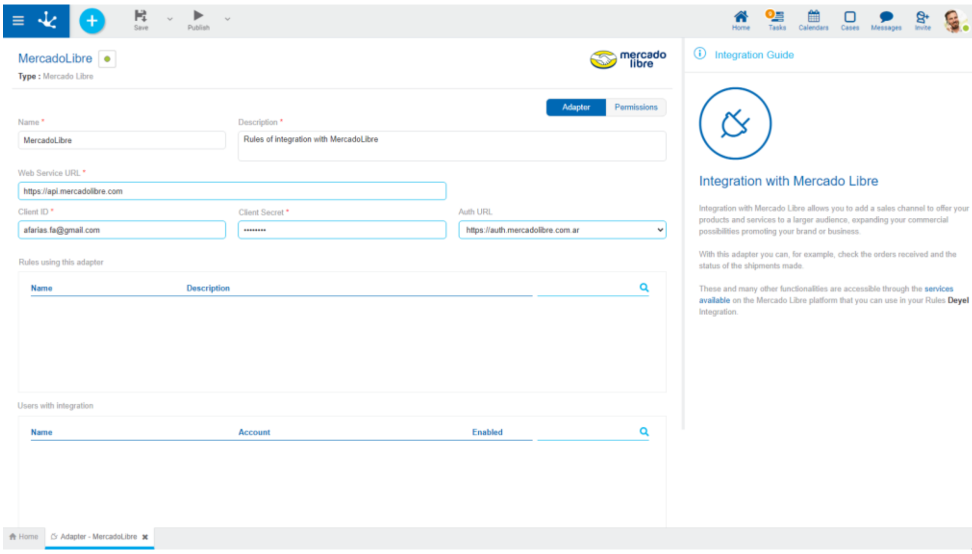
In a content publishing management process, an activity can publish a tweet automatically.



It must be a rule type activity and as an automatic action it invokes a "Tweet v1 - Rule" rule that publishes a tweet to the user with the specified message. The user that publishes the tweet and the message are reported as parameters.

3.6.5.2.2.2. Mercado Libre

Apart from properties shared by adapters those specific to Mercado Libre are added.



> *An asterisk "*" on the label indicates that the property is required.*

Web Service URL

Corresponds to the URL that attends requests for services that are made from the **Deyel** environment to the Mercado Libre platform.

Client ID

Identification of the service that Mercado Libre issues when creating an application on its platform.

Client Secret
Secret key associated to the Client ID property, they are used together when requesting access to the resources provided by the platform.

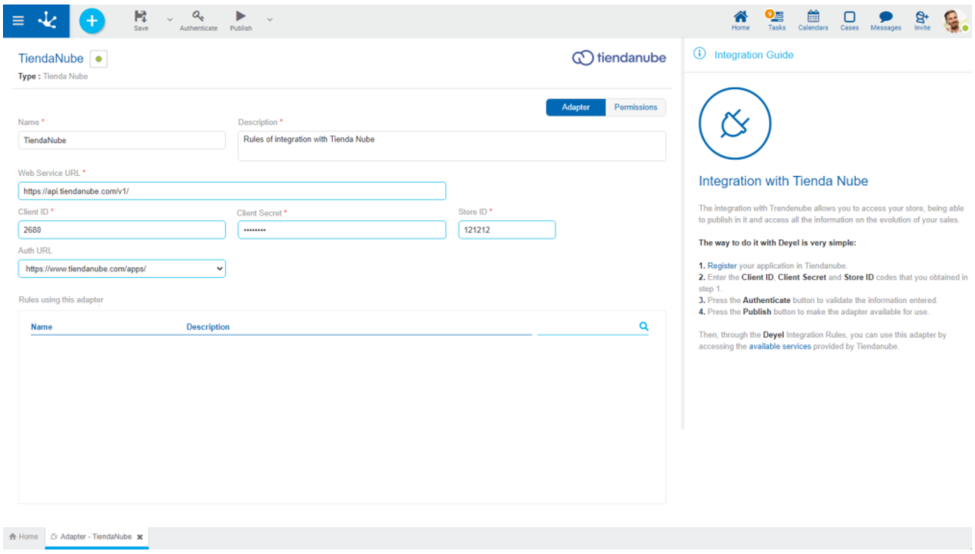
Auth URL
Corresponds to the Mercado Libre URL against which the authentication must be performed.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

Users with integration
In this grid you can see the users who have the Mercado Libre integration configured and the state of each one, which can be enabled or disabled. The state can be modified from each line.

3.6.5.2.2.3. Tiendanube

Apart from [properties shared by adapters] those specific to Tiendanube are added.



An asterisk "" on the label indicates that the property is required.*

Web Service URL
Corresponds to the URL that handles the return of requests for services that are made from the **Deyel** environment to the Tiendanube platform.

Client ID
Identification of the service that Tiendanube issues when creating an application on its platform.

Client Secret
Secret key associated to the Client ID property, they are used together when requesting access to the resources provided by the platform.

Store ID

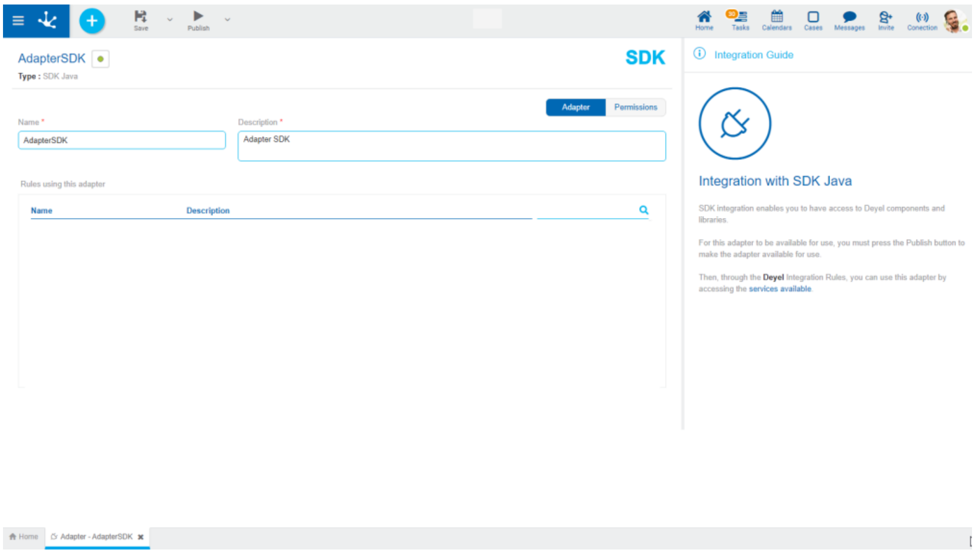
It is the unique identification of the store in Tiendanube

Auth URL
It corresponds to the URL of Tiendanube against which the authentication must be performed.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.4. Deyel SDK

Apart from properties shared by adapters the grid of rules used by the adapter is added.

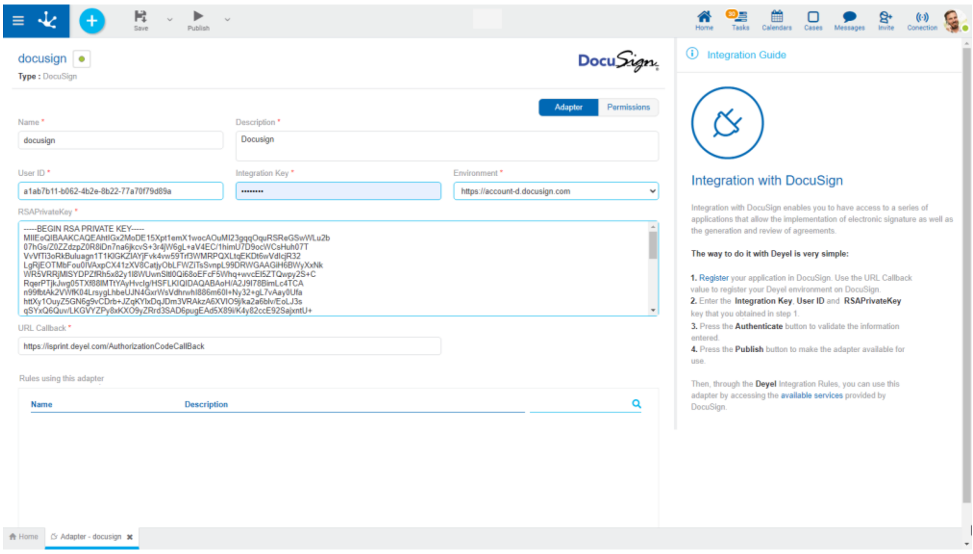


> *An asterisk "*" on the label indicates that the property is required.*

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.5. DocuSign

Apart from properties shared by adapters those specific to DocuSign are added.



An asterisk "" on the label indicates that the property is required.*

User ID

Identification of the user account registered in DocuSign.

Integration Key

Identification key of the service that DocuSign issues when creating an application on its platform.

Environment

Corresponds to the DocuSign URL against which APIRest operations are performed, it can be the production environment or the development environment.

RSAPrivateKey

Secret key associated to the property Integration Key, are used together when requesting access to the resources provided by the platform.

URL Callback

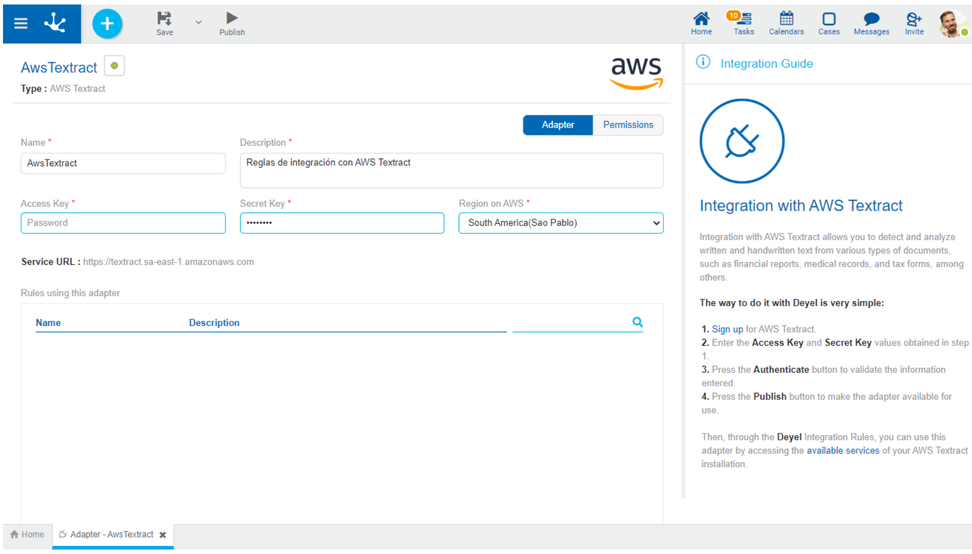
This property must be defined when creating the application on DocuSign and corresponds to the URL that handles the return of requests for services that are made from the **Deyel** environment to the DocuSign platform.
The value for this property must have the name of the environment Deyel https://.deyel.com/AuthorizationCodeCallBack.

Rules using this adapter

In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.6. AwsTextract

Apart from properties shared by adapters those specific to AwsTextract are added.



An asterisk "" on the label indicates that the property is required.*

Access Key

Identification key of the service that AwsTextract issues when creating an application on its platform.

Secret Key

Secret key associated to the property Access Key, are used together when requesting access to the resources provided by the platform.

Region on AWS

Indicates the location of the services to be used. The region determines the transaction processing quotas, based on the documentation.

Service URL

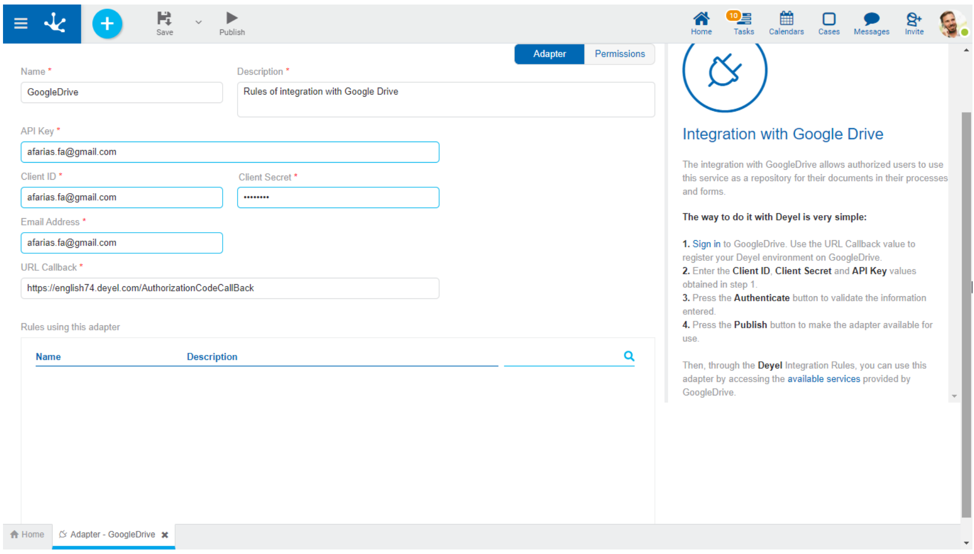
This property is filled in automatically when selecting the Region on AWS property.

Rules using this adapter

In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.7. GoogleDrive

Apart from properties shared by adapters those specific to GoogleDrive are added.



An asterisk "" on the label indicates that the property is required.*

API Key

Access key to the service that GoogleDrive issues when creating an application on its platform.

Client ID

Identification of the service that GoogleDrive issues when creating an application on its platform.

Client Secret

Secret key associated to the Client ID property, they are used together when requesting access to the resources provided by the platform.

Email Address

Associated account and owner of the GoogleDrive space.

URL Callback

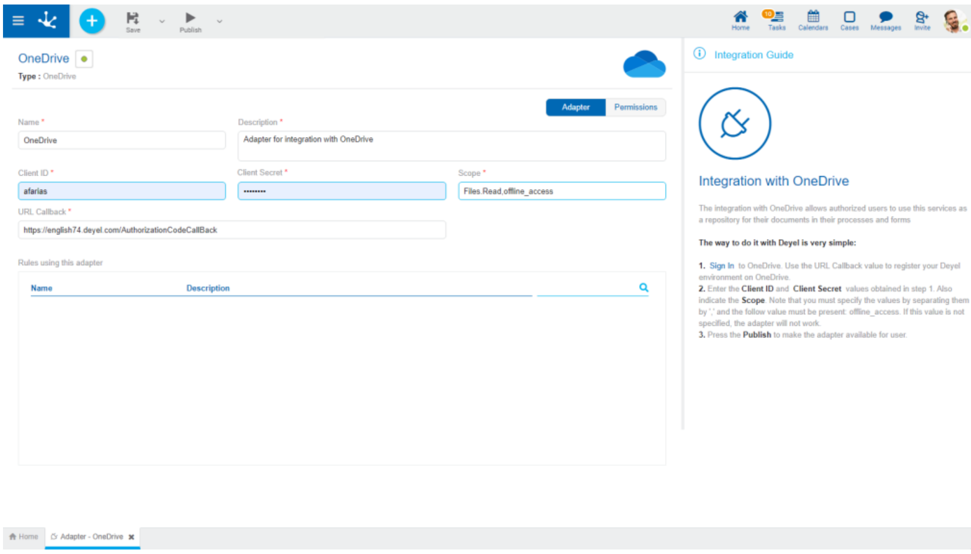
This property must be defined when creating the application on OneDrive and corresponds to the URL that handles the return of requests for services that are made from the **Deyel** environment to the GoogleDrive platform.
The value for this property must be composed with the name of the environment Deyel https: //<mi-ambiente>.deyel.com/AuthorizationCodeCallBack.

Rules using this adapter

In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.8. OneDrive

Apart from properties shared by adapters those specific to OneDrive are added.



An asterisk "" on the label indicates that the property is required.*

Client ID

Identification of the service that OneDrive issues when creating an application on its platform.

Client Secret

Secret key associated to the Client ID property, they are used together when requesting access to the resources provided by the platform.

Scope

Determines what type of access is granted to the application when the user logs in, based on documentation.

URL Callback

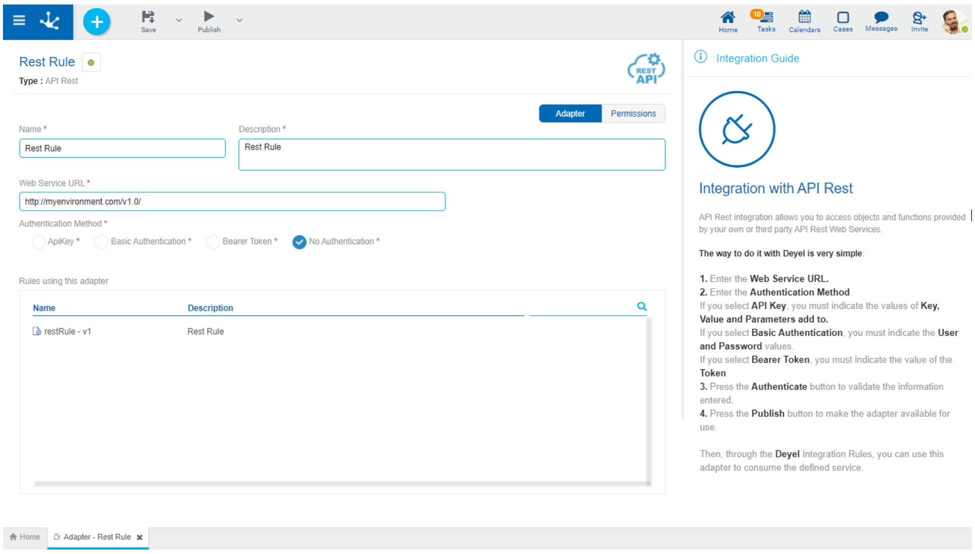
This property must be defined when creating the application on OneDrive and corresponds to the URL that handles the return of requests for services that are made from the **Deyel** environment to the GoogleDrive platform.
The value for this property must be composed with the name of the environment Deyel https://.deyel.com/AuthorizationCodeCallBack.

Rules using this adapter

In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.9. API Rest

Apart from properties shared by adapters those specific to API Rest are added.



An asterisk "" on the label indicates that the property is required.*

Web Service URL

Address of the Rest service with which it is being integrated.

Authentication Method

Identifies the way **Deyel** must authenticate with the service depending on the security scheme it implements.
The possible schemes are:

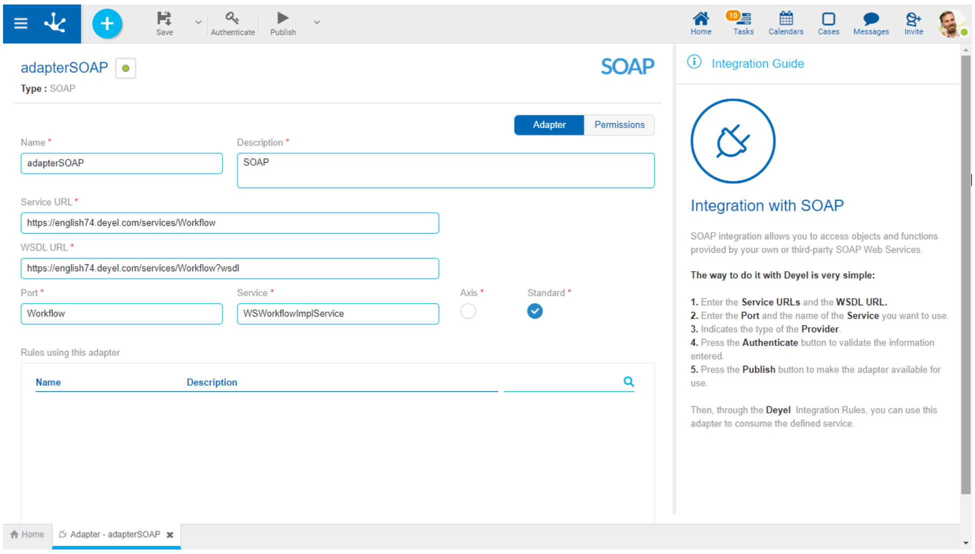
- ApiKey: in this case the service platform generates a combination of unique values called Key and Value. In addition to these values, the value for the property Parameters add to must be indicated, where it is specified in which way the parameters should be sent to the service, it can be done in the Header or as Query Params.
- Basic Authentication: it is the simplest authentication scheme. It must specify the User and Password, provided by the participant responsible of the service.
- Bearer Token: it is a scheme similar to ApiKey but in this case it must specify the Token, which is generated by the service.
- No Authentication: it does not require any access validation.

Rules using this adapter

In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.10. Soap

Apart from properties shared by adapters those specific to Soap are added.



An asterisk "" on the label indicates that the property is required.*

Service URL
Address of the SOAP service with which you want to integrate.

WSDL URL
Address where the definition of the SOAP service classes and methods is obtained.

Port
Port number used by the SOAP service.

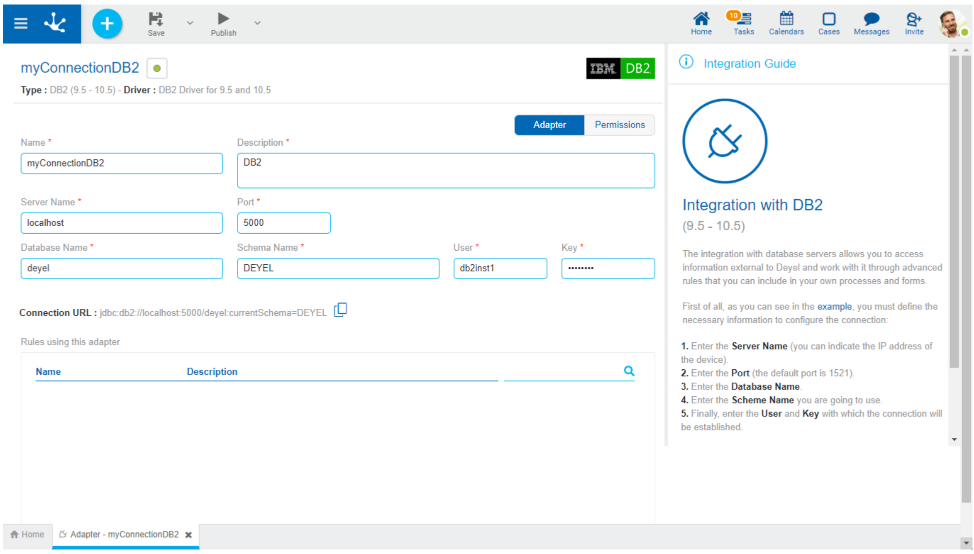
Service
It is the name of the service class.

Authentication Method
Identifies how **Deyel** will authenticate with the service. Possible values are:
- Axis
- Standard

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.11. IBM/DB2

Apart from properties shared by adapters those specific to IBM/DB2 are added.



An asterisk "" on the label indicates that the property is required.*

Server Name
Name or IP address of the server where the database engine is installed.

Port
Port number used by the database engine.

Database Name
Corresponds to the identification of the database with which you want to integrate.

Schema Name
Name of the schema within the database with which you want to integrate.

User
Identification of the database user that has permissions on the schema.

Key
Password of the database user making the connection.

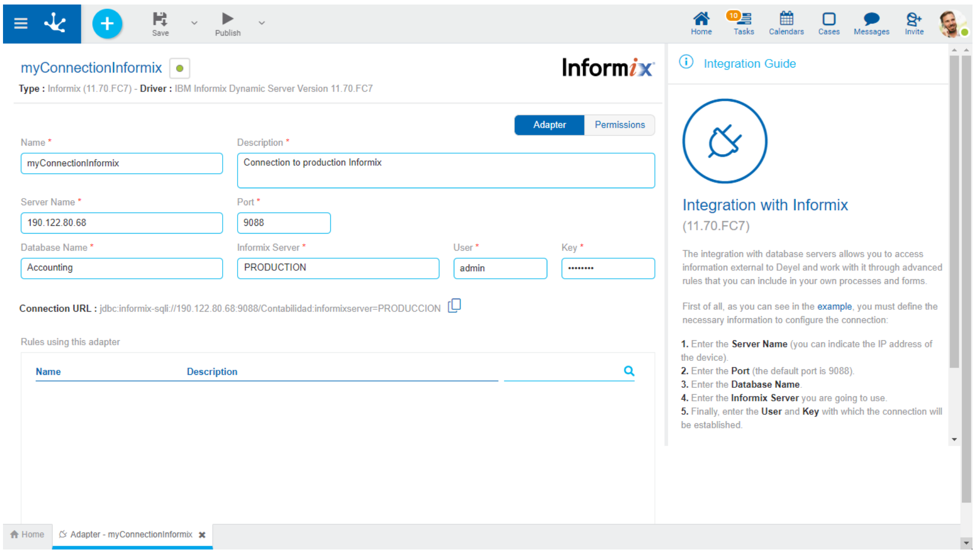
Connection URL
Shows the connection string for the adapter.

Allows to copy the connection URL.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and its definition can be shown from each line.

3.6.5.2.2.12. Informix

Apart from properties shared by adapters those specific to Informix are added.



An asterisk "" on the label indicates that the property is required.*

Server Name
Name or IP address of the server where the database engine is installed.

Port
Port number used by the database engine.

Database Name
Corresponds to the identification of the database with which you want to integrate.

Informix Server
Name of the server that manages the database with which you want to integrate.

User
Identification of the database user that has permissions on the schema.

Key
Password of the database user making the connection.

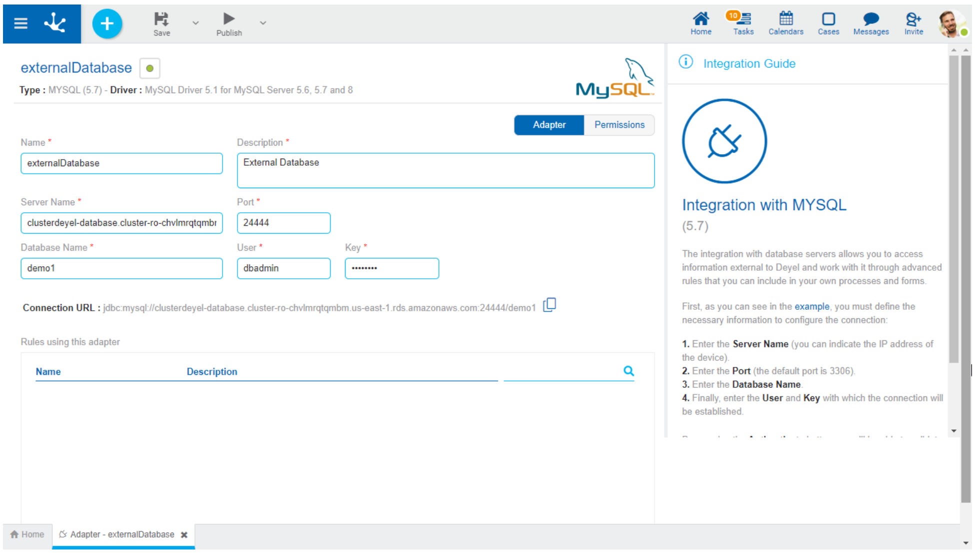
Connection URL
Shows the connection string for the adapter.

 Allows to copy the connection URL.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.13. MySQL

Apart from properties shared by adapters those specific to MySQL are added.



An asterisk "" on the label indicates that the property is required.*

Server Name
Name or IP address of the server where the database engine is installed.

Port
Port number used by the database engine.

Database Name
Corresponds to the identification of the database with which you want to integrate.

User
Identification of the database user that has permissions on the schema.

Key
Password of the database user making the connection.

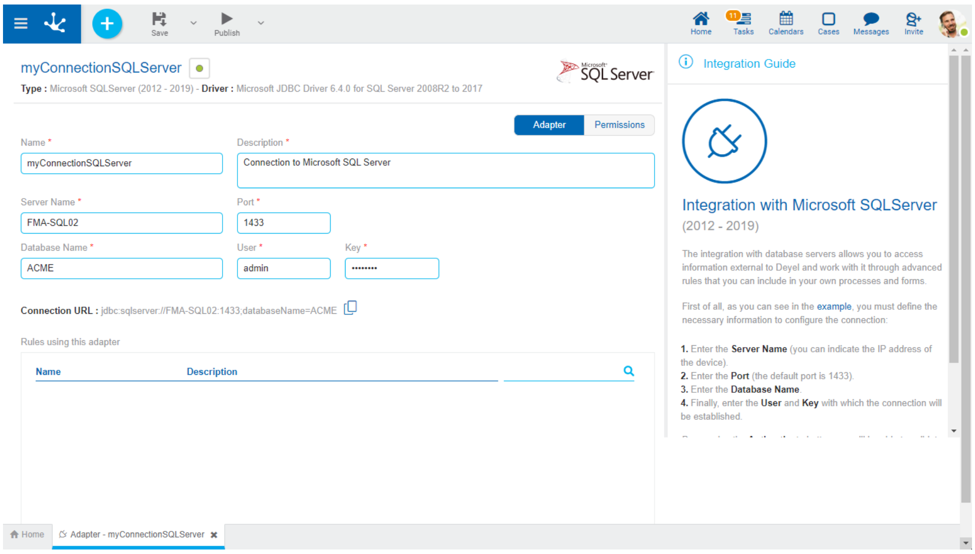
Connection URL
Shows the connection string for the adapter.

Allows to copy the connection URL.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.14. Microsoft SQL Server

Apart from properties shared by adapters those specific to Microsoft SQL Server are added.



> *An asterisk "*" on the label indicates that the property is required.*

Server Name
Name or IP address of the server where the database engine is installed.

Port
Port number used by the database engine.

Database Name
Corresponds to the identification of the database with which you want to integrate.

User
Identification of the database user that has permissions on the schema.

Key
Password of the database user making the connection.

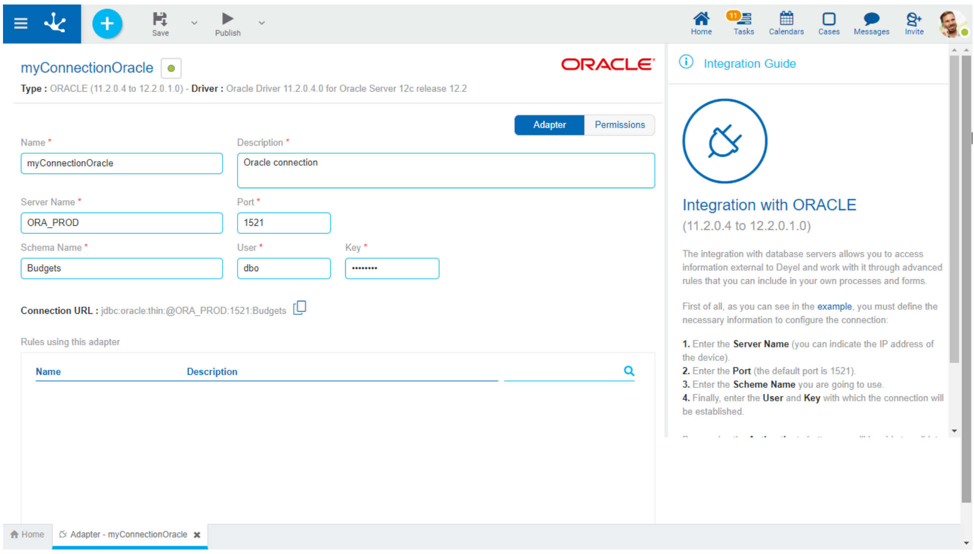
Connection URL
Shows the connection string for the adapter.

Allows to copy the connection URL.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.15. Oracle

Apart from properties shared by adapters those specific to Oracle are added.



> *An asterisk "*" on the label indicates that the property is required.*

Server Name
Name or IP address of the server where the database engine is installed.

Port
Port number used by the database engine.

Schema Name
Name of the schema within the database with which you want to integrate.

User
Identification of the database user that has permissions on the schema.

Key
Password of the database user making the connection.

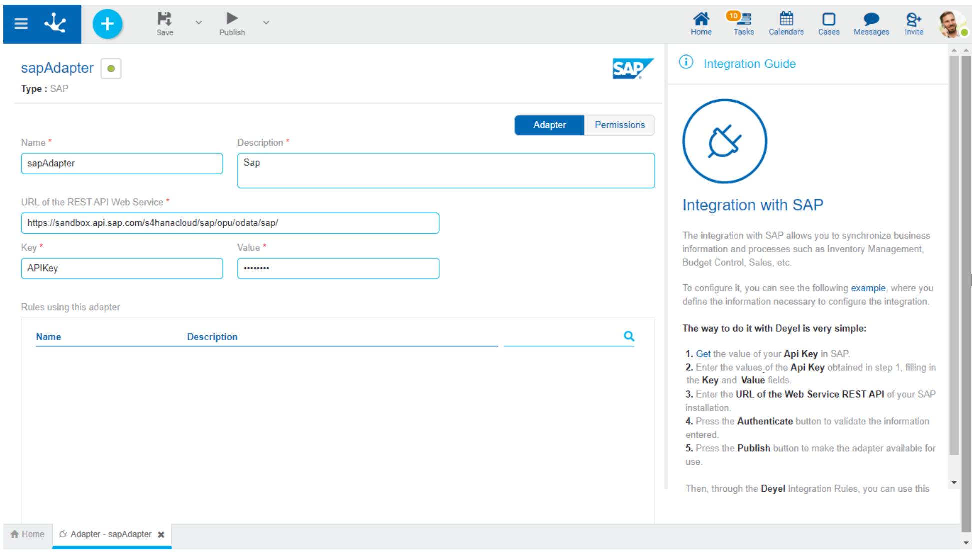
Connection URL
Shows the connection string for the adapter.

Allows to copy the connection URL.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

3.6.5.2.2.16. SAP

Apart from properties shared by adapters those specific to SAP are added.



An asterisk "" on the label indicates that the property is required.*

URL of the REST API Web Service
Service URL of the SAP environment with which it is integrating.

Key
Identifier that serves as a means of authentication to use of the service, provided by the SAP environment.

Value
Key associated to the property Key, also provided by the SAP environment.

Rules using this adapter
In this grid, the advanced rules used by the adapter are displayed and their definition can be shown from each line.

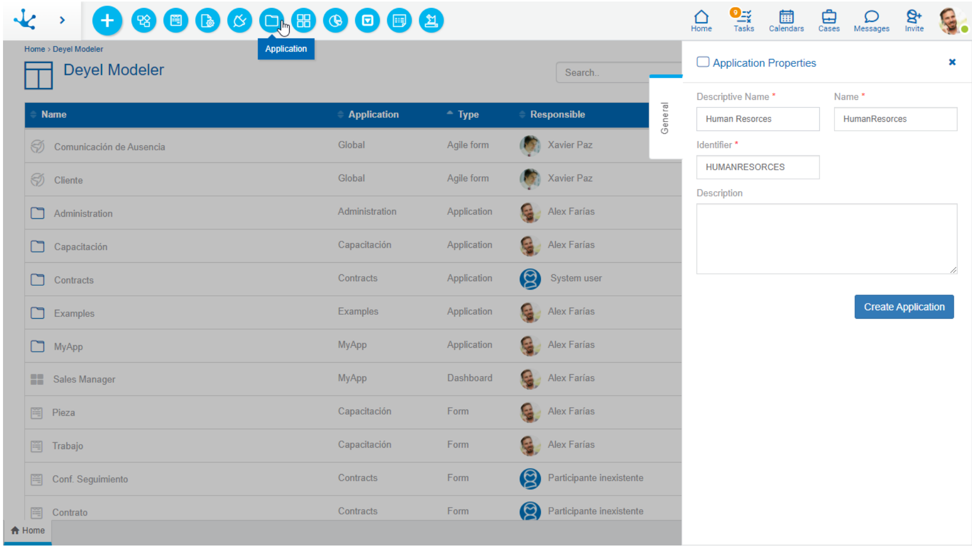
3.6.6. Applications Modeling

An application can group different **Deyel** objects, when defining the Application property in the general panel of each of the modeled objects.

In the modeler's grid of **Deyel** a new application can be created from the context menu or perform operations on existing ones, selecting the buttons available for each line.

New Application

The properties panel of the application opens when an application is created or updated.



An asterisk "" on the label indicates that the property is required.*

Properties

Name

It is used to reference the application within rules or as a parameter. Supports multi-language.
Examples: Contracts, Self-care.

Descriptive Name

It is used in the interface when the application is referenced, for example in the modeler's grid and in the objects general properties of **Deyel**. Supports multi-language.
Examples: Contracts, Employees Self-service.

Description

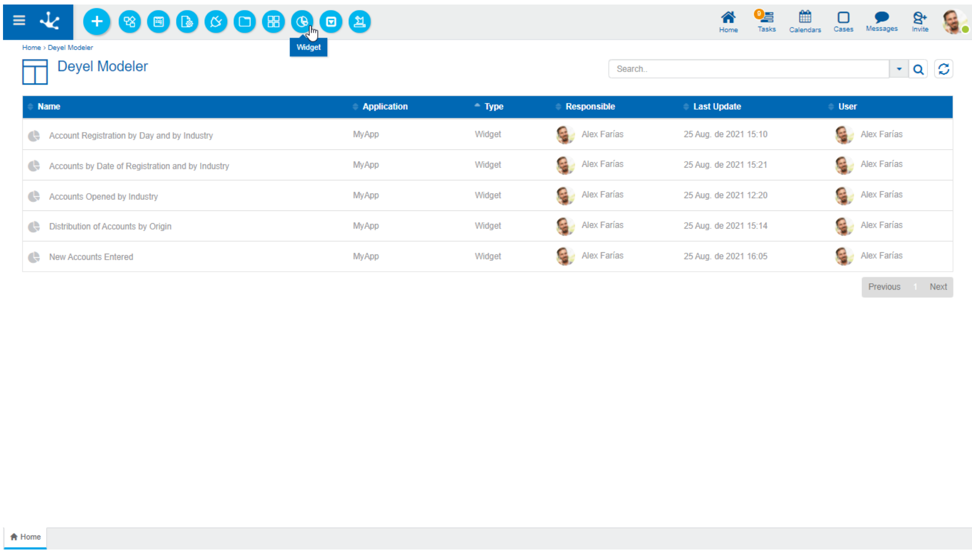
Text that defines the application. Supports multi-language.

Identifier

It is used in programming code. Not multi-language. When creating a new application, a suggested identifier is automatically generated and can be modified. Whereas when modifying an application, the identifier cannot be changed.
Examples: CONTRACTS, SELFSERVICE.

3.6.7. Widgets Modeling

The widgets modeling can be used to design and implement in an easy and intuitive way, the required widgets to display the relevant information for the user, as management issues, tasks and calendars.



The general characteristics of the widgets modeling and the elements that compose it are described in the topics:

- [Modeling Facilities]
- [Widget Properties]

A new widget can be created from the icon corresponding to the [context menu].

- From the icon
- From the menu displayed with the option "Widget"

An existing widget is modified by selecting it from the grid with the "Open" button.

3.6.7.1. Modeling Facilities

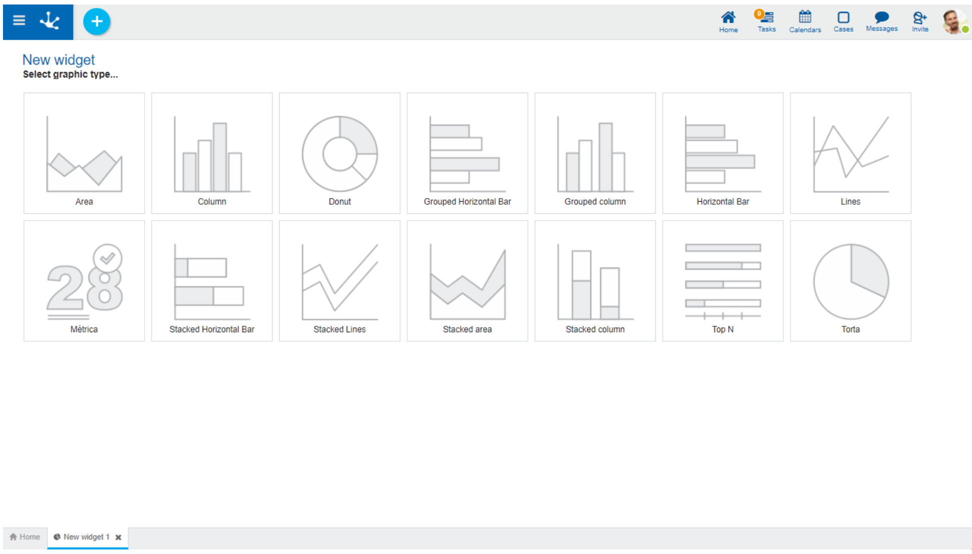
New Widget

The TI modeler user can design a new widget, which after being published, is available to be used on a dashboard.

Steps for Creating a New Widget

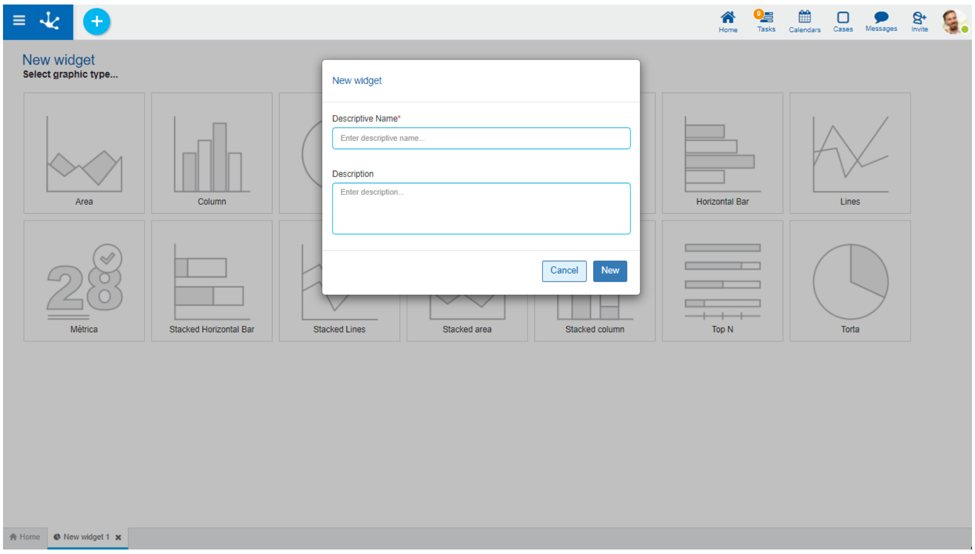
Step 1

Select the graphic type.



Step 2

Assign the name, optionally write the description and press the "Create" button.



Step 3

Complete the widget using the sections of the workspace.

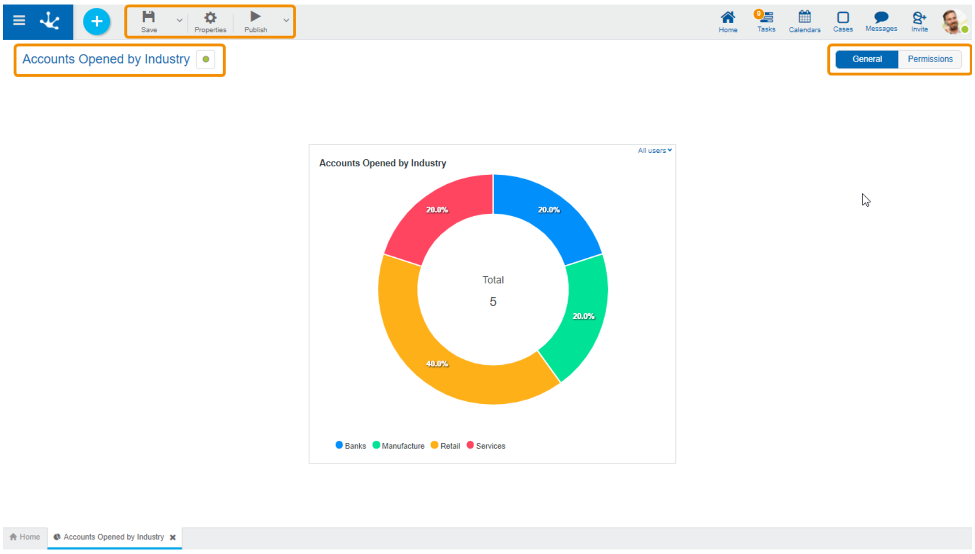
Workspace Sections

- Top Toolbar

- Widget Information
  - Name

- State

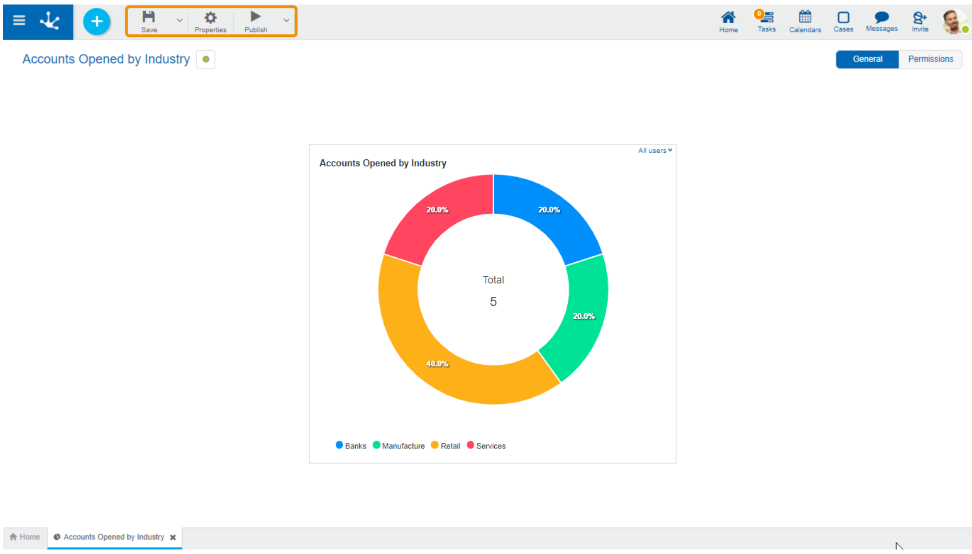
- Design Options



3.6.7.1.1. Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its state, some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The application of the object must exist.
- The name must be unique in the application.
- The object must not be locked by another user.

To the right of the icon the option to open the submenu.

Properties

Open the widget properties panel.

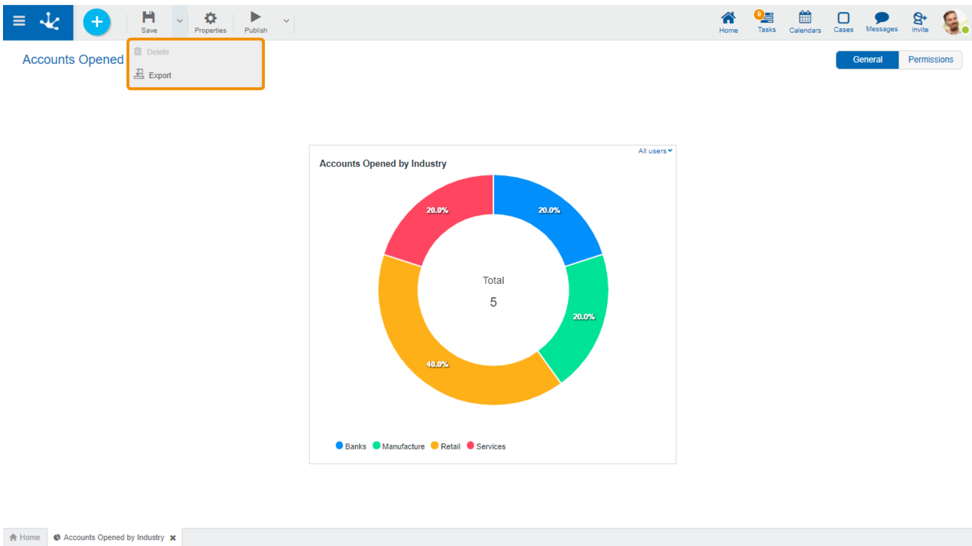
Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.

To the right of the icon the option to open the submenu.

3.6.7.1.1.1. Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".

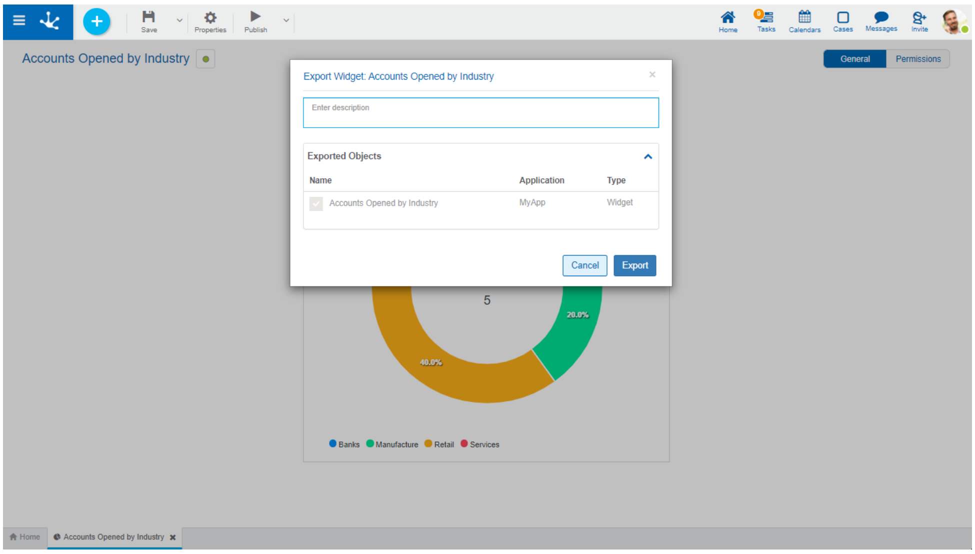


Delete

Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid.

Export

This icon opens a window for the user to select and confirm the export of the object.



Description

In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the export record.

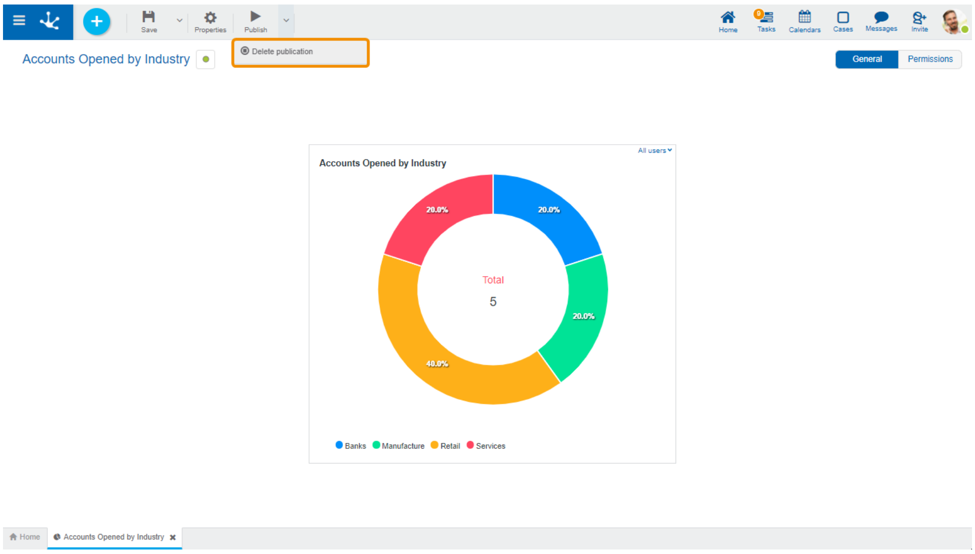
Exported objects

By expanding the container, the name of the object being exported is displayed.

You must press the “Cancel” button to leave the export without effect or the “Export” button to finish the operation.

3.6.7.1.1.2. Submenu Publish

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".

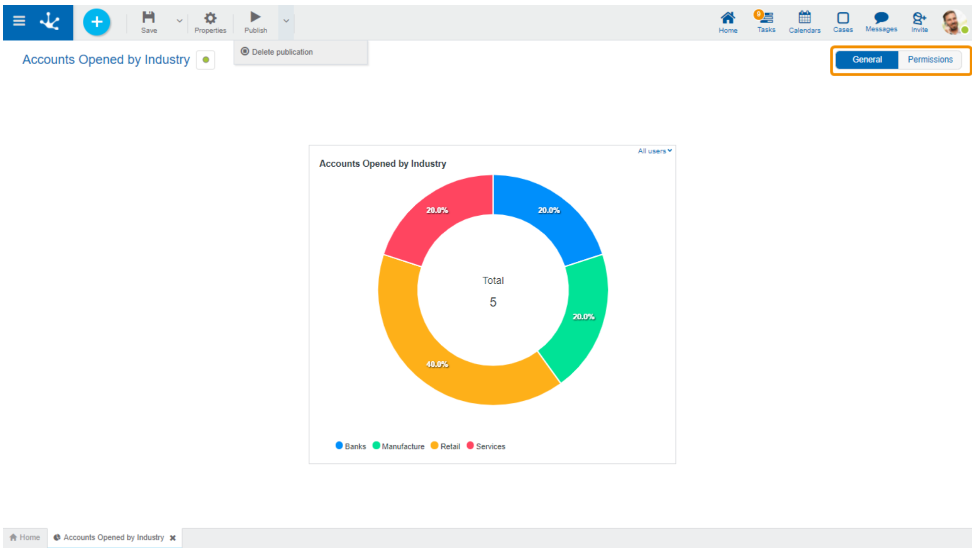


Delete Publication

Allows to leave the widget unavailable for use by returning it to the "Draft" state.

3.6.7.1.2. Design Options

These options are presented on the upper right margin.



- General
  From this design option the widget is visualized and when hovering over it the data values that compose it can be seen.
- Permissions

3.6.7.1.2.1. Permissions

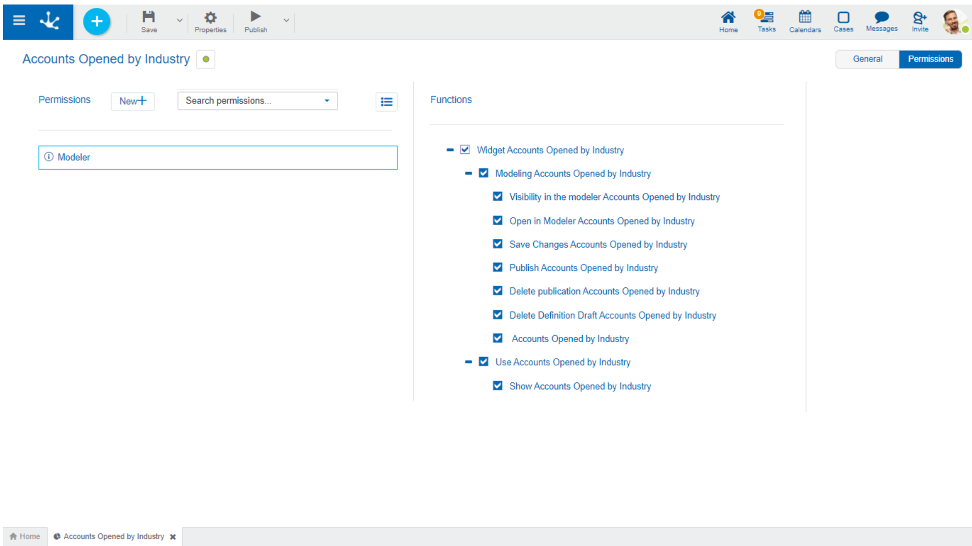
Allows to assign the security functions for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the permission settings option from the menu.

Sections

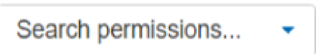
- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission Modeler.

Users who are assigned the permissions have access to the functions included in it.



Opens a panel to create a new permission and once created, the security functions included in it must be selected .



Allows to select a permission from a list and enables the input of characters to filter the values in the list.


Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon ✖. If there are functions selected for that permission, they must be unchecked in order to delete it.

Security Functions to Model the Widget

- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Save changes: Enables the operation of saving modifications made to the object.
- Publish: Enables the operation of publishing the object leaving its state as "Published".
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete draft definition: Enables the operation of deleting the object.
- Export widget: Enables the operation to export the object from the save submenu of the upper toolbar.

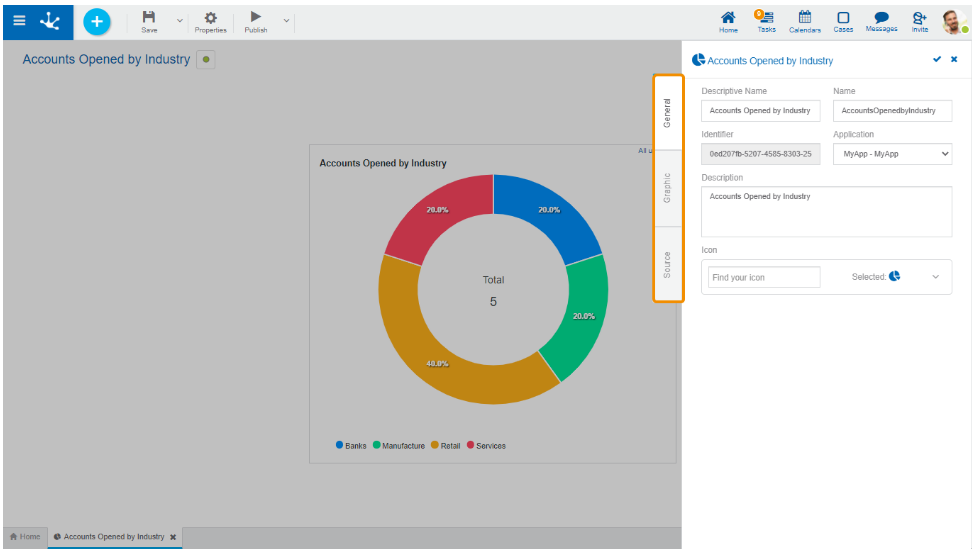
Security Functions to Use the Widget

Show: Enables the operation of showing the object.

3.6.7.2. Widget Properties

The properties of the widgets can be entered both at the time of their creation, and when modifying an existing one.

Entering the widget properties panel is done using the icon which is in the top toolbar.

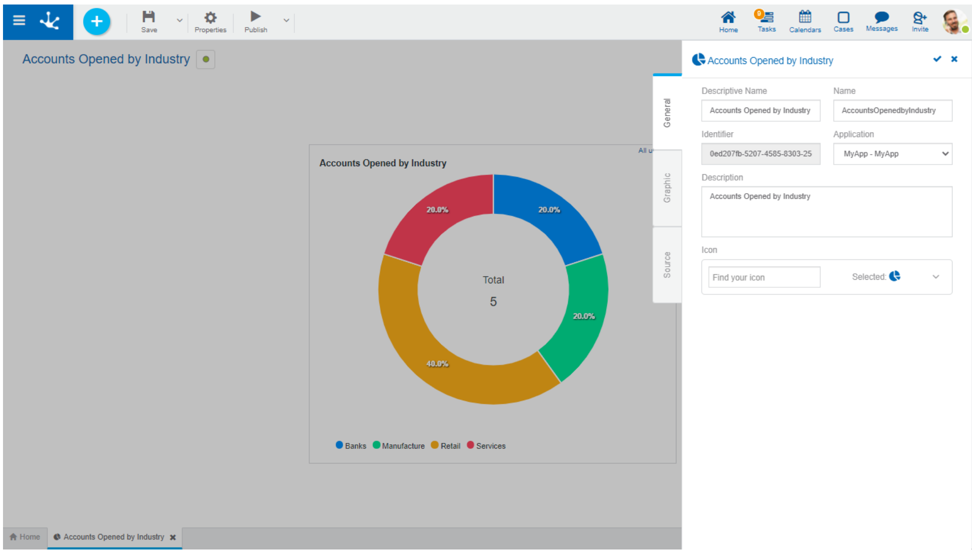


Tabs

- General
- Graphic
- Source

3.6.7.2.1. General

The properties panel is displayed on the right side of the widget modeler, where the first tab corresponds to general information.



Properties

Descriptive Name
It is the name used by users to reference the widget, for example in the modeler's grid and in the dashboards. It is required.

Name
It is internally used to reference the widget. It does not allow blanks or special characters. It is unique and required.

Identifier
Uniquely identifies the widget. It is automatically generated.

Application
It is the name of the application to which the widget belongs. It is not required, just as it happens with the rest of the modeled objects.

Description
Text that describes the topic the widget allows to analyze, when incorporated into a dashboard.

Icon
Allows to incorporate an icon that visually identifies the widget when the operation is made [Add widget](), from the use of the dashboard.
The list of available icons is displayed to select one of them. The list is reduced as the name is written on the text "Find your icon".

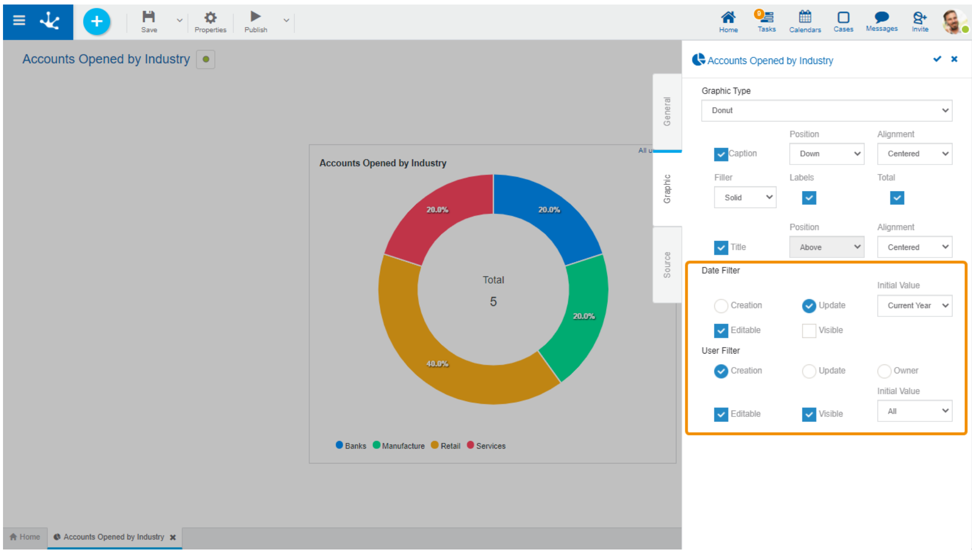
Actions

The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.7.2.2. Graphic

The second tab of the side panel corresponds to the charts information. Allows to do the management of the properties of each chart type.



Properties

In addition to these shared properties, each type of widget has specific properties, which are detailed for each chart.

- Metrics
- Areas
- Lines
- Bars and Columns
- Pies and Donuts

Date Filter

Creation

Indicates that the date filter is applied on the creation date.

Update

Indicates that the date filter is applied on the modification date.

Editable

Indicates if the user can modify the filter conditions when using the widget from the dashboard, only if they have permission to do it.

If the user makes modifications and saves the dashboard, the new filter conditions established are maintained.

Visible

Indicates whether the filter is visualized or not when using the widget from the dashboard.

Initial Value

Indicates the value displayed from the dashboard by default.

Possible Values:

- Today
- From
- Last 7 days
- Current month
- Current year
- Last month
- Last year

User Filter

Creation

Indicates that the user filter is applied on the creation user.

Update

Indicates that the user filter is applied on the modification user.

Owner

Indicates that the user filter is applied on the instance owner.

Editable

Indicates if the user can modify the filter conditions when using the widget from the dashboard, only if they have permission to do it.

If the user makes modifications and saves the dashboard, the new filter conditions established are maintained.

Visible

Indicates whether the filter is visualized or not when using the widget from the dashboard.

Initial Value

Indicates the value displayed from the dashboard by default.

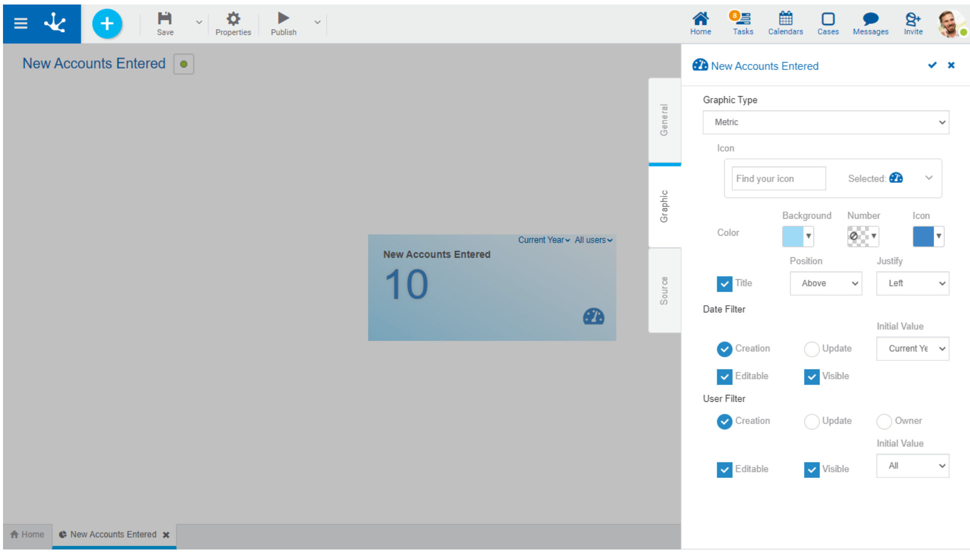
Possible Values:

- Current user
- All
- My Team

> *My team is made up by all of the users that belong to the organizational unit for which the logged in user is responsible and all users of a role for which the logged in user is responsible.*

3.6.7.2.2.1. Metrics

To the properties shared by all the widgets, those specific to metrics are added.



Properties

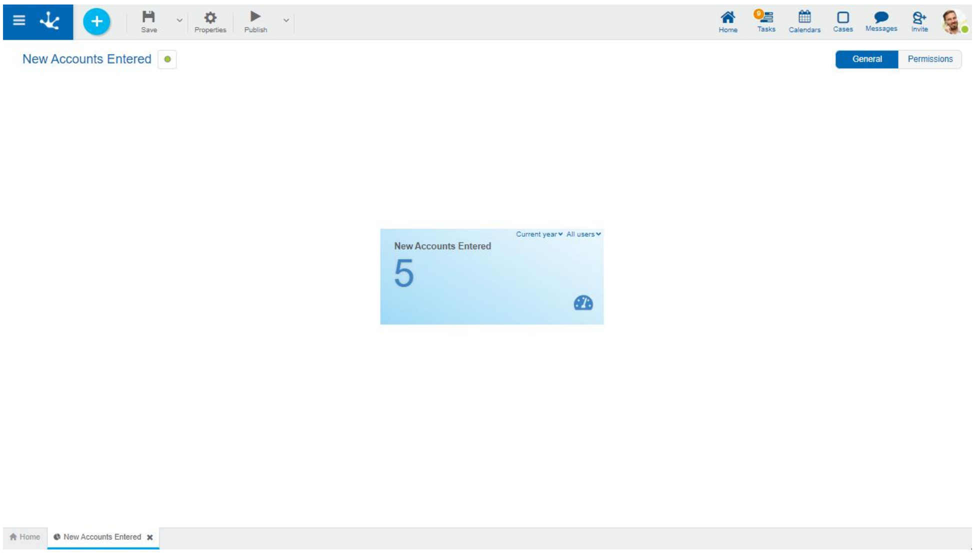
Icon
Allows to incorporate an image displayed as a background, inside the widget. It is incorporated in the same way as the icon of the "General" tab.

Color
Background
Allows to modify the background color of the widget, selecting it from the color palette.
Number
Allows to modify the value color of the widget, selecting it from the color palette.
Icon
Allows to modify the icon color, selecting it from the color palette.

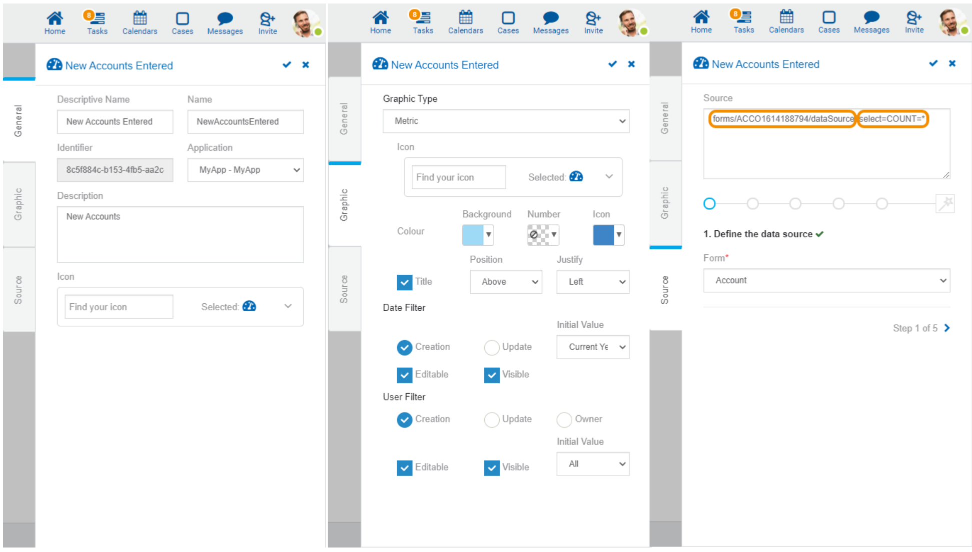
Title
If this property is selected, when using the widget on a dashboard, the descriptive name is displayed. In this case it must also indicate:
Position
Allows to locate the title in the upper or lower sector of the widget area.
Justify
Allows to position the title to the right, center, or left, within the widget area.

Example of Use

This metric chart shows the number of accounts entered during a selected period and for the users indicated in the filter.



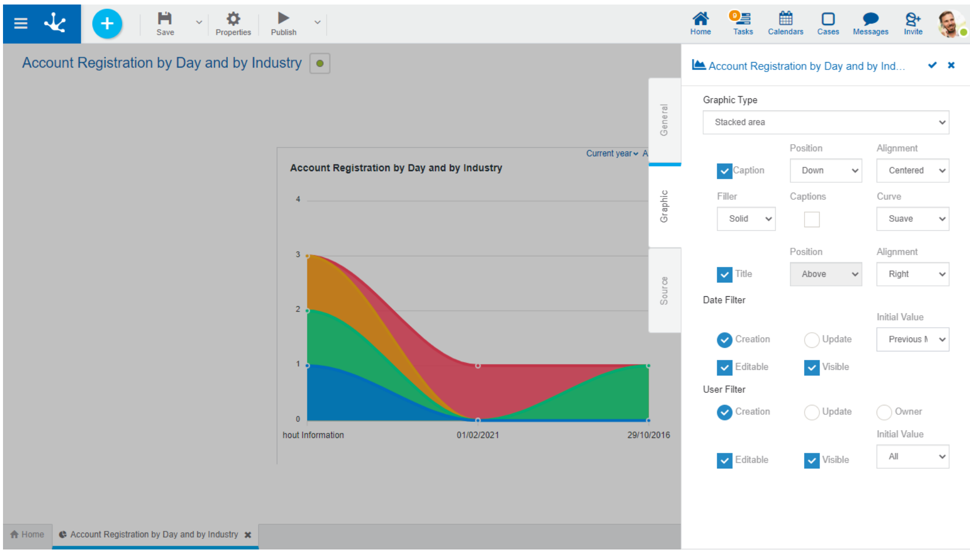
The source code to model this chart is detailed.



> *In the "Source" tab, each orange box represents the code for a particular step.*

3.6.7.2.2.2. Areas

Widgets of area type, comprehend the area and stacked area charts. To the properties shared by all the widgets, those specific to areas are added.



Properties

Legend
Indicates the incorporation of the data series description.
If this property is selected, it must also indicate:

Position
Select above or below.

Justify
If above or below position is selected, it allows to indicate right, center or left alignment.

Filler
Allows to highlight the area of data series in a gradient or solid way.

Labels
Allows to indicate whether the labels corresponding to the data series are displayed.

Curve
Indicates whether data lines are displayed as smooth, straight, or stepwise curve.

Title
If this property is selected, when using the widget on a dashboard, the descriptive name is displayed.
In this case it must also indicate:

Position
Allows to locate the title in the upper or lower sector of the widget area.

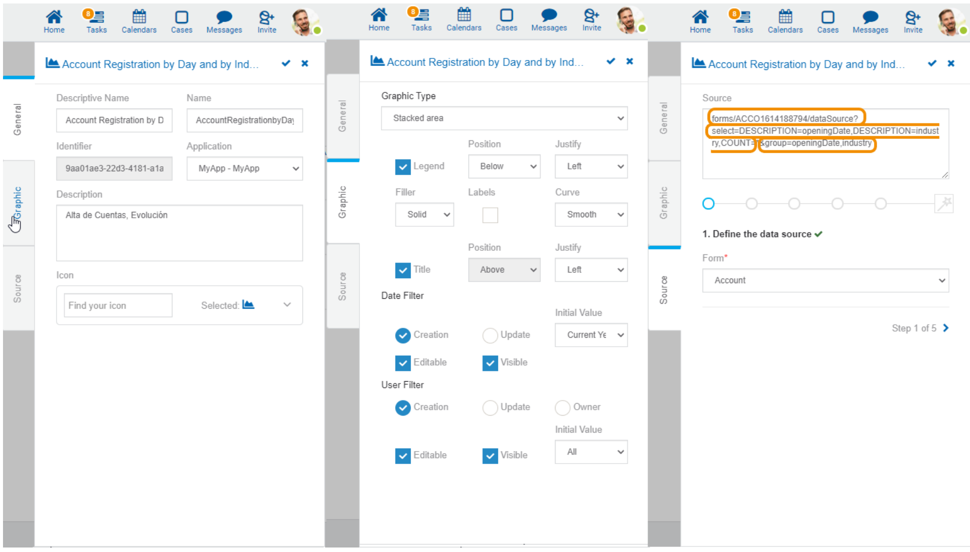
Justify
Allows to position the title to the right, center, or left, within the widget area.

Example of Use

In this stacked area chart the number of accounts entered per day and by industry is displayed, for a selected period and for the users indicated in the filter.

On the horizontal axis are represented the registration dates and on the vertical axis the sum of the registrations made.
The percentage of each industry is given by the colored surface, and the grouping of all surfaces represents the total number of discharges in the day.

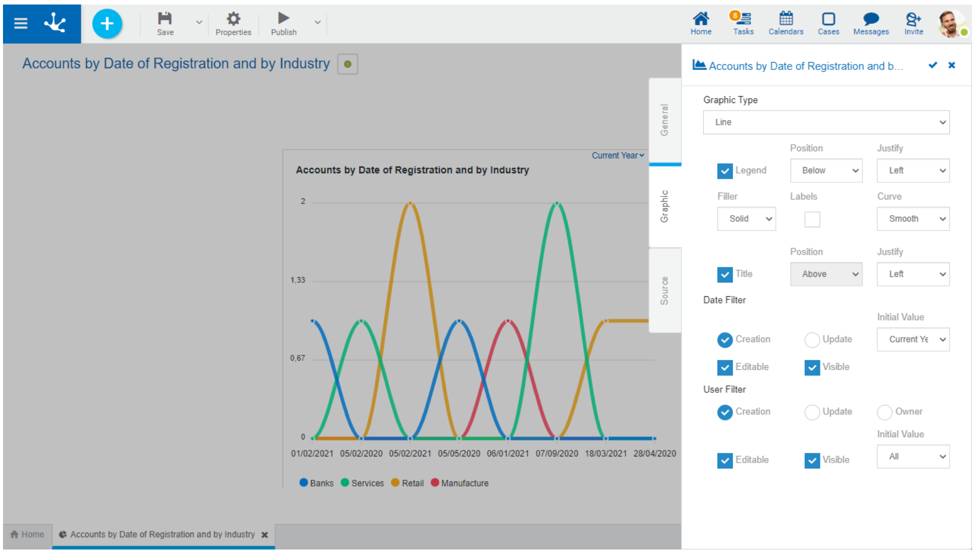
The source code to model this chart is detailed.



In the "Source" tab, each orange box represents the code for a particular step.

3.6.7.2.2.3. Lines

Widgets of line type comprehend line and stacked line charts. To the properties shared by all the widgets, those specific to lines are added.



Properties

Legend
Indicates the incorporation of the data series description.
If this property is selected, it must also indicate:

Position
Select above or below.

Justify
If above or below position is selected, it allows to indicate right, center or left alignment.

Filler
Allows to highlight the area of data series in a gradient or solid way.

Labels
Allows to indicate whether the labels corresponding to the data series are displayed.

Curve
Indicates whether data lines are displayed as smooth, straight, or stepwise curve.

Title
If this property is selected, when using the widget on a dashboard, the descriptive name is displayed.
In this case it must also indicate:

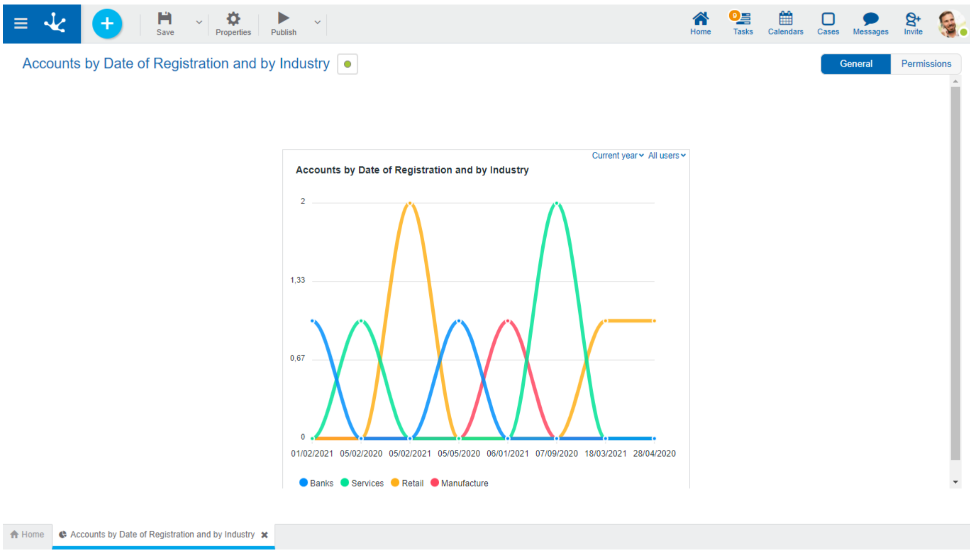
Position
Allows to locate the title in the upper or lower sector of the widget area.

Justify
Allows to position the title to the right, center, or left, within the widget area.

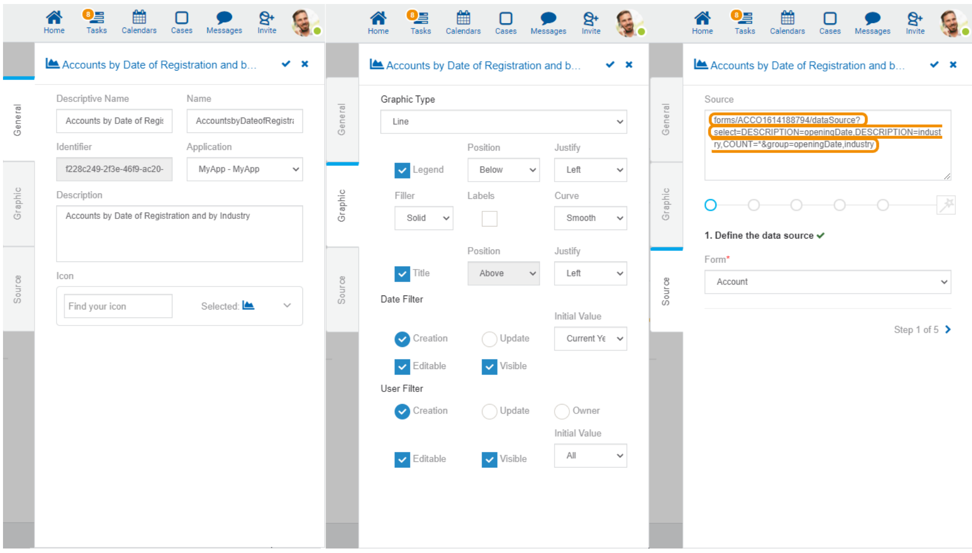
Example of Use

In this line chart the number of CRM accounts entered per day and by industry is displayed, for a selected period and for the users indicated in the filter.
On the horizontal axis are represented the registration dates and on the vertical axis the sum of the registrations made.

The height of the line for each industry indicates the total number of discharges per day.



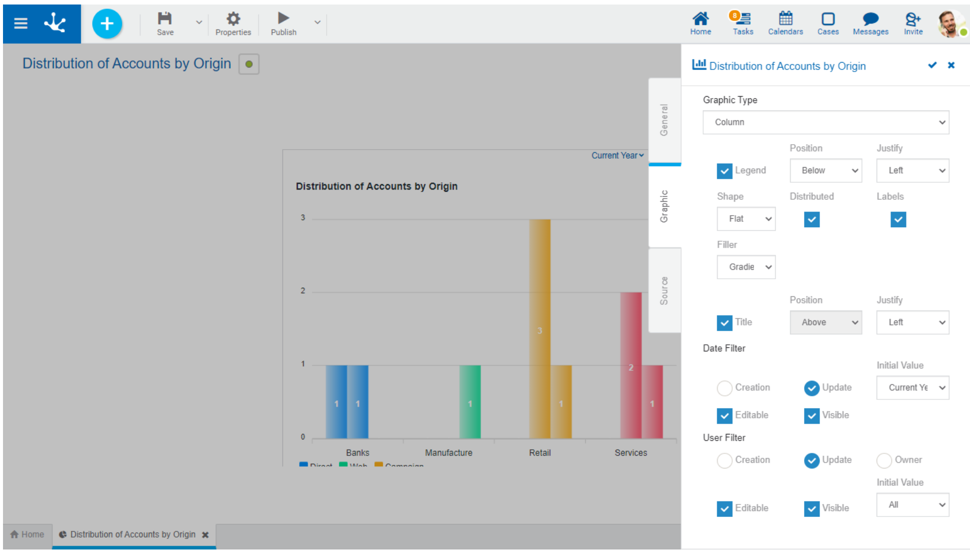
The source code to model this chart is detailed.



In the "Source" tab, each orange box represents the code for a particular step.

3.6.7.2.2.4. Bars and Columns

The bar and column widgets, comprehend the charts of type, bar, grouped bar and stacked bar, column, grouped column and stacked column and N Top. To the properties shared by all the widgets, those specific to bars and columns are added.



Properties

Legend
Indicates the incorporation of the data series description.
If this property is selected, it must also indicate:

Position
Select above or below.

Justify
If above or below position is selected, it allows to indicate right, center or left alignment.

Shape
It allows to select whether the figure has a flat or curved edge.

Distributed
Indicates whether the series are grouped or interleaved.

Labels
Allows to indicate whether the labels corresponding to the data series are displayed.

Filler
Allows to highlight the area of data series in a gradient or solid way.

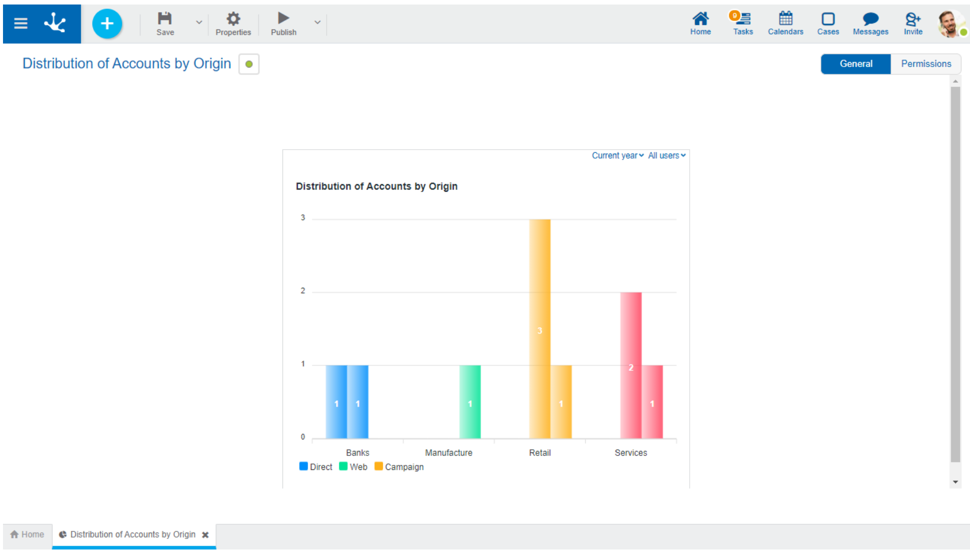
Title
If this property is selected, when using the widget on a dashboard, the descriptive name is displayed.
In this case it must also indicate:

Position
Allows to locate the title in the upper or lower sector of the widget area.

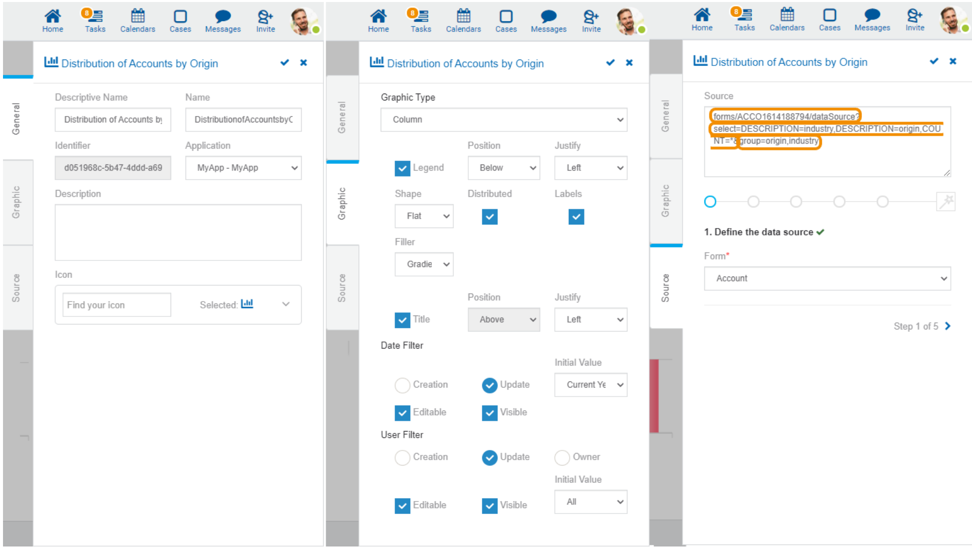
Justify
Allows to position the title to the right, center, or left, within the widget area.

Example of Use

In this column or bar chart the series type of industry and origin are displayed at the same time, so as to make a comparative analysis of the total sum of CRM accounts.



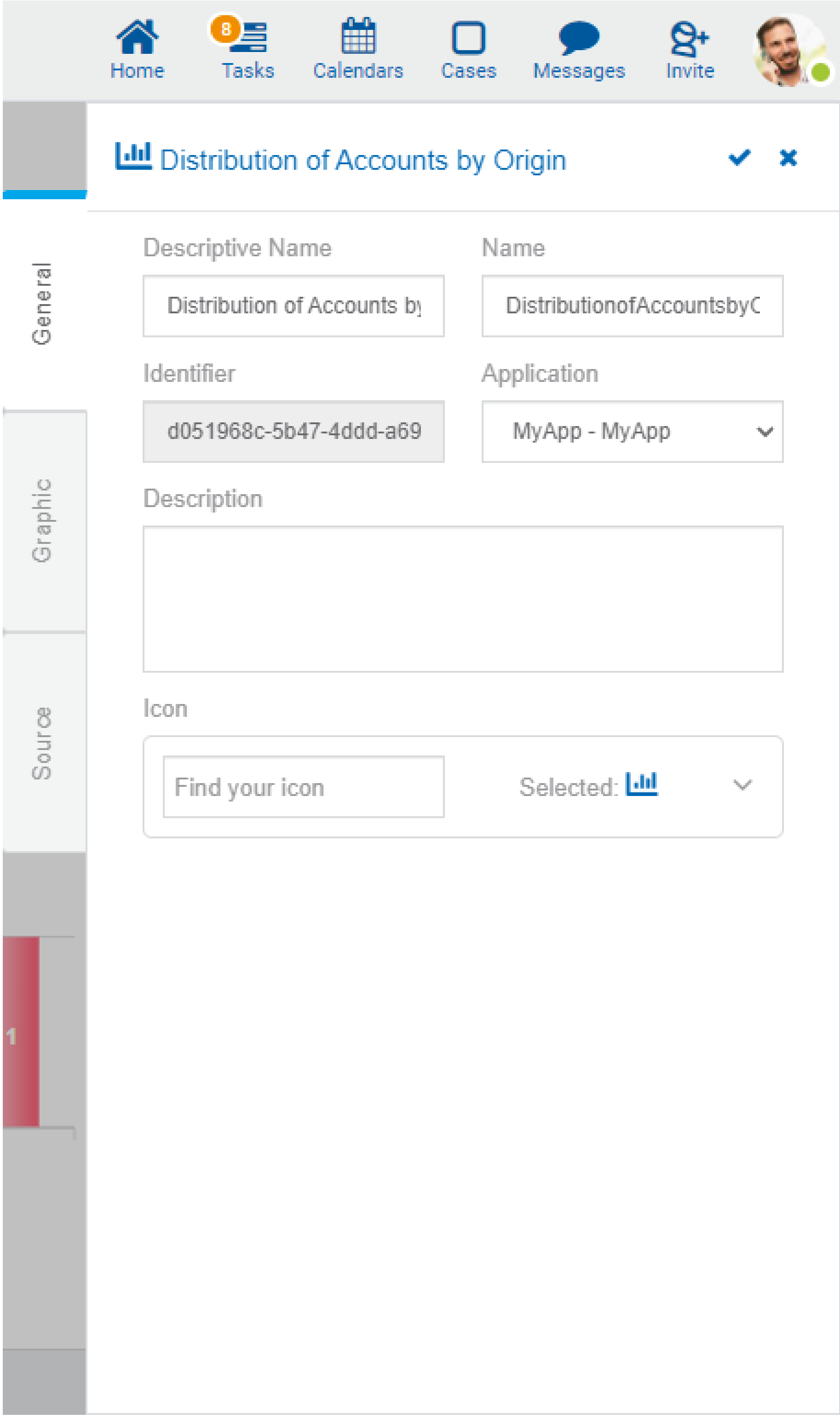
The source code to model this chart is detailed.



In the "Source" tab, each orange box represents the code for a particular step.

3.6.7.2.2.5. Pies and Donuts

To the [properties shared](#) by all the widgets, those specific to pies and donuts are added.



Properties

Legend
Indicates the entry of data series description.
If this property is selected, also indicate:

Position
Select above, below, left, right.

Justify

If above or below position is selected, it allows to justify right, center or left.
If right or left position is selected, the legend is displayed top right or left as indicated.

Filler

Allows to highlight the area of data series in a gradient or solid way.

Labels

Allows to indicate whether the labels corresponding to the data series are displayed.

Total

Indicates whether or not the total of all series is displayed, available for donuts.

Title

If this property is selected, when using the widget on a dashboard, the descriptive name is displayed. In this case it must also indicate:

Position

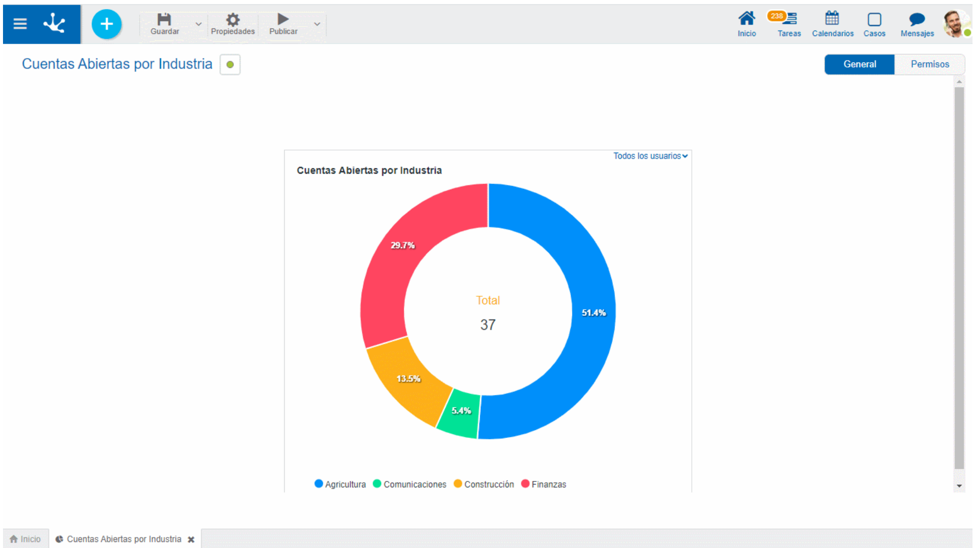
Allows to locate the title in the upper or lower sector of the widget area.

Justify

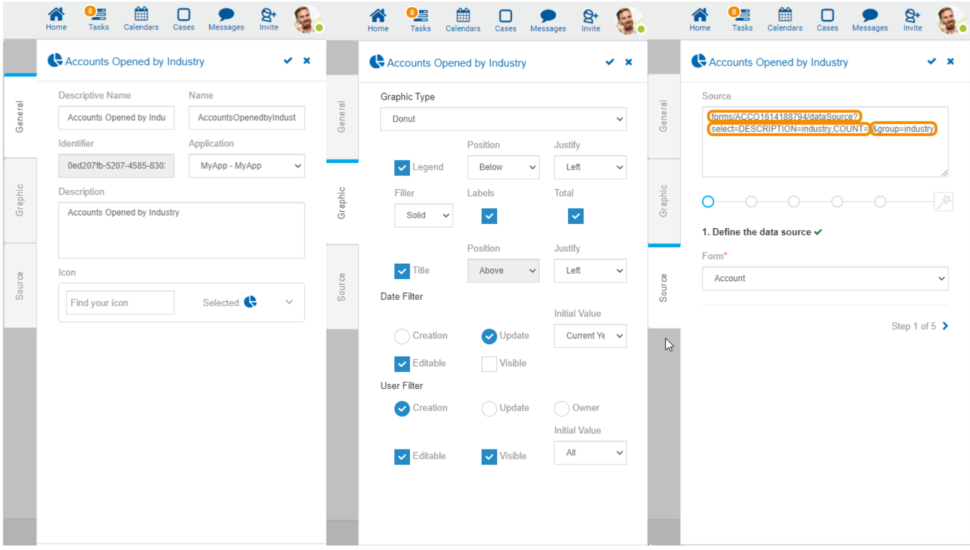
Allows to position the title to the right, center, or left, within the widget area.

Example of Use

In this donut chart, the percentage of CRM accounts is displayed, grouped by type of industry.



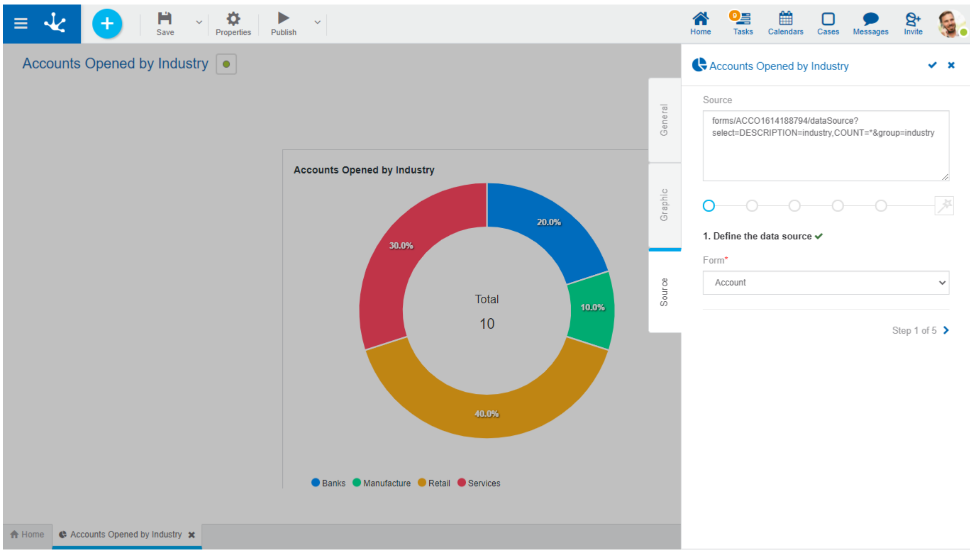
The source code to model this chart is detailed.



In the "Source" tab, each orange box represents the code for a particular step.

3.6.7.2.3. Source

The third tab of the side panel corresponds to the Rest API for obtaining the data of the selected graphic and the wizard for its automatic generation, following a series of steps.



Properties

Source

Corresponds to the URI on the Rest API to obtain the data displayed on the selected graphic. It can be codified or automatically generated through the wizard steps.

Wizard for Widgets Modeling

Allows to automatically generate the URI of the Rest API in the area of the source following the sequence of steps represented by the lines of circles.

Each step is identified by a number and accompanied by an informative paragraph, represented by the "i" icon.

The required steps are represented by the red circle and once they are completed they are displayed in light blue, indicating that the part corresponding to the source code has been completed. The circles corresponding to the steps not yet completed are displayed in grey.

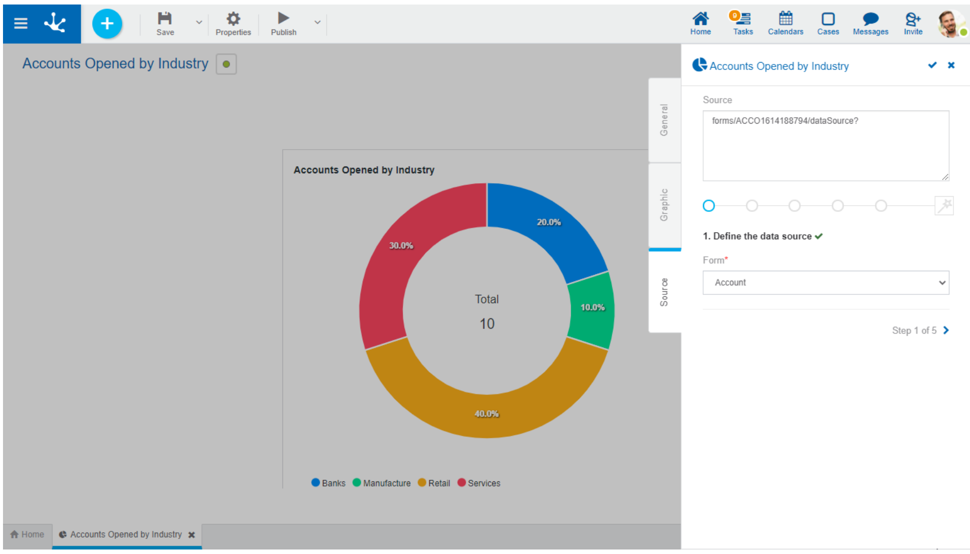
You must respect the pre-established order and advance by selecting the next circle or by pressing the paging icon, located at the bottom of the wizard. You can navigate between the completed steps by pressing the circles or by using the paging icon.

Wizard Steps for Widgets Modeling

Step 1: Define the data source

This step is required.

Form
Allows to select the entity from which the data to be displayed on the graphic will be taken. Once it is selected there is a check mark to the right of the step description, indicating that it was completed successfully.
When finishing the step, the generated code is displayed on the source.

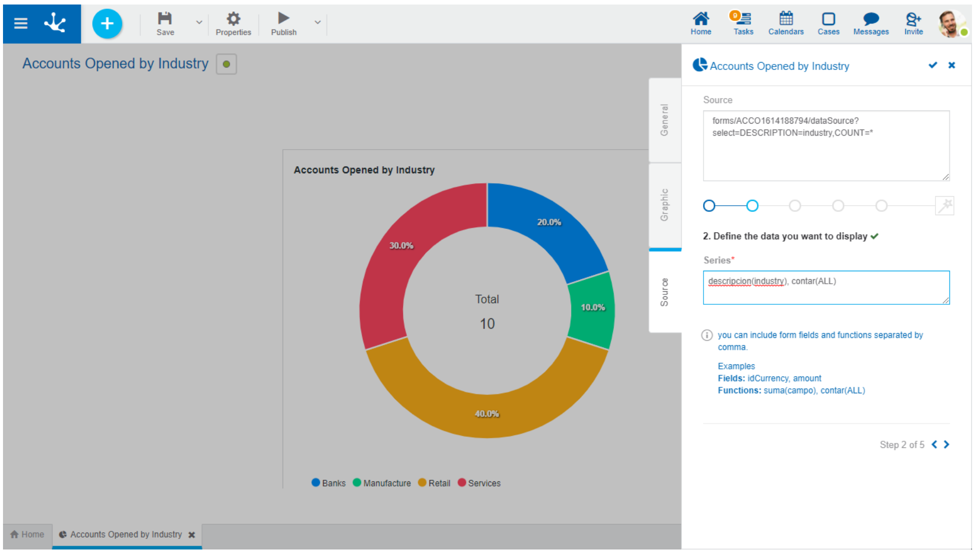


Step 2: Define the data you want to display.

This step is required.

Series

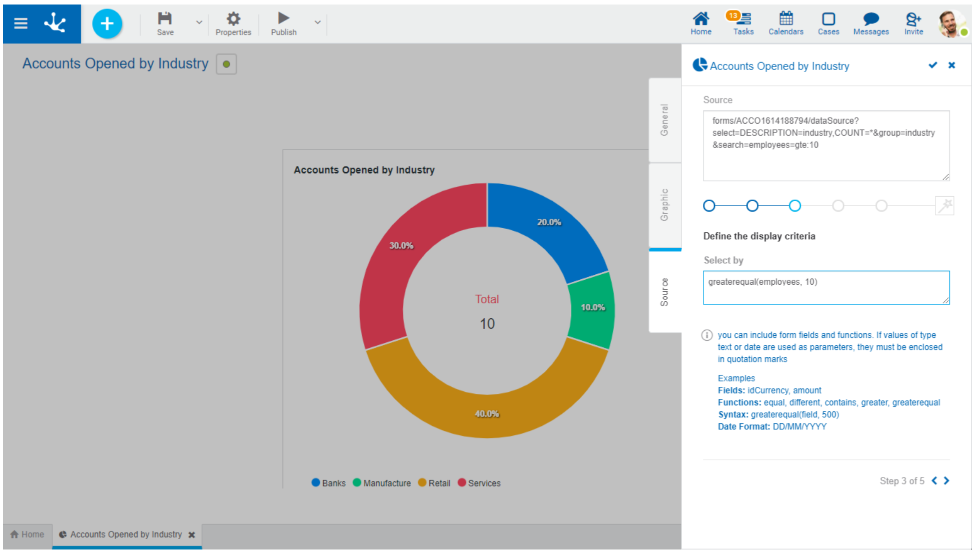
It must be indicated which elements are going to be displayed on the graphic, being able to use the help of the wizard. Once the series are entered, there is a check mark to the right of the step description, indicating that it was completed successfully. When completing the series, the added code is displayed on the source.



Step 3: Define display criteria.

This step is optional.

Select by
Allows to indicate with the help of the wizard the elements that must meet a condition for the data to be displayed on the graphic.
When completing this step, the added code is displayed on the source.

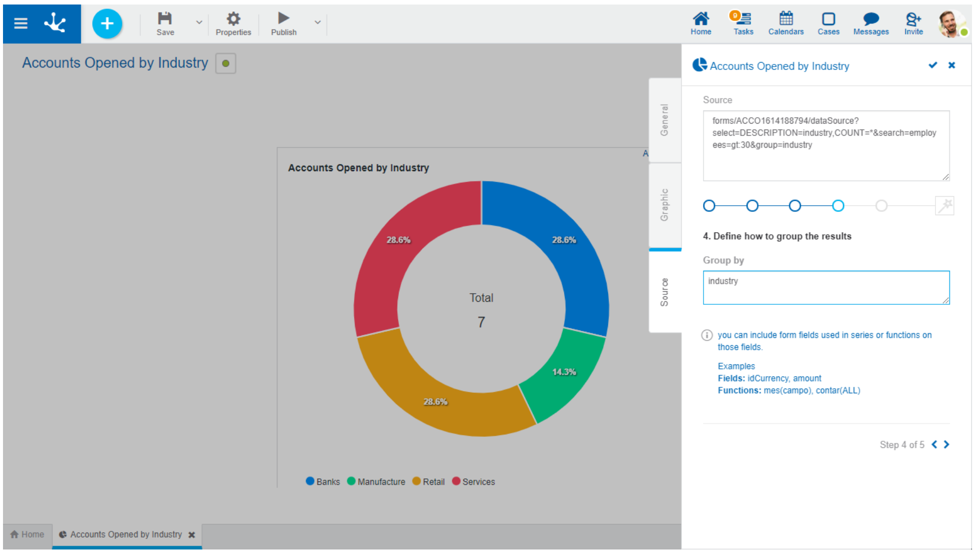


Step 4: Define how to group the results.

This step is optional.

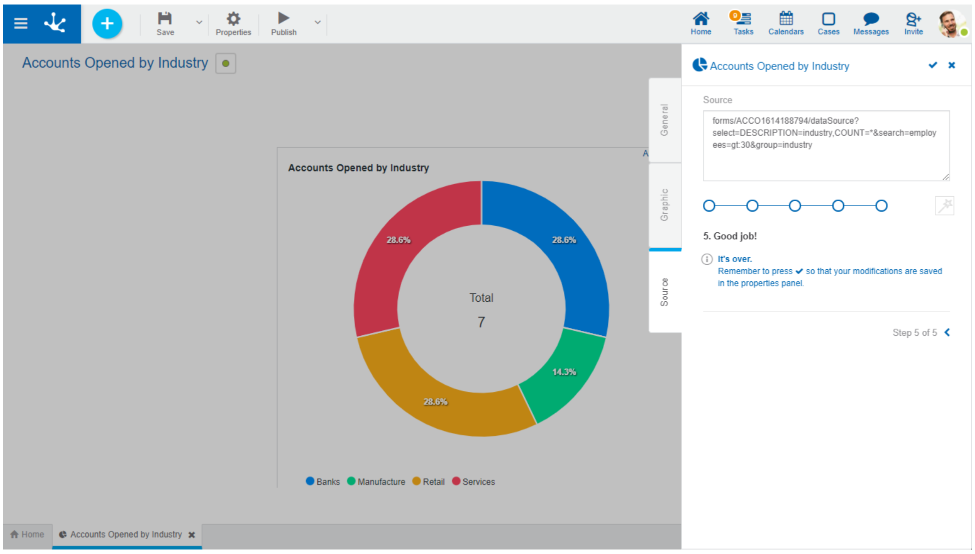
Group by

Allows to indicate with the help of the wizard the elements of the series, by which the results will be grouped.
When completing this step, the added code is displayed on the source.



Step 5: Good job.

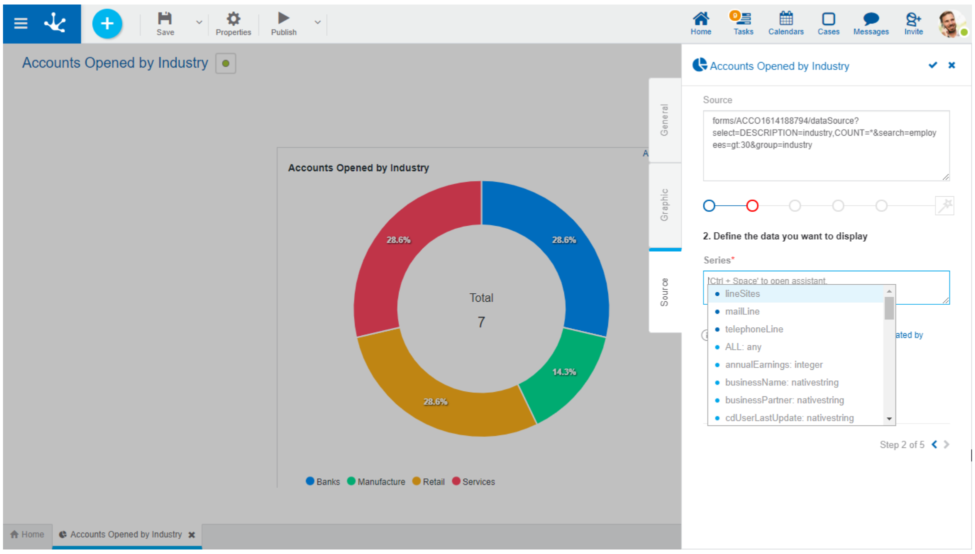
Informs that all the steps have been completed, and reminds that changes made on the indicator properties panel must be saved.



3.6.7.2.3.1. Wizard

In the editing area of each of the steps you can use a wizard for the automatic generation of the source.

Such wizard is activated pressing the "Ctrl + Space" keys, using the functionality of autocompleting, that is, as text is entered in the wizard, only are shown the elements which names start with the text the user writes.
In case of not using autocomplete the complete list of elements available for the step you are working on opens.



3.6.7.2.3.2. Elements Used in the Wizard

The steps can be composed by different types of elements, separated by a ".".

- Form field
  Form fields are used identifying them by the property Name. In the wizard they are displayed with ● in their left.

- Iterative containers
  The property Name of the container is shown. Whenever an iterative container is used, then the field separated by a "." must be indicated. In the wizard they are displayed with ● in their left.
  Example: Items.Number

- Functions
  In the wizard they are displayed with ● in their left.

In every case it is indicated on the right, the data type they represent and in the case of the functions, the data type they receive as a parameter.

In case of a syntax error, a message is displayed indicating the problem.

Wizard Functions

These functions are displayed in the wizard, for each of them it is indicated a brief description of its functionality and in which steps of the wizard it is suggested.

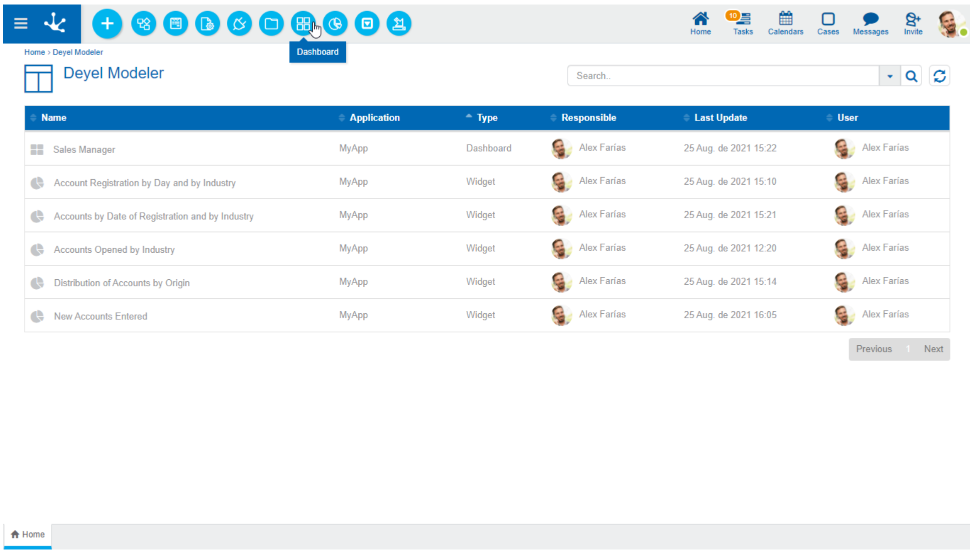
Function	Description	Wizard (Step)	Return Type
count(field)	Counts the occurrences of a certain field.	Series and group	Numeric
descrip-tion(field)	Returns the field description.	Series	Text
max(field)	Returns the maximum value.	Series and group	Field type used
month(field)	Month of the year. It is used for date type fields.	Series	Numeric
min(field)	Returns the minimum value.	Series and group	Field type used
ave-rage(field)	Returns the average value.	Series and group	Numeric
sum(field)	Sums the values entered from the field.	Series and group	Numeric Deci-mal
equal(field, field or value)	Compares by equality the first field with the other field or value.	Display criteria	Boolean
differ-ent(field, field or value)	Compares by inequality the first field with the other field or value.	Display criteria	Boolean
con-tains(field, value)	Checks if the field contains a determined value.	Display criteria	Boolean
starts-With(field, value)	Checks if the field starts with a determined value.	Display criteria	Boolean
doesNotStart With(field, value)	Checks if the field does NOT start with a de-termined value.	Display criteria	Boolean
greater(field, field or value)	Checks if the first field is greater than the second field or value entered.	Display criteria	Boolean

Function	Description	Wizard (Step)	Return Type
greaterEqual(field, field or value)	Checks if the first field is greater than or equal to the second field or value entered.	Display criteria	Boolean
lower(field, field or value)	Checks if the first field is lower than the sec-ond field or value entered.	Display criteria	Boolean
low-erEqual(field, field or value)	Checks if the first field is lower than or equal to the second field or value entered.	Display criteria	Boolean
inclu-ded(field, va-lue1, value2, ...)	Checks if the field value exists in the value list separated by a comma.	Display criteria	Boolean
notInclu-ded(field, va-lue1, value2, ...)	Checks if the field value does not exists in the value list separated by a comma.	Display criteria	Boolean

3.6.8. Dashboards Modeling

The dashboard modeler is a tool that allows to model in an easy and intuitive way the applications dashboards and to publish them. The indicators included in the dashboards are modeled with the indicator modeler.

From the portal, each business user can design its own dashboard, with the personalized information and their use preference, or they can use the dashboards created by the IT modelers.



The general characteristics of the dashboards modeling and the elements that compose it are described in the topics:

- Modeling Facilities
- Dashboard Properties

A new dashboard can be created from the icon corresponding to the context menu.

- From the icon displayed when hovering over the context menu.
- From the menu displayed with the option “Dashboard”.

An existing dashboard is modified by selecting it from the grid with the "Open" button.

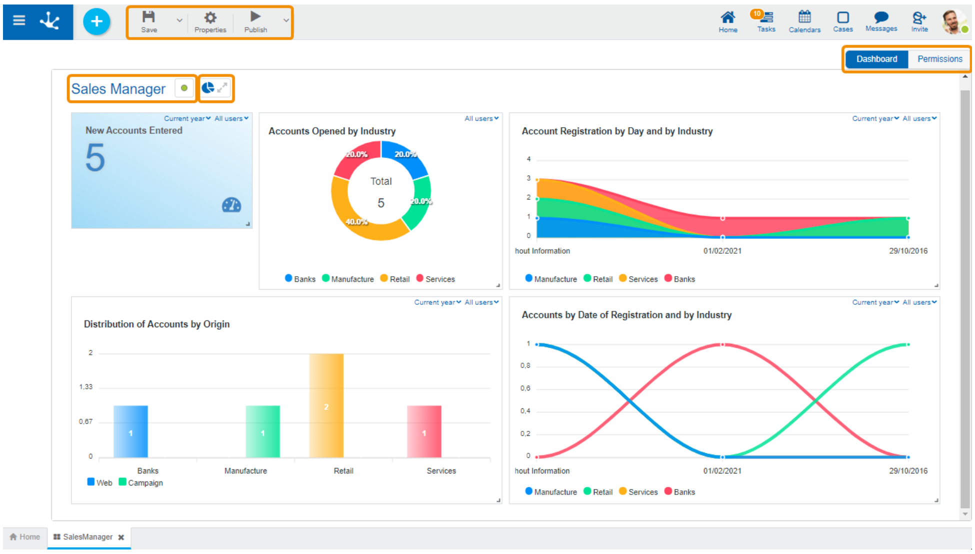
3.6.8.1. Modeling Facilities

New Dashboard

The IT modeler user can define application dashboards. After being published it is available for users to have permission in an application or, in case of being more than one application dashboard, to have the specific permission.

Workspace Sections

- Top Toolbar
- Design Options
- Data Area
- Icon to Add Indicators
- Dashboard Body



Data Area

Contains the dashboard name and the state of the dashboard.

Icon to Add Indicators

Allows to incorporate indicators to the dashboard.

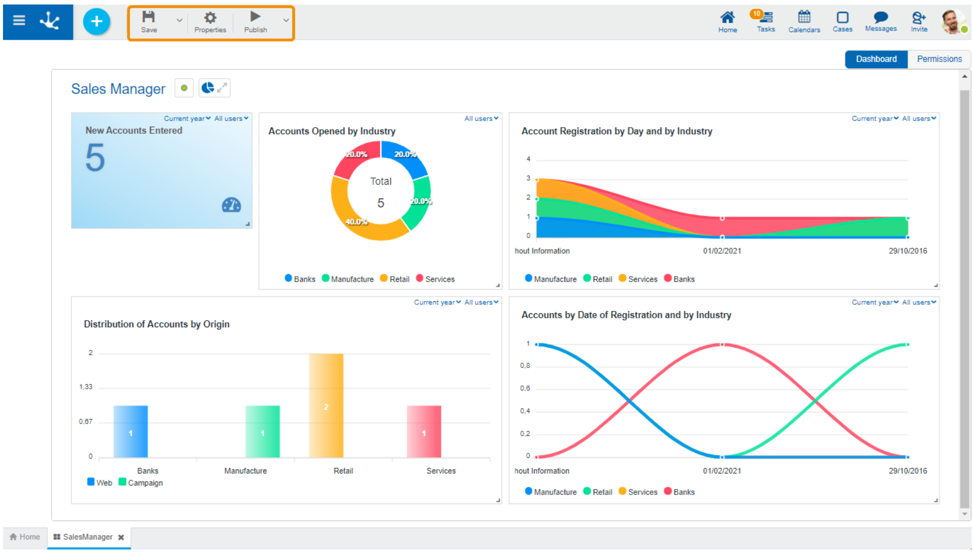
Body

In this section the published indicators that make up the dashboard are located. Its maintenance is done from the modeling option "Dashboard".

3.6.8.1.1. Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its state, some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The application of the object must exist.
- The name must be unique in the application.
- The object must not be locked by another user.
- The object's permissions must exist.

To the right of the icon the option to open the submenu.

Properties

Open the dashboard properties panel.

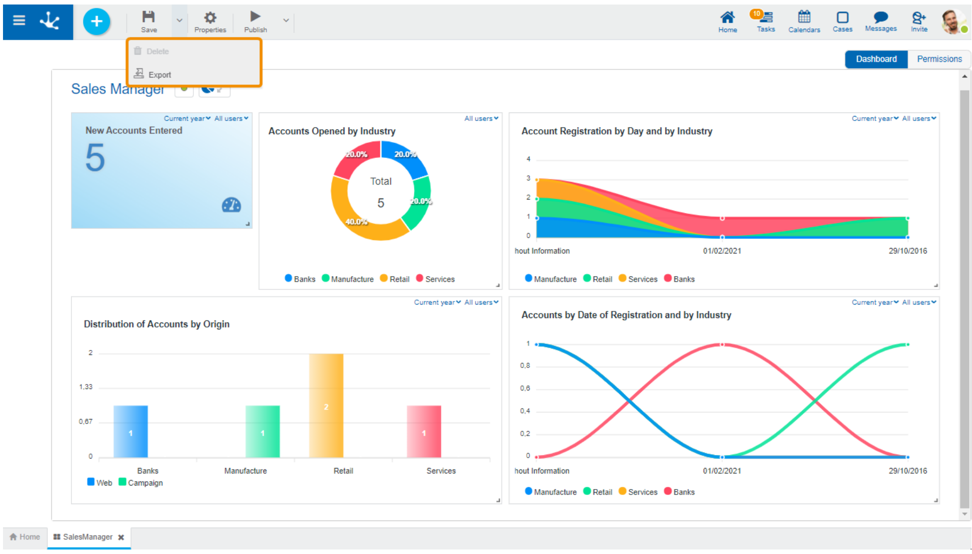
Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.

To the right of the icon the option to open the submenu submenu.

3.6.8.1.1.1. Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".

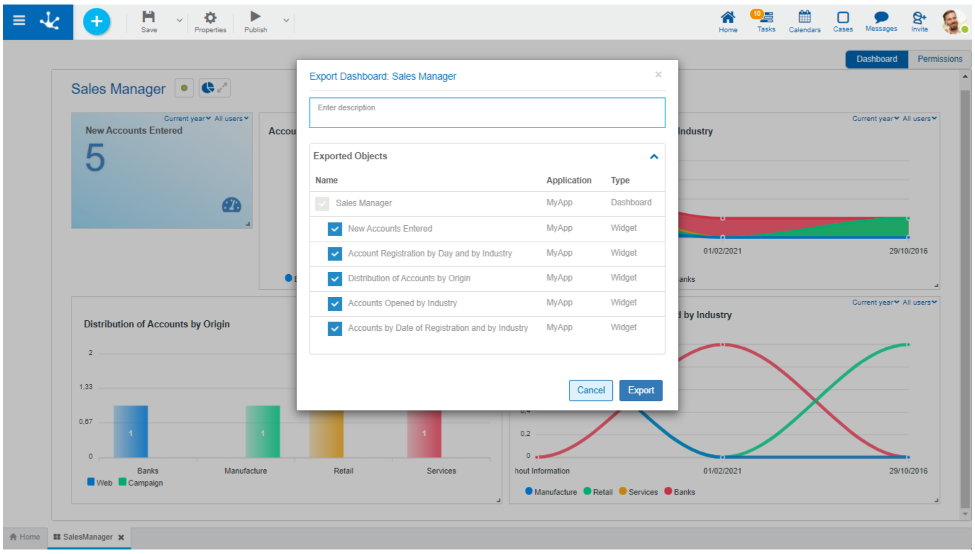


Delete

Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid.

Export

This icon opens a window for the user to select and confirm the export of the object and the related objects included in it.



Description

In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the [export record.](#)

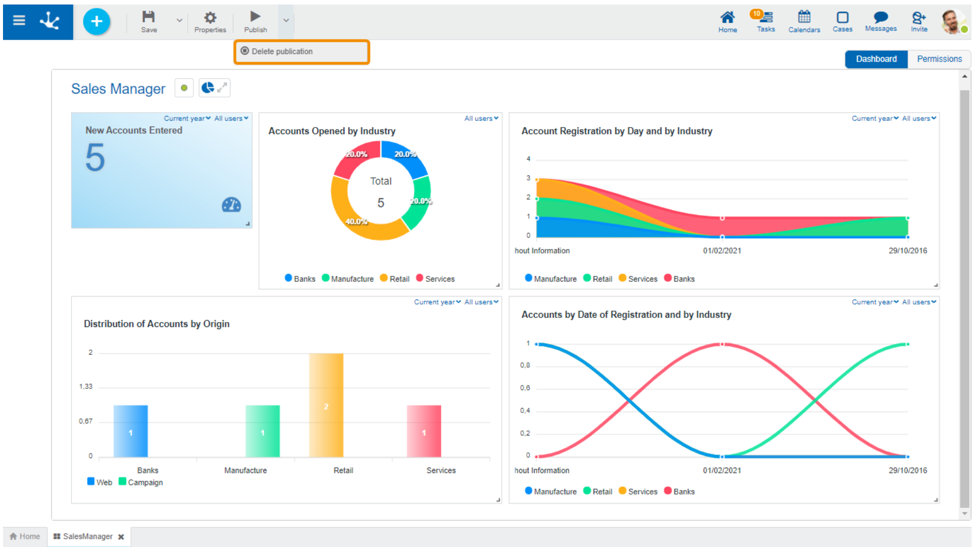
Exported objects

By expanding the container, the objects related to the dashboard being exported are shown. Objects not meant to be exported are unchecked.

You must press the “Cancel” button to leave the export without effect or the “Export” button to finish the operation.

3.6.8.1.1.2. Publish Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".

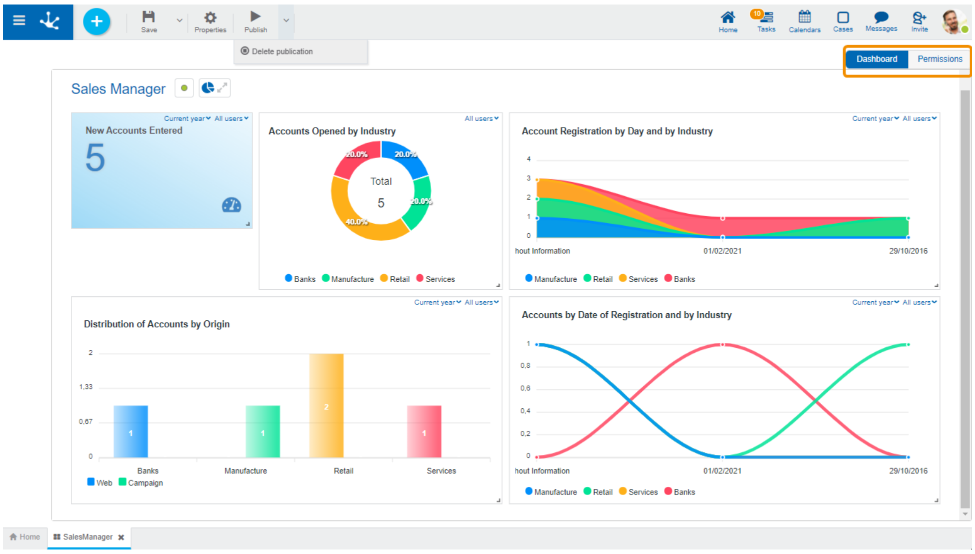


Delete Publication

Allows to leave the dashboard unavailable for use by returning it to the "Draft" [state](#).

3.6.8.1.2. Design Options

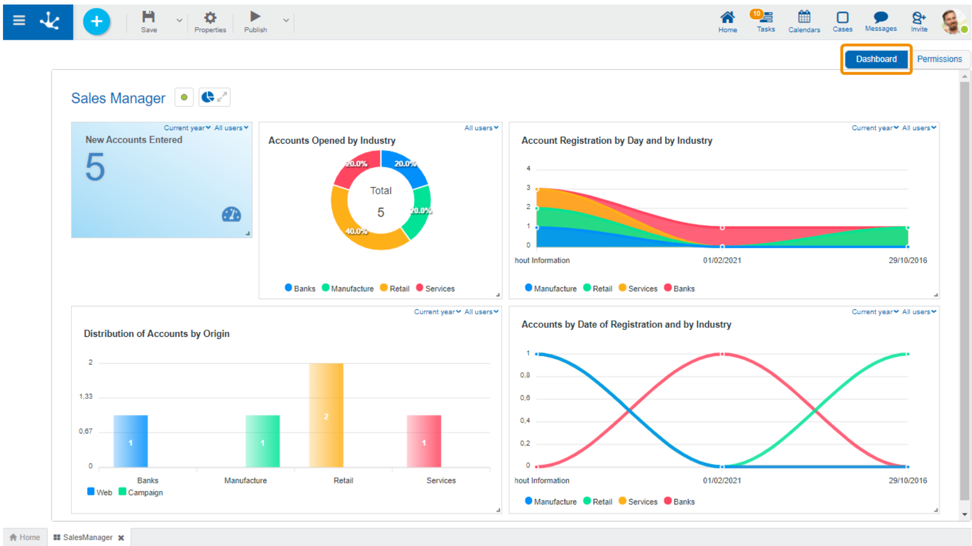
These options are presented on the upper right margin.



- [Dashboard]
- [Permissions]

3.6.8.1.2.1. Dashboard

In this section the maintenance of the dashboard widgets is done.



Operations

Add Indicators

Displays the gallery of published indicators on which the user has permission. For each indicator its name is visualized as well as its icon.
The "Search" option, in the gallery allows to filter indicators by the entered text.

Closes the indicators gallery.

Modify Indicators

The modifications the user applies on the indicators of a dashboard, have impact only in the visualization of such dashboard.

- Modify the indicators size. in order to secure the suitable visualization, each indicator is assigned a minimum size to respect.
- Modify the location of the dashboards in the dashboard area.
- Change user filters.
- Change date filters.
- Delete dashboard indicator.
- Add indicator.

> *Operation modify size and modify location are done with the function "Drag and Drop".*

3.6.8.1.2.2. Permissions

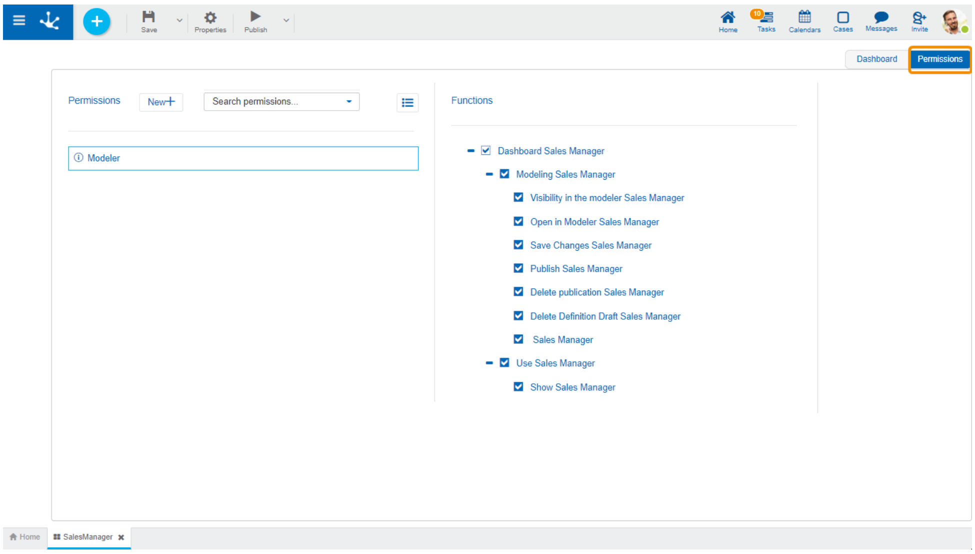
Allows to assign the security functions for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the permission settings option from the menu.

Sections

- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission Modeler.

Users who are assigned the permissions have access to the functions included in it.



New+ Opens a panel to create a new permission and once created, the security functions included in it must be selected .

Search permissions... Allows to select a permission from a list and enables the input of characters to filter the values in the list.

Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon . If there are functions selected for that permission, they must be unchecked in order to delete it.

Security Functions to Model the Dashboard

- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Save changes: Enables the operation of saving modifications made to the object.
- Publish: Enables the operation of publishing the object leaving its state as "Published".
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete draft definition: Enables the operation of deleting the object.
- Export: Enables the operation to export the object from the save submenu of the top toolbar.

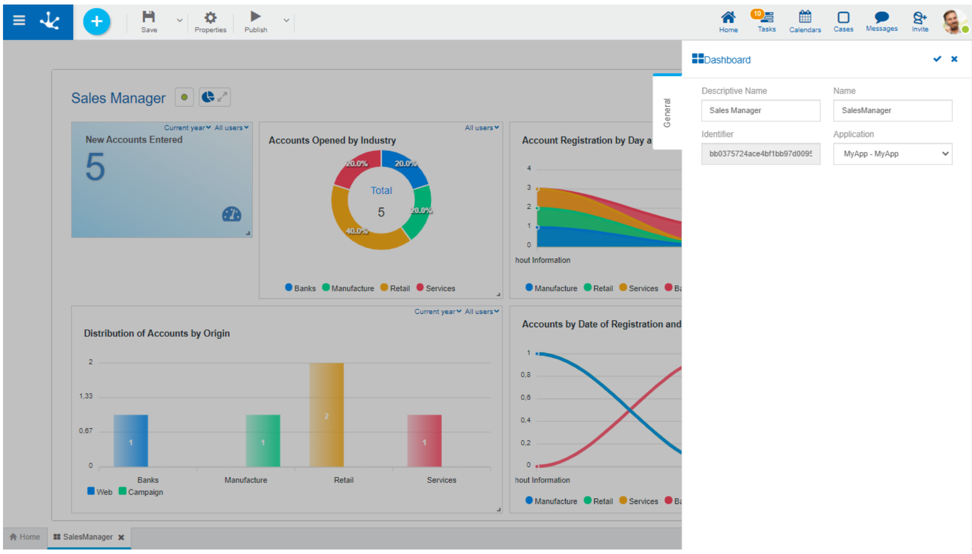
Security Functions to Use the Dashboard

- Show: Allows to show the object.

3.6.8.2. Dashboard Properties

The properties of the dashboards can be entered both at the time of their creation and when modifying an existing one.

Entering the dashboard properties panel is done using the icon which is in the [top toolbar](#).



General Tab

Properties

Descriptive Name
It is the name visualized from the dashboard.

Name
It is the dashboard´s name. It does not allow blanks or special characters. It is unique and required.

Identifier
It is the internal dashboard´s name. It is automatically generated.

Application
It is the name of the application to which the dashboard belongs. It is not required, just as it happens with the rest of the modeled objects.

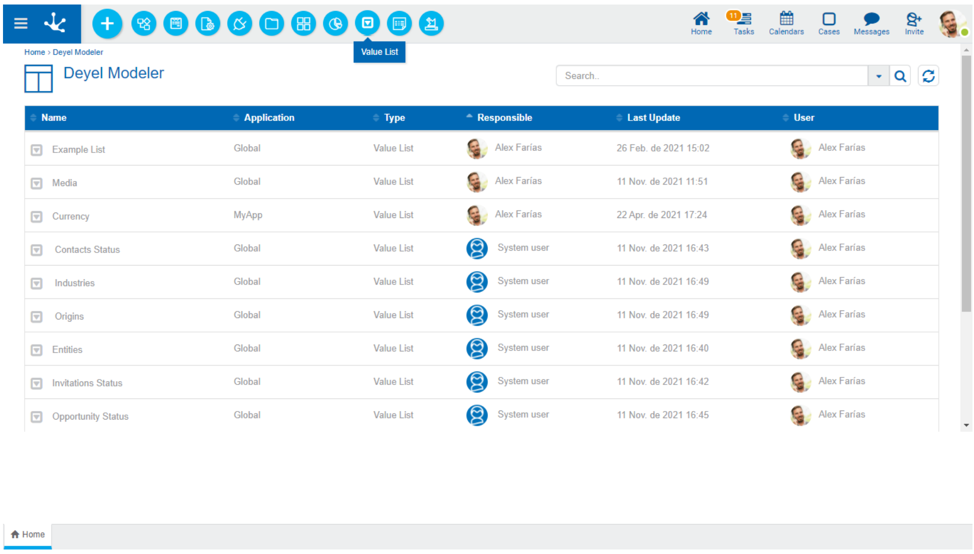
Actions

The icon is used to confirm the modifications made in the properties panel.

The icon is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.9. Value Lists Modeling

The value list modeler allows to define a set of possible values for a field, grouped under some criteria. These values can be associated to form fields.



The value list modeler allows to administer each list, respecting their progress through the different [states](#) of a modeling object.

- Save
- Publish
- Delete
- Export
- Delete Publication

The general characteristics of the list of values modeling environment are described in the topics:

- [Modeling Facilities](#)
- [Value List Properties](#)

A new value list can be created from the:

- [Context menu](#)  .

- The icon  .
- The menu displayed with the “Value List” option.

- The form modeler, in the “Relation” tab of a field selecting the value list option of a [form](#) or of an [agile form](#).

- The form modeler, through the control [Value List](#).

- The agile modeler, through the control [Value List](#).

An already existing value list is modified by selecting it from the grid with the "Open" button.

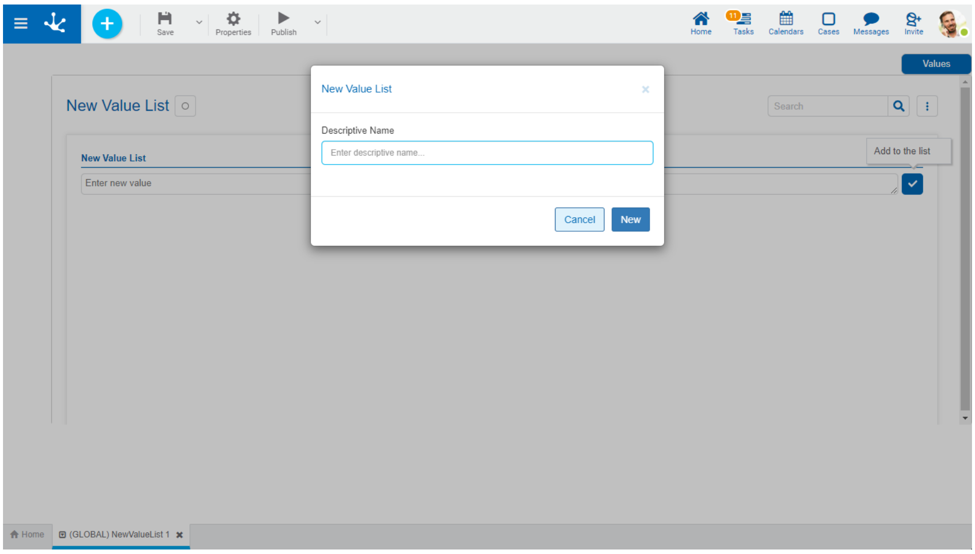
3.6.9.1. Modeling Facilities

New Value List

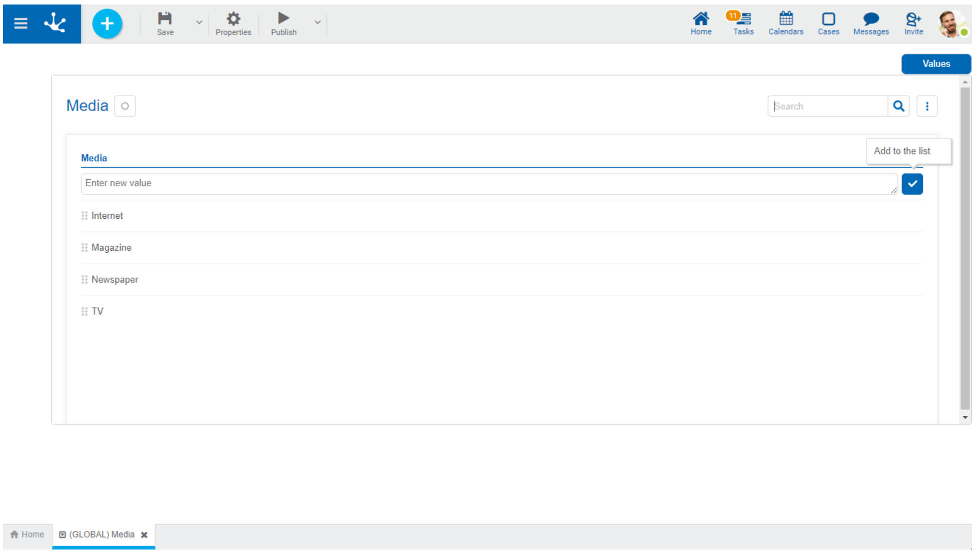
The IT modeler user can design a new value list, which is available to be used from any form after being published.

Steps for Creating a New Value List

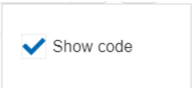
Step 1: Assign the name and press the "Create" button.



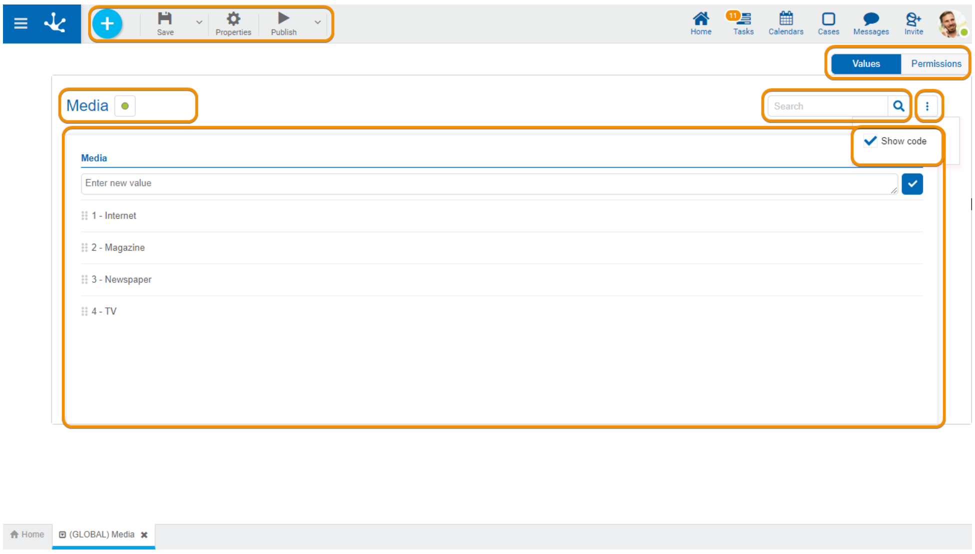
Step 2: Enter a new value and press the accent mark icon. Repeat this step until all the desired values are entered.



Workspace Sections

- Top Toolbar
- Value List Information
    - Name
    - State
- Allows to filter list values based on the entered characters. If a list is too long, it helps users to easily display the desired values.
- Enables an icon 

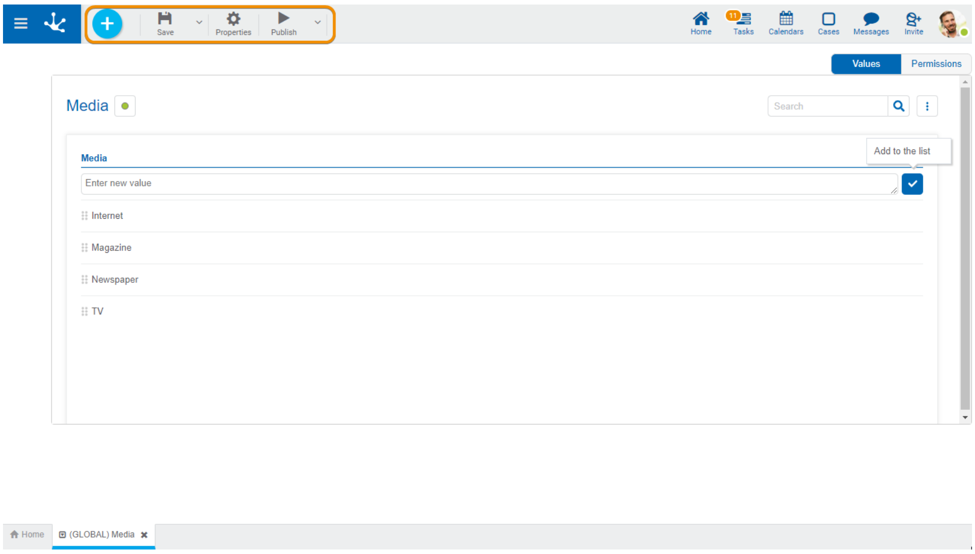
 which allows to add the internal code to the list values.
- Design Options
- Modeling Area



3.6.9.1.1. Top Toolbar

This toolbar contains icons and submenus from which you can perform operations on the object. Depending on its state, some options may be disabled.

The bar is displayed on the toolbar of **Deyel**.



Save

This icon allows to save the object in the repository of **Deyel**, leaving its state as "Draft" or "Modified". If certain conditions are met, the modeler user receives a message indicating that the operation was performed correctly, otherwise they receive an explanatory message.

Main Conditions

- The application of the object must exist.
- The name must be unique in the application.
- The object's permissions must exist if you select the property Models Security in the “General” tab of the properties panel.

To the right of the icon the option to open the submenu.

Properties

Open the value list properties.

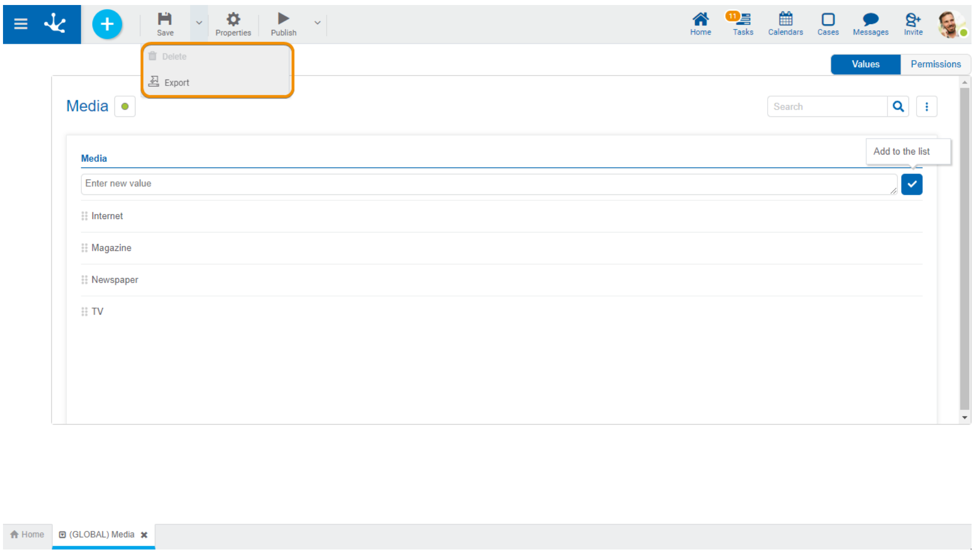
Publish

By means of this icon the object goes to "Published" state, after verifying a set of additional conditions to those of the "Save" operation. The modeling user receives the corresponding message, indicating the result of the operation.

To the right of the icon the option to open the submenu.

3.6.9.1.1.1. Save Submenu

This submenu is opened by pressing the icon immediately to the right of the icon corresponding to "Save".

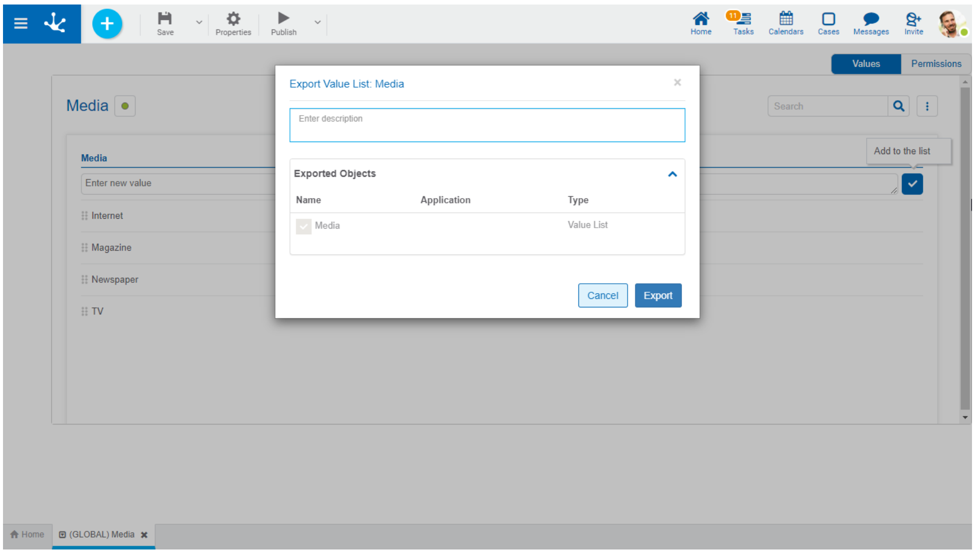


Delete

Allows to delete the object only if it is in "Draft" state, closing the tab in which it is located and deleting it from the modeler's grid.

Export

This icon opens a window for the user to select and confirm the export of the object.



Description

In this property a text explaining the reason for the operation can be entered.
This text can be modified upon import and is displayed in the description column of the export record.

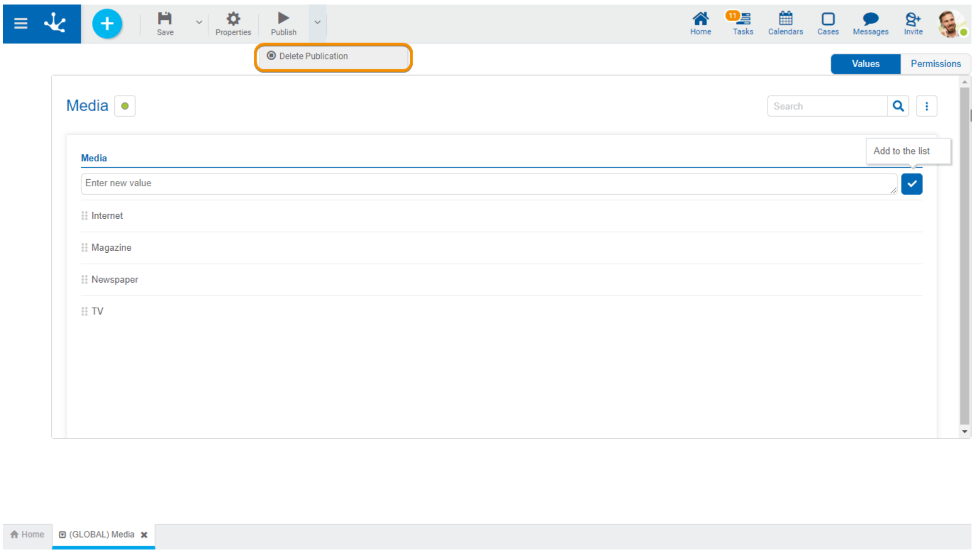
Exported Objects

By expanding the container, the object being exported is displayed.

You must press the “Cancel” button to leave the export without effect or the “Export” button to finish the operation.

3.6.9.1.1.2. Publish Submenu

This submenu can be opened by pressing the icon immediately to the right of the icon corresponding to "Publish".

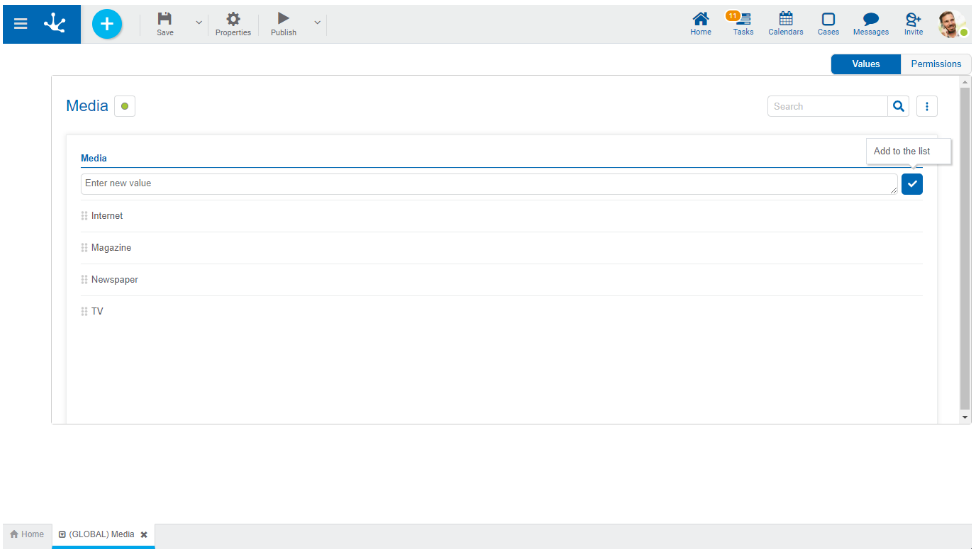


Delete Publication

Allows to leave the value list unavailable for use by returning it to the "Draft" state.

3.6.9.1.2. Modeling Area

The modeling are is the space where you can enter, modify or delete values from the lists.



Operations on Values

- Allows adding each entered value to the list of values.
- It is displayed if the list has the Icons property modeled. It allows to associate icons to the list values.

- Double click: Allows to modify a value in the list.
- Move: Allows to change the position of a value within the list by dragging the value with the mouse.

Hovering the cursor over each of the values entered, a set of icons is displayed and this allows to perform different operations.

- Allows to delete a value from the list of values. Once deleted, it is displayed in gray and crossed out.
- Allows to restore a previously deleted value.

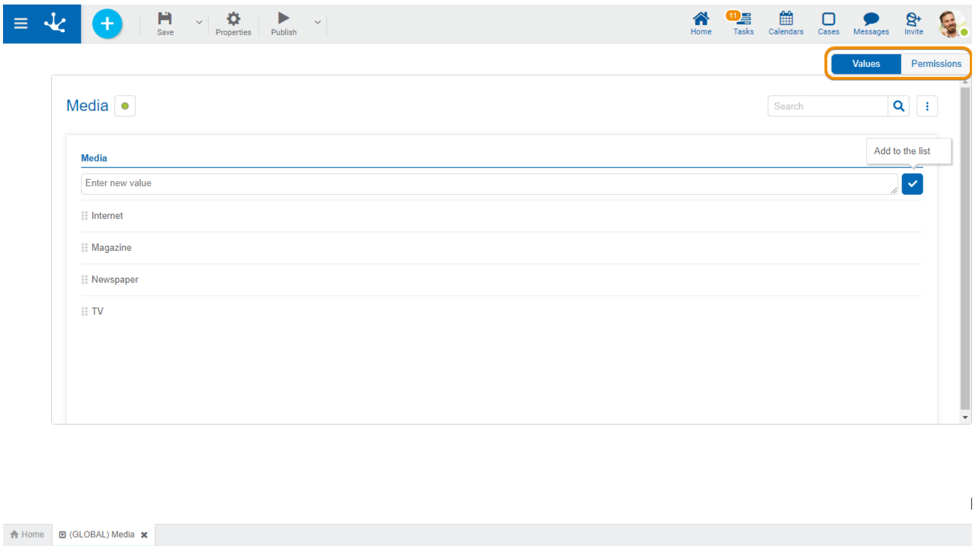
Display the Selected Line

- Hides the icons that are displayed.
- Shows hidden icons.

3.6.9.1.3. Design Options

When creating or modifying a value list, it allows to enter the values that are going to be displayed in it.

These options are presented on the upper right margin.



- Values

From this design option the value list is displayed and new values can be added in it in the modeling area.

- Permissions

This option is displayed if the property Models Security is selected in the properties panel of the value list.

3.6.9.1.3.1. Permissions

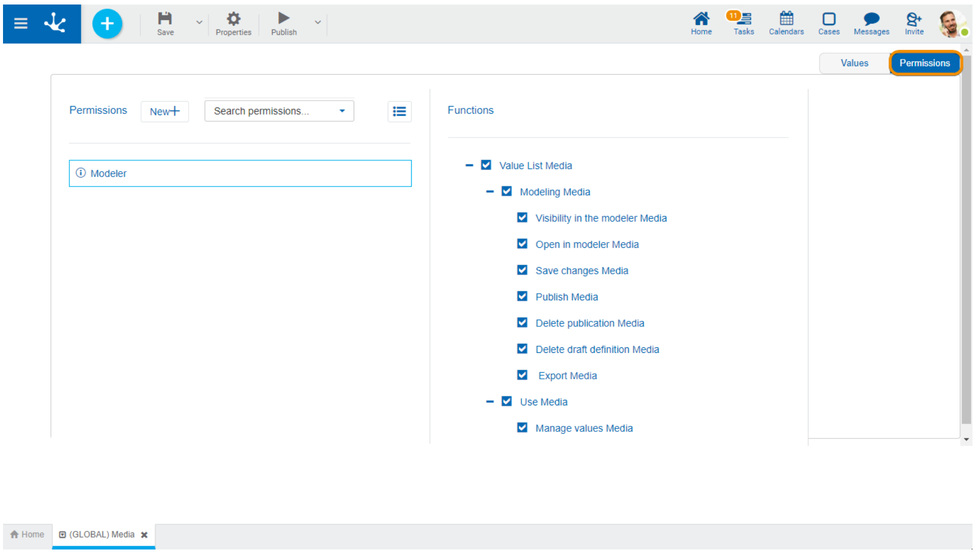
Allows to assign the [security functions] for use and modeling of the object to the existing permissions or to new permissions that the user creates, without having to go to the [permission] settings option from the menu.

Sections

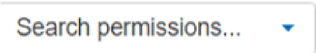
- Permissions: Permissions to which object functions are assigned.
- Security Functions: Represents the total set of security functions, modeling and use of the object. Those that are marked are the ones included in the selected permission.

By default, all security functions for a new object are assigned to the permission Modeler.

Users who are assigned the permissions have access to the functions included in it.



Opens a panel to create a new permission and once created, the security functions included in it must be selected .



Allows to select a permission from a list and enables the input of characters to filter the values in the list.


Opens the wizard to select a permission and once chosen, the necessary object security functions must be checked.

To unrelate a permission from the object, hover the cursor over the permission and press the icon ✖. If there are functions selected for that permission, they must be unchecked in order to delete it.

Security Functions to Model the Value List

- Visibility in the modeler: Allows to display the object in the Deyel modeler.
- Open in modeler: Allows to show the object from the Deyel modeler.
- Save changes: Enables the operation of saving modifications made to the object.
- Publish: Enables the operation of publishing the object leaving its state as "Published".
- Delete publication: Enables the operation of deleting the object publication leaving its state as "Draft".
- Delete draft definition: Enables the operation of deleting the object.
- Export: Enables the operation to export the value list from the save submenu of the upper toolbar.

Security Functions to Use the Value List

Security functions to use the value list are available if the value list is in “Published” state.

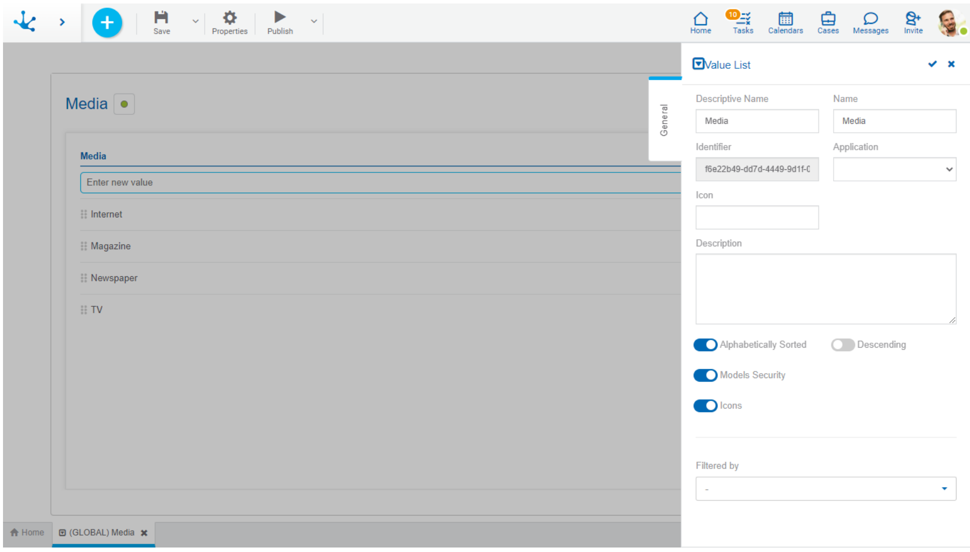
- Manage values: Enables the operation to enter, modify or delete values in the list.

> *The design option "Permissions" is only displayed if the property Models Security has been selected.*

3.6.9.2. Value List Properties

The properties of the value list can be entered both at the time of their creation and when modifying an existing one.

Entering the value list properties panel is done using the icon which is in the Top Toolbar



General Tab

Properties

Descriptive Name
It is the name used by the user to reference the value list.

Name
It is the name used internally by the user to reference the value list. It does not allow blanks or special characters. It is unique and required.

Identifier
It is the name which identifies unequivocally the value list. It is automatically generated.

Application
It is the name of the application to which the value list belongs. It is not required, just as it happens with the rest of the modeled objects.

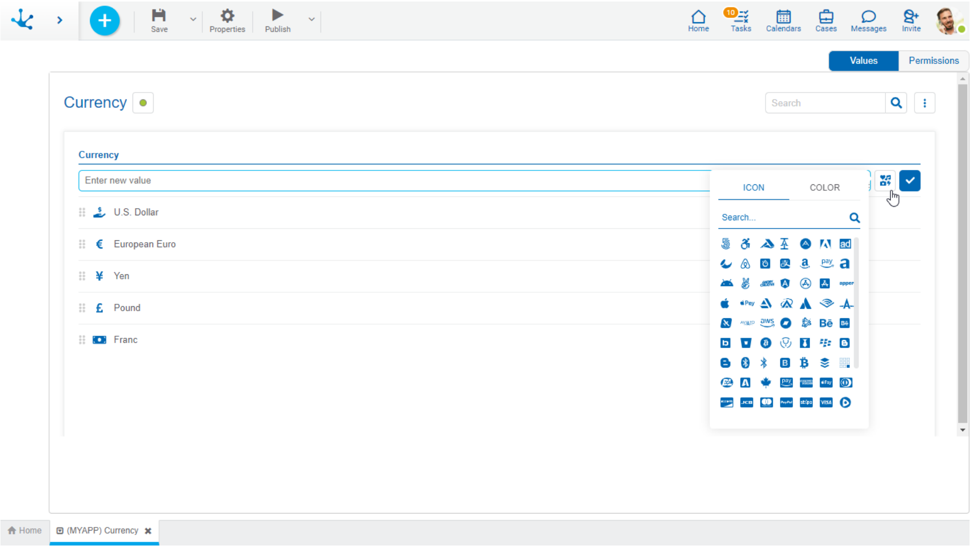
Description
Text which defines the value list and its respective content.

Alphabetically Sorted
Checking this property indicates that the values in the value list are sorted alphabetically, and allows to select if the order will be descending.

Descending
Indicates that the order of the values in the value list is descending. This property can be selected if it was previously indicated that the list is sorted alphabetically.

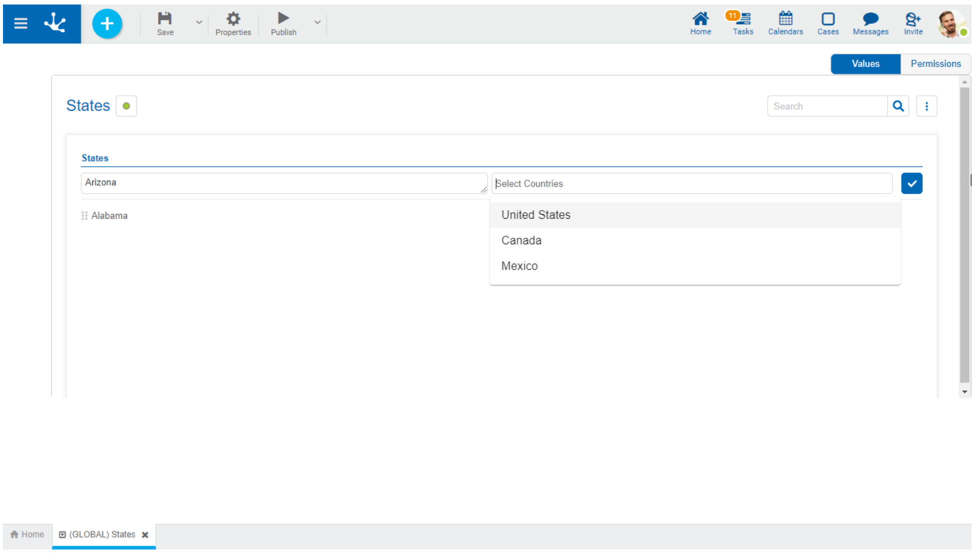
Models Security
Allows to add security to the value list, and indicates the creation of the security functions to model and the security functions to use, to be assigned in the design option "Permissions" or in the permission configuration.

Icons
It allows to associate an icon to each value of the list at the time such values are incorporated.



Filtered by

Allows to select the value list to be related to the list being modeled. When a value is entered in the modeled list its corresponding is indicated in the list selected in this property.
Example: If the modeled list is States and the list selected in the property Filtered by is Countries, when entering a province you must indicate which country it corresponds to.



Actions

The icon ✔ is used to confirm the modifications made in the properties panel.

The icon ✖ is used to close the properties panel, if it was not previously saved, changes are discarded.

3.6.10. Export and Import

The modeler user can export their objects for different purposes.

- To move objects between environments, importing those objects into the target environment
- To make backup copies.

Exporting an object generates a compressed file containing the definition of the object and its selected related objects.

Export and import operations have different considerations depending on whether the objects have state or not.

- With state: when imported into the target environment, they have no impact until they are published.
- Without state: when imported into the target environment, they have an immediate impact.

Before moving objects from one environment to another, it is advisable to configure the target environment correctly in terms of organizational units, users, roles, and adapters.

Steps to Move Objects between Environments

Step 1: Import objects

- Applications and permissions are imported first.
- The order in which other objects are imported is indistinct.

Step 2: Publish objects

- It is recommended to publish objects that have no relation to other objects, first.
- First, rules, value list and indicators, followed by forms, dashboards and processes.

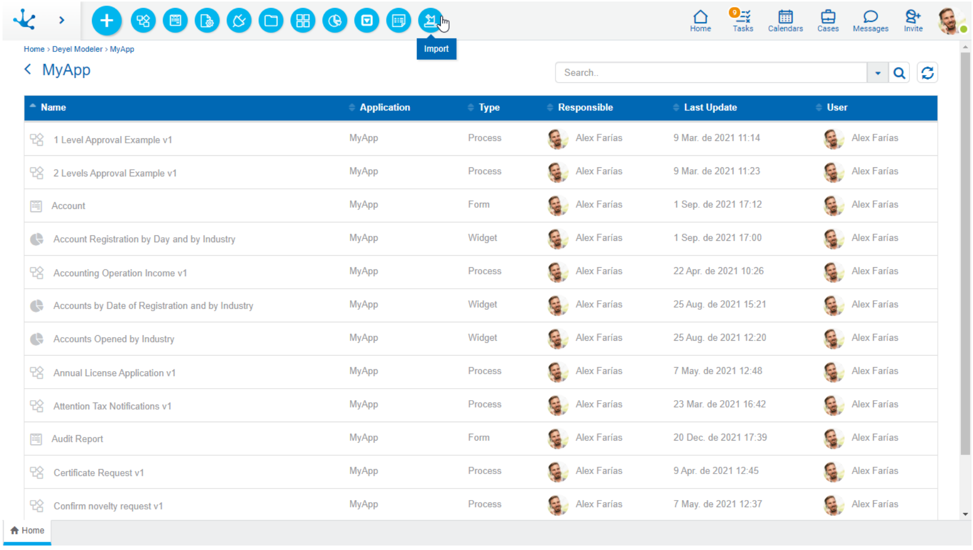
Export

Objects are exported from the icon in the top toolbar of each object modeler or from the modeler's grid, with the exception of application, role and permission, which are exported only in the latter way.

Import

All the objects are imported from the context menu of the modeler.

- From the icon .
- From the expanded menu using the "Import" option



Import Panel

When import starts, a panel with information about the object being imported is opened.

Description

It is the description entered when exporting the object. This text can be modified upon import and is displayed in the description column of the imports record.

Imported Objects

By expanding this container, the related objects are displayed in a hierarchical order. They were included when the main object was exported. Check marks can be removed from objects that you do not want to import.

Application

It corresponds to the application in which each object is imported.

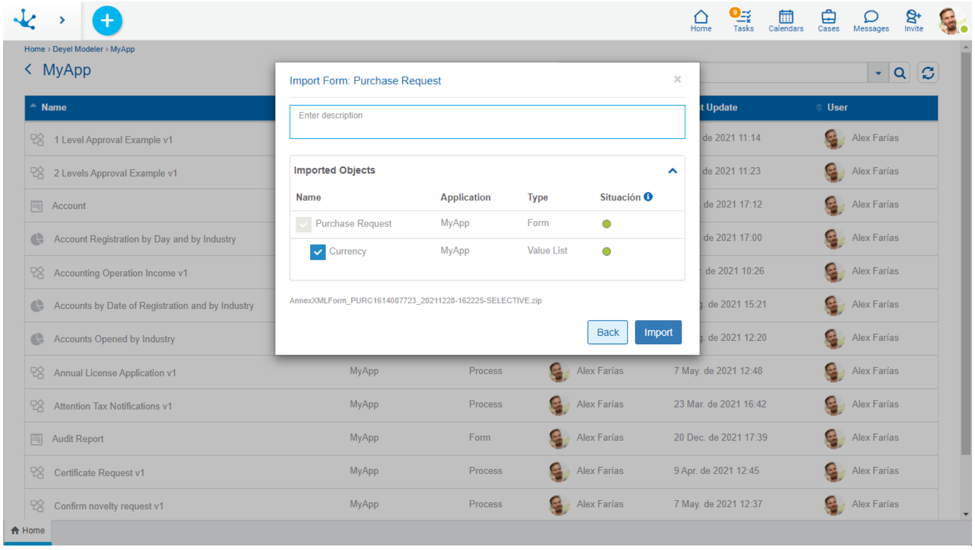
Type

The types of objects being imported are detailed.

Status before import

- In the case of objects with state, it indicates the state of the object in the environment in which it is being imported:
  - : Modified
  - : Published
  - : Draft
- For objects without state, it indicates if there is an object in the environment in which it is being imported or not:
  - : There is
  - : There is not

By pressing the "Import" button, the selected objects become imported into the target environment and the panel displays information on the operation result.



By pressing the icon of the column Status , the explanation of its content is displayed.

If the selected objects do not meet any of the conditions to import, the import is totally ineffective, that is, all or none of the objects are imported.

> *If exported objects imported in versions prior to 7.0, only the allowed related objects are displayed.*

Status after import

- For objects with state:
  - If they were in the target environment with published or modified state , after importing they change into modified state
  - If they were in the target environment with draft state or did not exist, after importing they remain with draft state
- For objects without state:
  - If they were in the target environment , the import updates them directly
  - If they did not previously exist , the import creates them

Conditions for Import

When importing objects, the same conditions apply as when performing the save operation for each object.

Additionally, the following conditions are verified depending on the object:

- Processes
  In a process with cases already started, it cannot be imported if activities or gates have been deleted.

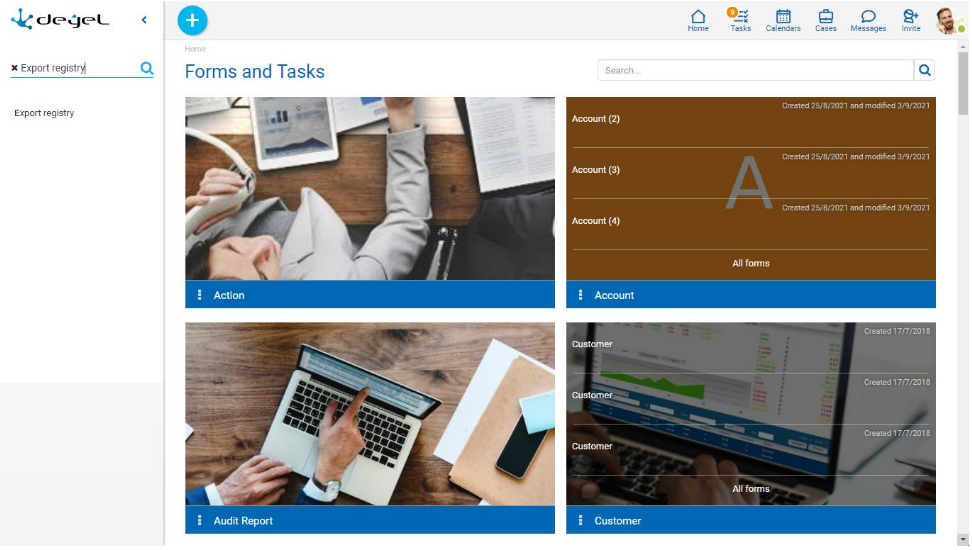
- Rules
  There should be an adapter.

- Roles
  There should be a role application, actors and a coordinating user.

- Permissions
  The permission application should be in the target environment. It may happen that some of the security functions contained in the permission do not exist in the target environment. In these cases, a warning is issued in the log file and the import is allowed. The imported permission is left without referencing these non-existent functions.

3.6.10.1. Export Registry

Deyel allows IT modeler users to show the executed exports. Thus, to enable registration of exported objects, the property should be selected in the environment. To show, use the menu quick search, entering "Export Registry".



Properties

Number
It is a consecutive number that uniquely identifies the export record.

Identifier
It is an identification of the record that results from the concatenation of the following data:
- Date and time of the export execution.
- Server name.

Date and Time
Date and time when the object was exported.

Server Name
URL of the environment where the export was executed.

Server IP Address

IP address of the computer where the Deyel environment is installed and where the object is exported from.

Customer IP Address
IP address of the user's computer that exports the object.

User
Code of the user that executed the export.

Selective
Indicates the selected export method. This selective option allows the user that exports to choose the objects that are included and that they cannot be updated when performing the import.

File
File generated on export.

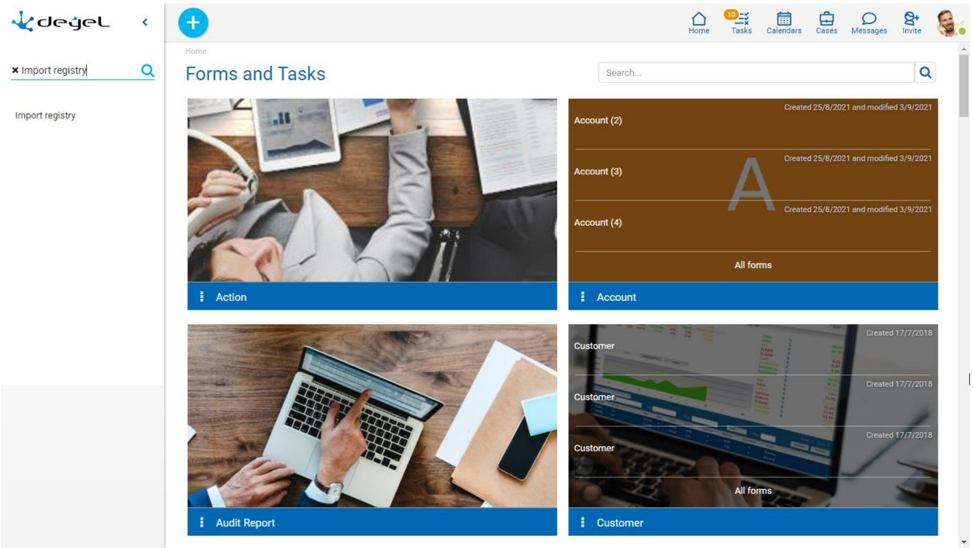
Description
If the user entered remarks when exporting the object, they are displayed in this field.

Root Object and Included Objects

The root object is the main object of the export. Whereas all the objects included in the export file are those related to the main object, which were indicated when exporting.

3.6.10.2. Import Registry

Deyel allows IT modeler users to show the executed imports. Thus, to [enable registration of imported objects](), the property should be selected in the environment. To show, use the menu quick search, entering "Import Registry".



Properties

Number

It is a consecutive number that uniquely identifies the import record.

Import Identifier

It is an identification of the record that results from the concatenation of the following data:

- Date and time of import execution.
- Server name.

Date and Time

Date and time when the object was imported.

Server Name

URL of the environment where the import was executed.

Server IP Address

IP address of the computer where the Deyel environment is installed and where the object is imported from.

Customer IP Address

IP address of the user's computer that imports the object.

User

Code of the user that executed the import.

Selective

Indicates the selected export method. This selective option allows the user that exports to choose the objects that are included and that they cannot be updated when performing the import.

Validated

Determines whether export is performed with a "hash" check.

Log File

In case an error occurs when importing, it defines the file where that error is recorded along with "stack trace".

File

File used in import.

Description

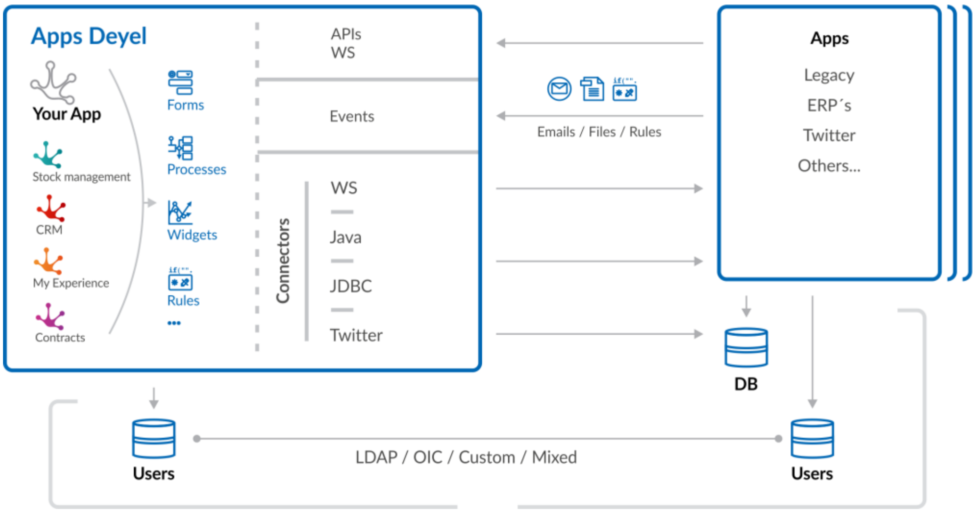
If the user entered remarks when importing, they are displayed in this field.

3.7. Integration

Applications developed with **Deyel** can interact with other applications, by using different tools and services of the platform.

On the one hand, **Deyel** allows to integrate its applications with external applications and existing data sources, that is, Legacy systems, databases, Twitter or other external applications, making use of adapters based on web services, Java and JDBC.

It also has a web services API based on the Richardson maturity model design guides, level 3, which allows any external application to **Deyel** to interact with applications developed with **Deyel**, or with solutions, such as CRM, Contracts or Stock Management, among others. It also allows the use of emails, rules, files and other events.



Applications developed with **Deyel** have their own user directory and if necessary they can be integrated through LDAP, OIC, in a personalized and mixed way, that is, allowing groups of users with different authentications.

Integration Facilities

Applications can be integrated using different platform tools and services.

Integration with External Applications

Applications developed with **Deyel** can be integrated with other applications by different means, either consulting or updating their information.

- Rules based on Java, JDBC and web services adapters
  This integration uses advanced rules and adapters which are defined using the different modelers of **Deyel**.

- Rules based on application adapters that require user authorization
  Integration with Twitter is an example of this type of integration through an adapter where the connection credentials are recorded. This adapter allows to centrally administrate the interaction of **Deyel** users with Twitter.

Integrating with External Applications

Other applications can be integrated with applications developed with **Deyel**, mainly using Deyel Rest API. There are also other means that can be very useful, depending on the characteristics of the applications to be integrated.

- Use of web services API

Through the use of Deyel Rest API other applications can interact with applications developed with **Deyel**, having access to forms and cases through web services.

- Other media

Integration can be done by using emails, rules and files.

Authentication Schemas

When applications are integrated, it may be required for them to be the same users or to be synchronized among them. The authentication procedure ensures that any use of **Deyel** and the use of its solutions are performed by "someone" or "something" that can be identified as a user, within the user registry.

Deyel uses different authentication schemas to respond to this request.

- Native

Deyel verifies that the user exists in its registry and checks the password, which is stored encrypted in its database.

- LDAP

When an organization uses directory services to register its users, **Deyel** may be configured to delegate the authentication process to LDAP.

- Federated

When an organization uses Google accounts for its users, the authentication process can be delegated to Google.

- Mixed

It allows an organization to use different types of authentication simultaneously.

Using the Integration

Integration rules can be used from the different objects of the applications developed with **Deyel**.

- Rules in forms and processes

Advanced adapter-based rules can be used using embedded rules.

- Automatic actions of process activities

Advanced adapter-based rules can be used in the modeling of automatic actions of process activities.

- Scheduled tasks and events

Advanced adapter-based rules can be used in the modeling of events and scheduled tasks.

3.7.1. Deyel API Rest

By using Deyel Rest API, other applications can interact with applications developed with **Deyel** and use the information associated with their objects.

The Rest API of **Deyel** uses JWT to get the authentication token. The token granted by **Deyel** allows third-party applications to use all the methods of the implemented endpoints.

Endpoints

- **/forms**
  Allows administration of **Deyel** forms, being able to carry out the following operations: creation, show, modification, deletion and search.

- **/cases**
  Allows the creation of cases and the execution of activities.

- **/rules**
  Allows to obtain parameters and execute rules.

Methods

The Rest API of **Deyel** is composed of a set of methods that allow access to the objects that compose the applications of **Deyel**.

To test these examples, the json of forms or cases must be downloaded depending on what is to be tested.

Examples

To facilitate the use the Rest API of **Deyel** examples that are contained in collections are defined and must be imported into Postman.

To execute examples, the following steps must be followed beforehand:

- Define the User
- Import Collections
- Get the Token

Each collection has a list of operations that can be executed to access the Rest API of **Deyel**.

- Forms Collection
- Cases Collection
- Rules Collection

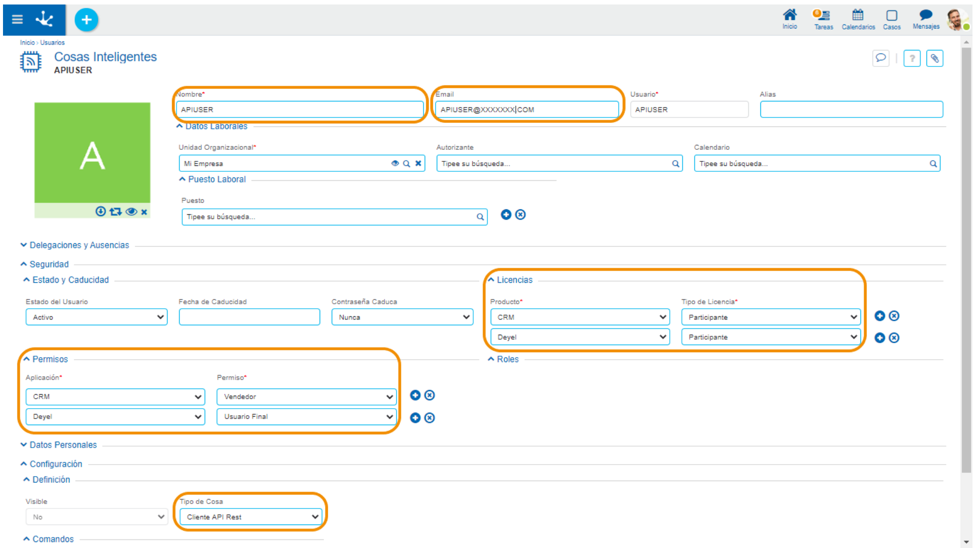
3.7.1.1. Define User

To access the objects used in the examples, a smart thing type user must be defined, configuring its properties to indicate name, user, type and permissions for each application.

User Properties

The smart thing type user properties must be completed with the suggested values.

Name	APIUSER
User	APIUSER
E-mail	Email address where the user receives the password.
Type	Rest API Client
Product Type of License	CRM Participant
Product Type of License	Deyel Participant
Application Permission	CRM Seller
Application Permission	Deyel End User



> *Permission for the CRM application is included so that the Account form (CRM_ACCOUNT) in the form samples can be accessed.*

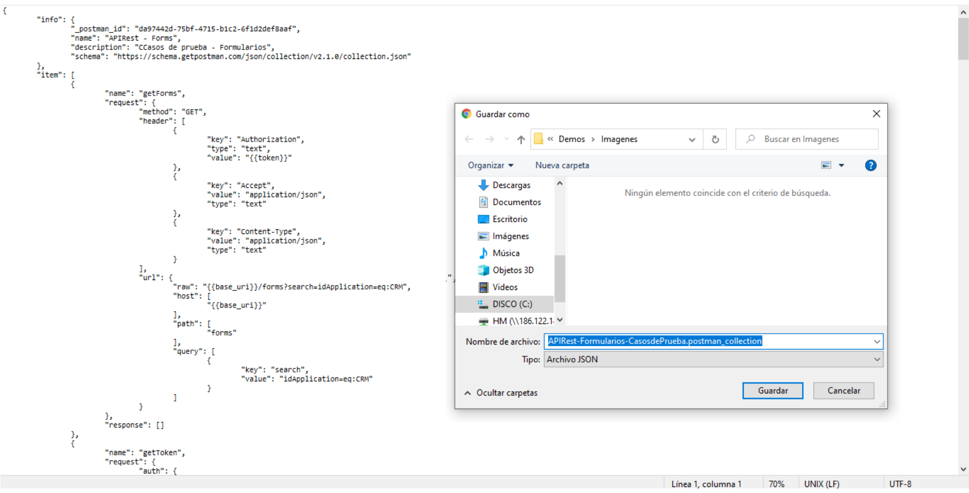
3.7.1.2. Import Collections

To start using Deyel Rest API from Postman, the collection corresponding to the selected example must be imported.

- Examples for Forms

The example is implemented on a project in Postman and can be opened from here.

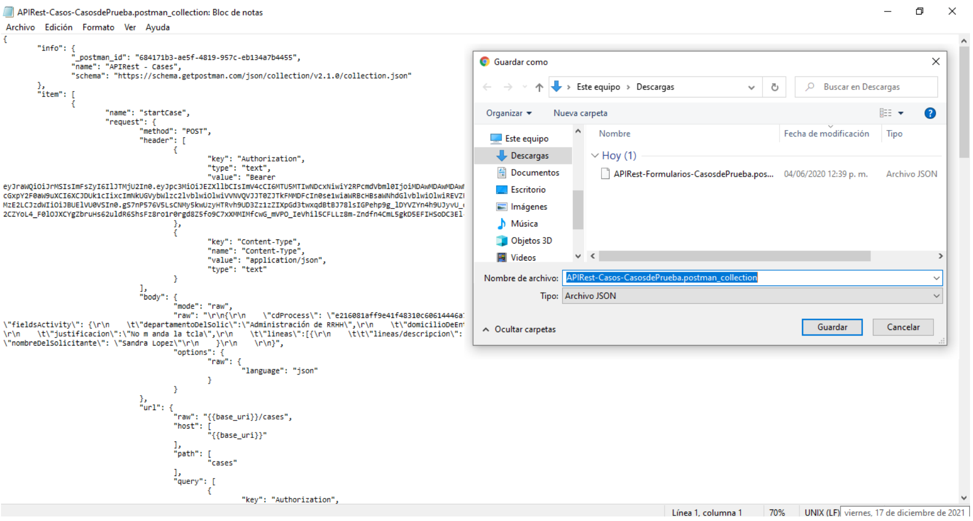
The example must be saved with a json extension and imported into Postman.



- [Examples for Cases](#)

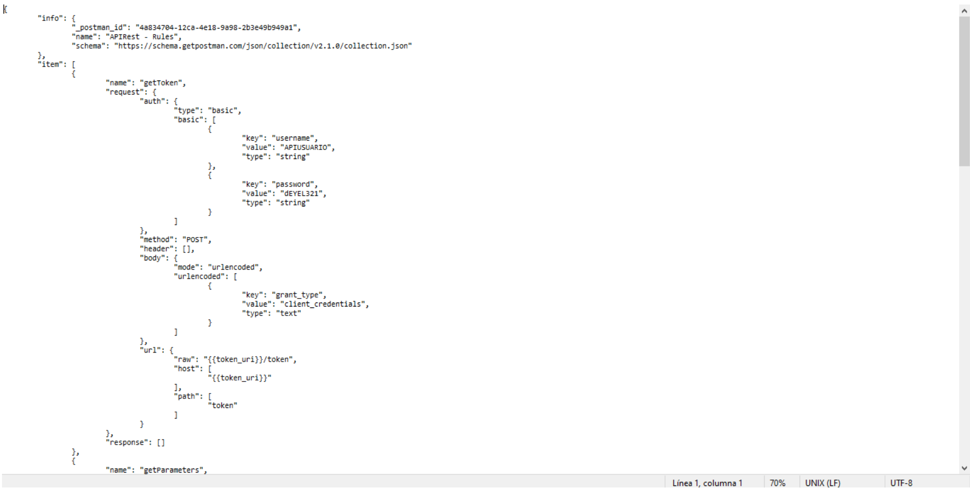
The example is implemented on a project in Postman and can be [opened from here](#).

The example must be saved with a json extension and imported into Postman.

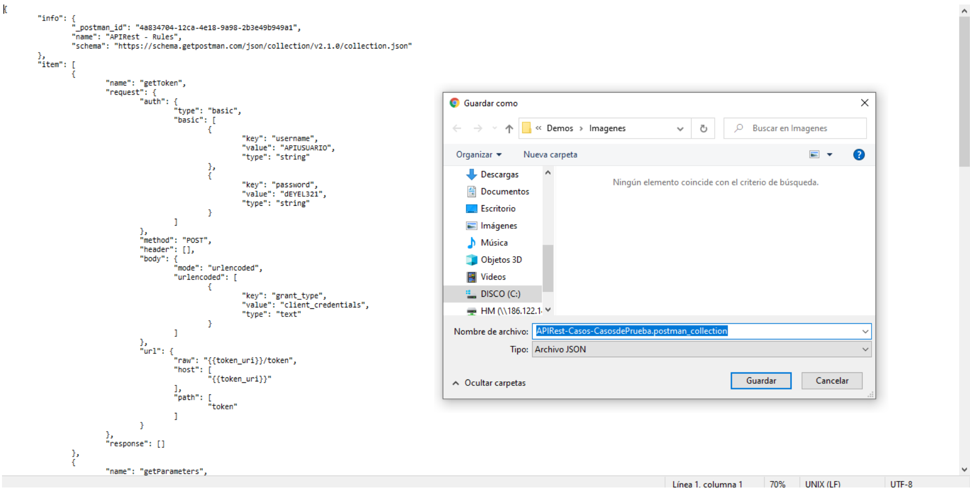


- [Examples for Rules](#)

The example is implemented on a project in Postman and can be [opened from here](#).



The example must be saved with a json extension and imported into Postman.



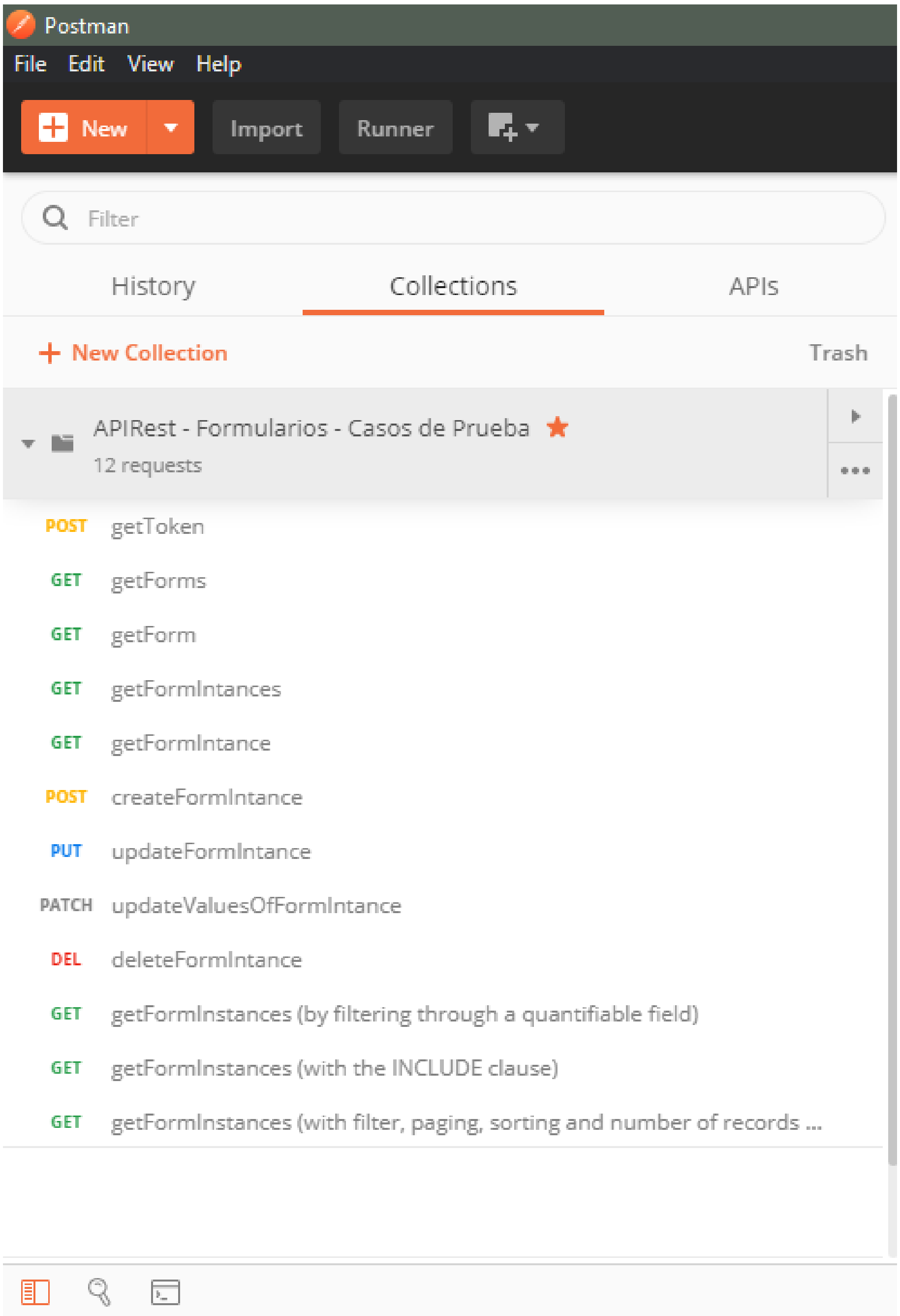
3.7.1.3. Obtain Token

To use Deyel Rest API from Postman, once the selected collection is imported, an authentication token must be obtained from **Deyel**. This token allows third-party applications to use the implemented methods.

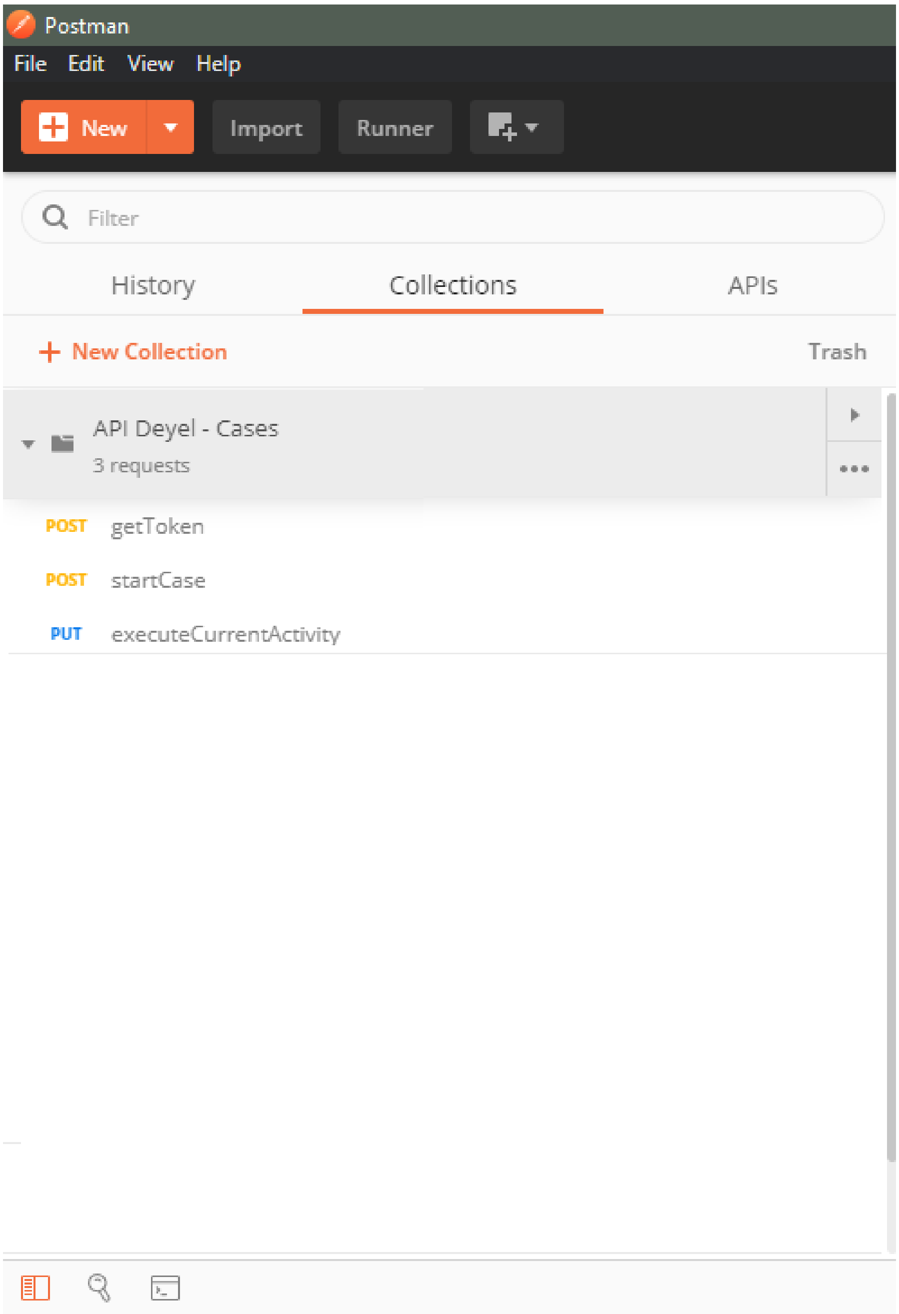
Step 1

Configure the uri used for testing, from the collection edition.

- For Forms Examples

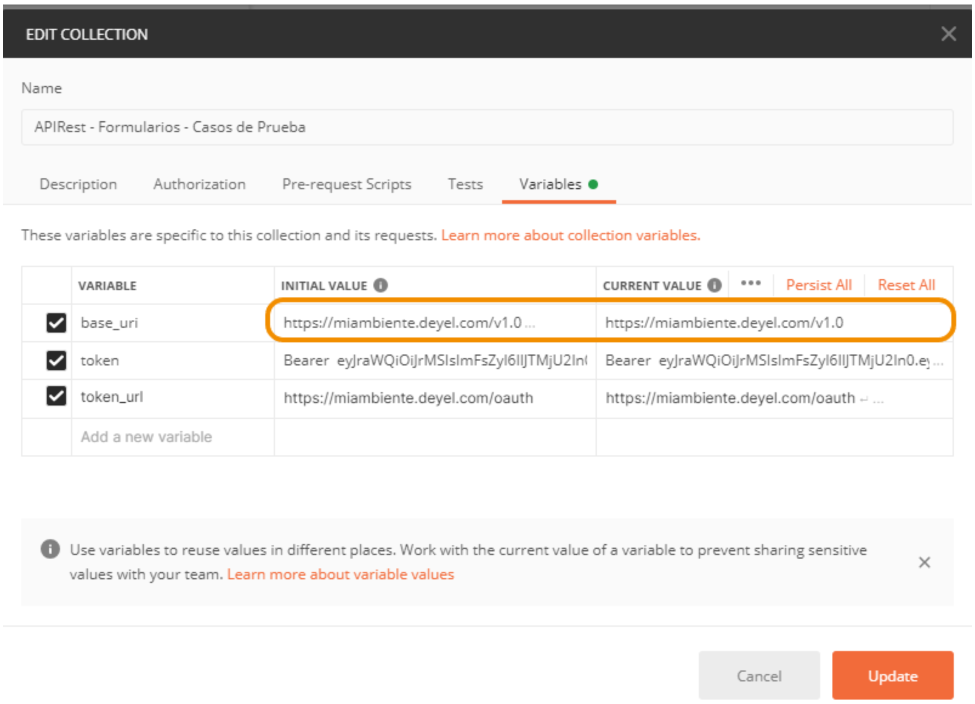


- For [Cases Examples]



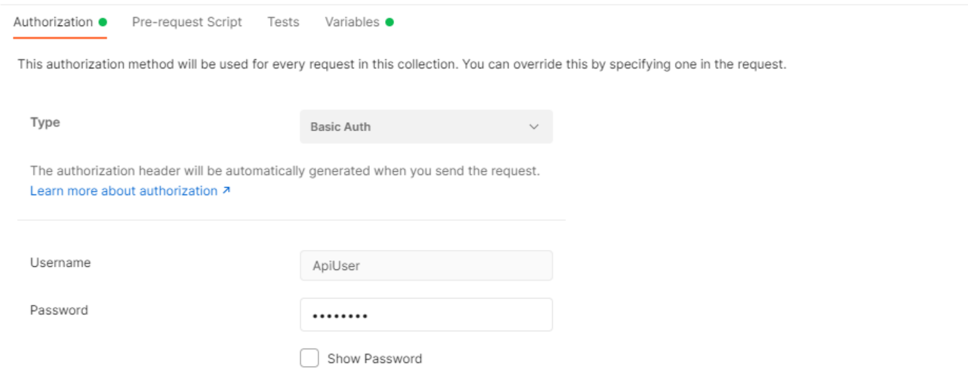
- For Rules Examples

The value of the "base_uri" variable must be modified, replacing <miambiente> by the name of the corresponding environment and press the "Update" button.



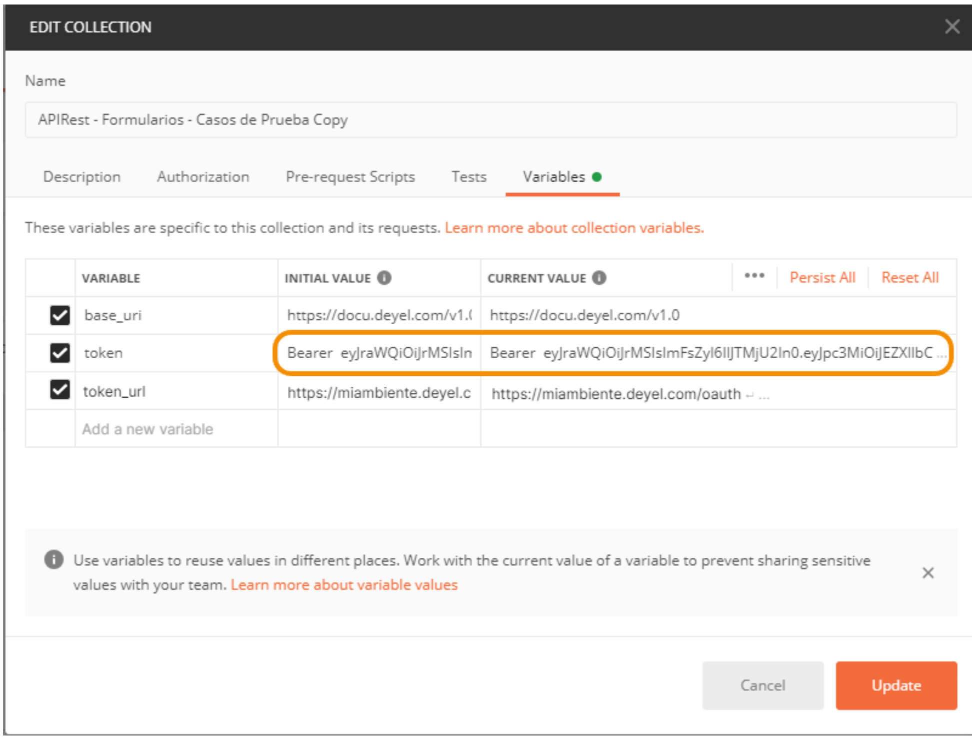
Step 2

From the getToken method, in the "Authorization" tab, you must indicate the user defined as thing type and the password received by mail. Press "Send" button.



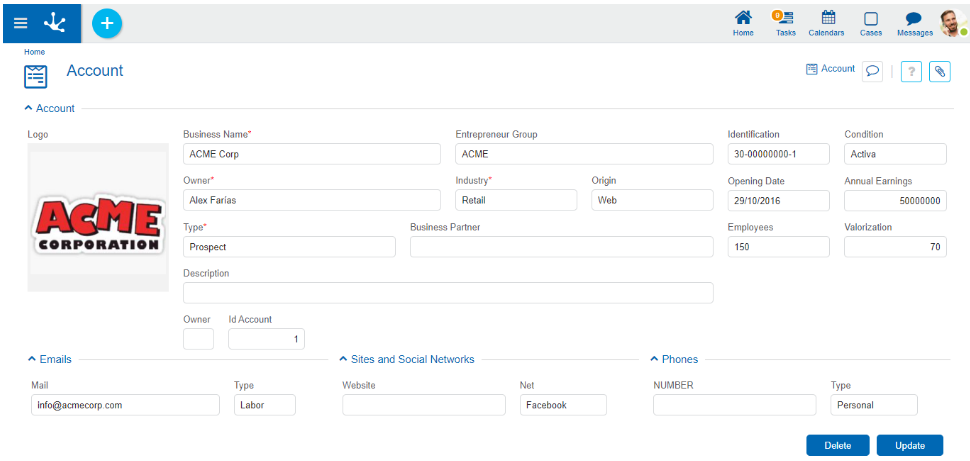
Step 3

Copy from the getToken method response, the "Authorization" parameter value of the "Header" tab, in the "token" variable of the collection edition. Press "Update" button.



3.7.1.4. Form Examples

These examples are based on the (CRM_ACCOUNT) Account form of the CRM solution, available in all versions of **Deyel**.



Forms Collection

Examples are implemented from Postman to execute each of the operations described in the following table. Previously, you must [import the Form collection.](#)

Operation	Description
getToken	Obtains token.
getForms	Returns a list with the CRM application forms.
getForm	Returns the information from the Account form definition (CRM_ACCOUNT).
getFormInstances	Returns a list with all the Account form instances (CRM_ACCOUNT).
getFormInstance	Returns a specific instance from the previous item list.
createFormInstance	Creates a new Account form instance (CRM_ACCOUNT). Values must be sent for all form fields. The ones that want to be omitted must be sent empty ("field_name": null).
updateFormInstance	Modifies the fields values in an Account form instance (CRM_ACCOUNT). Values must be sent for all form fields. The ones that want to be omitted must be sent empty ("field_name": null).
updateValuesofFormInstance	Modifies only the dsDescription field value in an Account form instance (CRM_ACCOUNT).
deleteFormInstance	Deletes an Account form instance (CRM_ACCOUNT).
getFormInstance (by filtering through a quantifiable field)	Returns a list with all the Account form instances (CRM_ACCOUNT), filtering through quantifiable fields.
getFormInstance (with the INCLUDE clause)	Returns a list with all the Account form instances (CRM_ACCOUNT), using inclusion clauses.
getFormInstance (with filter, paging, sorting and number of records per page)	Returns a list with all the Account form instances (CRM_ACCOUNT) with filter, paging and sorting options.

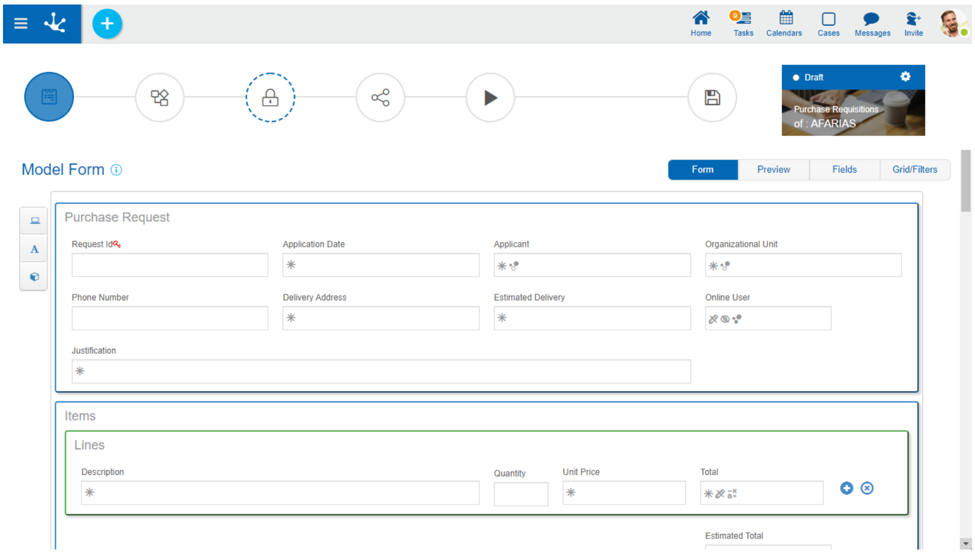
3.7.1.5. Cases Examples

These examples show how to create a case of a process, which is modeled using an agile forms template and allows you to execute an activity of the same.

Agile Form Modeling for Examples

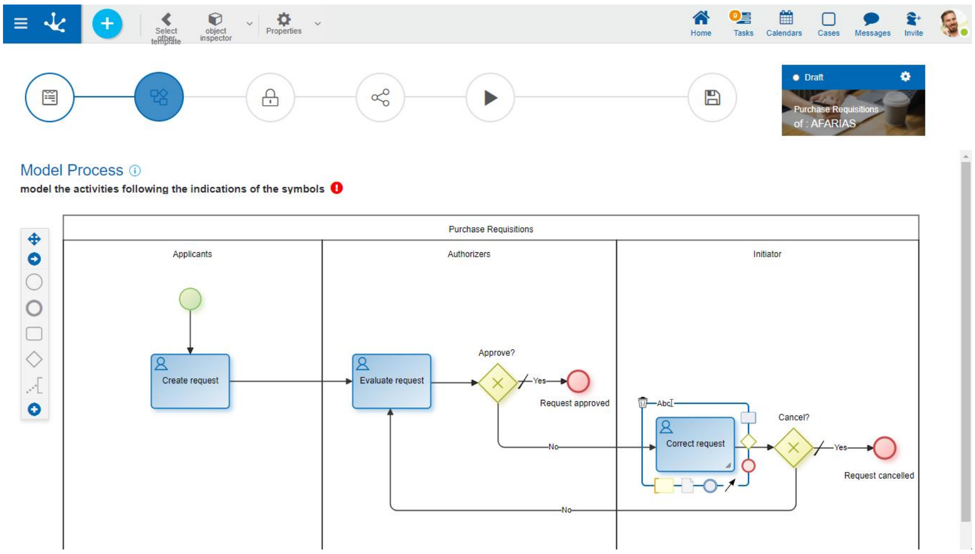
Step 1

Model the "Rest API Test" agile form based on the "Purchase Requisitions" forms template.



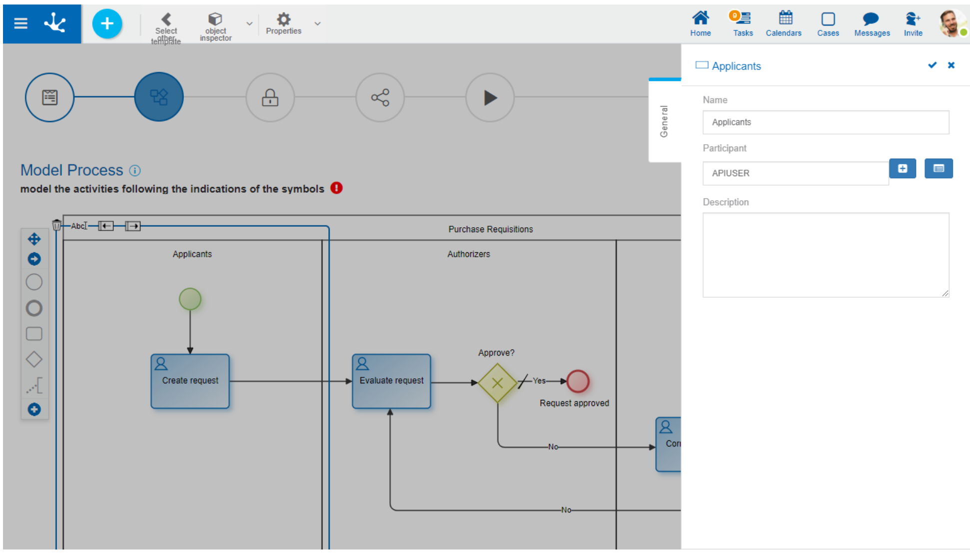
Step 2

Model the process related to the agile form "Rest API Test" based on the "Approval 1 Level" process template.



Step 3

Select the [previously created user] as "Applicants" lane participant.



Cases Collection

Examples are implemented from Postman to execute each of the operations described in the following table. Previously, you must import the Cases collection

Operation	Description
getToken	Obtains token.
startCase	Creates a case for the created process. The process code and the version of the modeled process properties must be shown. The required fields of the first process activity called "Create request" must be shown and they must always be sent. Editable fields do not need to be sent.
executeCurrentActivity	Executes the “Correct request” activity by sending the “Telephone” and “Observations” fields and the first occurrence of the “lines.quantity” field. The "Correct" button of the activity is executed. In the uri, case number and activity number must be entered {{base_uri}}/cases/<NRO_CASO>/activities/<NRO_ACTIVIDAD>/execute

3.7.1.6. Rules Examples

This example shows how to create a rule, show parameters, and execute it.

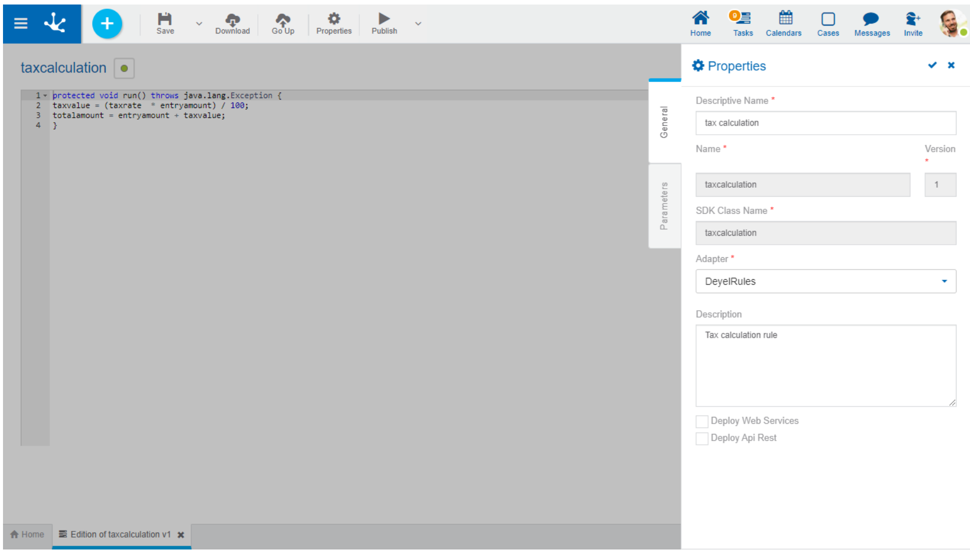
Rules Modeling for Examples

Step 1

Model a “VATcalculation” rule with the suggested values.

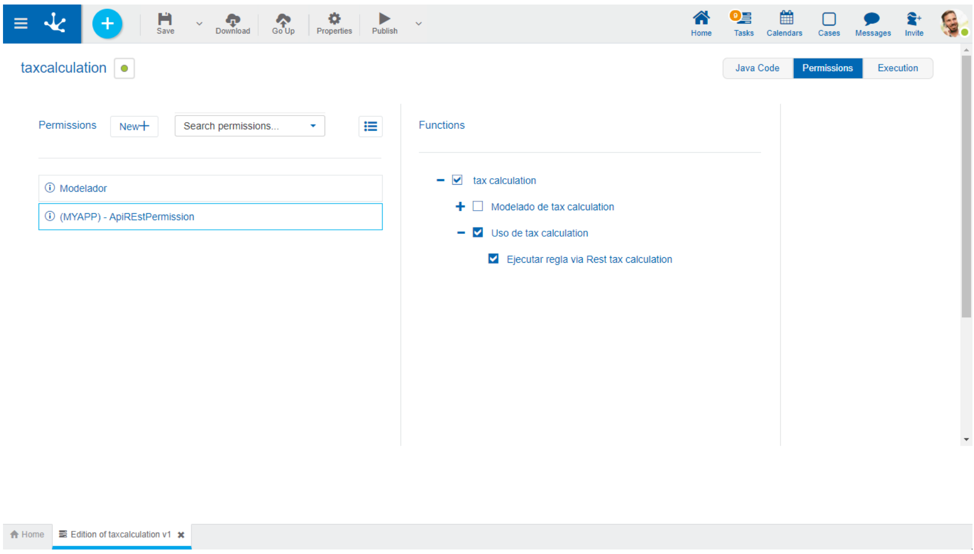
Descriptive Name	VATcalculation
Adapter	Standard Rule
JAVA code	VATvalue = (VATrate * Entryamount) / 100 ; Totalamount = Inputamount + VATvalue ;
Input Parameters	VATrate Inputamount
Output Parameters	VATvalue Totalamount

In the properties panel, on the "General" tab, select the Deploy Rest API property. This option allows the rule to be consumed as Rest API externally.



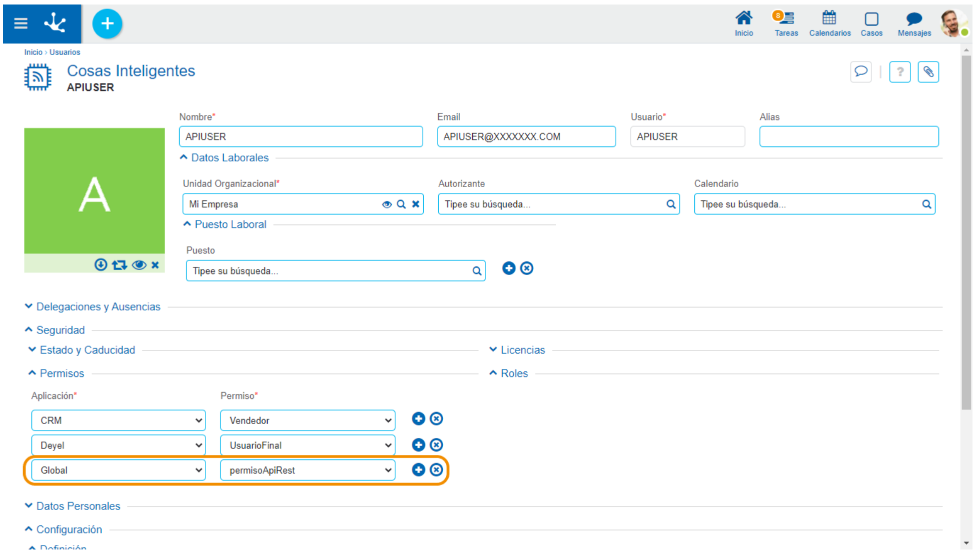
Step 2

In the "Permissions" option, add the security function "Execute rule via Rest + RuleName" to a new permission, for example "ApiRestPermission".



Step 3

Assign to the previously created user the generated permission.



Rules Collection

Examples are implemented from Postman to execute each of the operations described in the following table. Previously, you must import the Rules collection

Operation	Description
getToken	Obtains token.
getParameters	Returns the input and output parameters of the rule.
execute	Executes the rule "VATcalculation" sending the fields "Inputamount" and "VATrate". Returns "VATvalue" and "Totalamount".

3.8. Business Social Network - Tedis

Tedis is a business social network integrated to **Deyel**, aimed at improving communication and collaboration within the organization. It offers great potential when it comes to relating work teams, processes and cases with an agile, fast and highly intuitive messaging.

Through chats, users can exchange messages freely, receiving instant notifications and thus speeding up the exchange of information.

Associate comments to objects allows users to register comments in a group chat that is associated with the different objects of **Deyel**.

Comments associated with cases allow users to register comments on a particular case, leaving this information as part of the case and available to other interested users. The participation of multiple users that incorporate and share their comments constitutes a powerful tool that promotes collaboration and makes processes more efficient. This mechanism allows, for example, to inquire other users without the need to deliver the case to them so that they can intervene formally.

Comments related to the definition of processes enable a direct communication channel among the case participants and those users responsible for such processes, in order to improve their definition.

Form-related comments allow users to interact, collaborate, and discuss forms instances. In addition, conversations of cases associated with forms can be shown, in order to keep track of forms, learn about user interactions and also provide advice or opinions on their use.

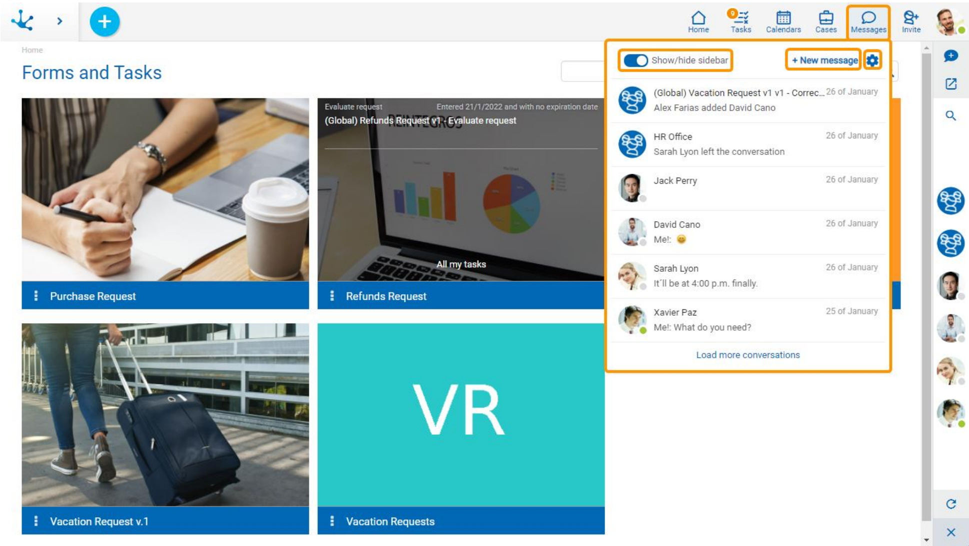
Through subscriptions, each user may choose to receive news about comments related to the object of interest. This allows quick tracking of new comments without having to show a particular case or form.

By using commands, it is possible to start the execution of a process from a chat window, with the possibility of executing it entirely from a chat window using actionable messages. To do this, all you have to do is define a process with a start event by command, and then associate the process command with one or more system bots. Actionable messages allow interaction with the process, showing the associated form fields in an instant message, so that the activities of a process can be executed from a chat window.

In case of losing connection with Tedis, the social networking goes offline and the messaging functions become available again when the connection is restored.

3.8.1. Chats

By pressing the icon corresponding to the messages on the top toolbar, the message panel opens. The number above this icon indicates the user's total number of unread messages.



Message Panel

Show/Hide Sidebar

This option allows to show or hide the chat sidebar, which contains conversations and users. Initially this bar is active.

User Preferences

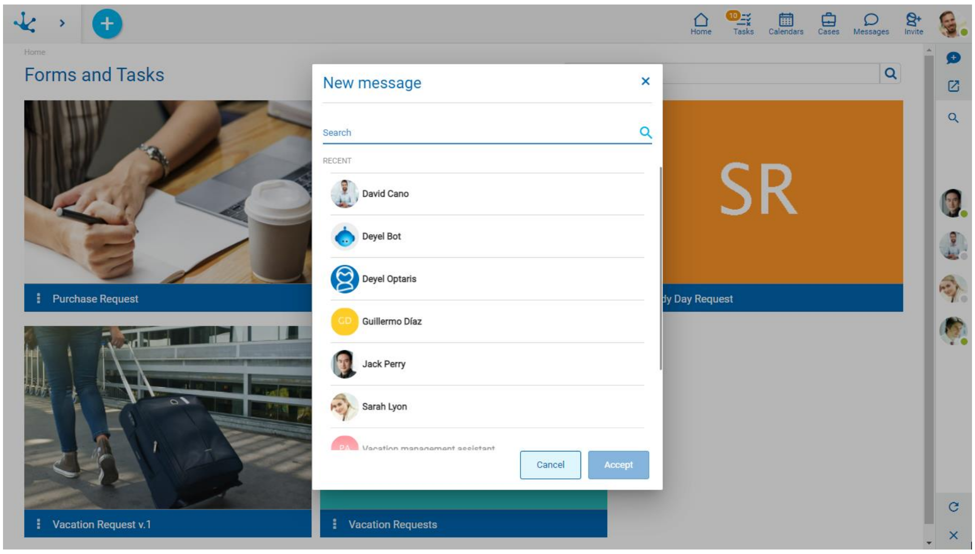
It allows to configure the conversation notifications.

Recent Conversations

In the final part of the message panel, the last user’s conversations are displayed, starting with the most recent ones. Through the "Load more conversations" option, previous conversations can be incorporated.

New Message

It opens a window to select the recipient of a new message, using a wizard.



Select the number of desired recipients, in this case a group chat is generated. Selecting more than one recipient enables entering a title for the new group chat, which is required.

Pressing the "Accept" button opens the chat window, to allow sending messages.

Another option to open a new message is to do it from the full screen feature.

Guest User Permission

In **Deyel** there is a permission called "Guest user in Tedis", which determines the actions that a guest user can perform in the business social network.

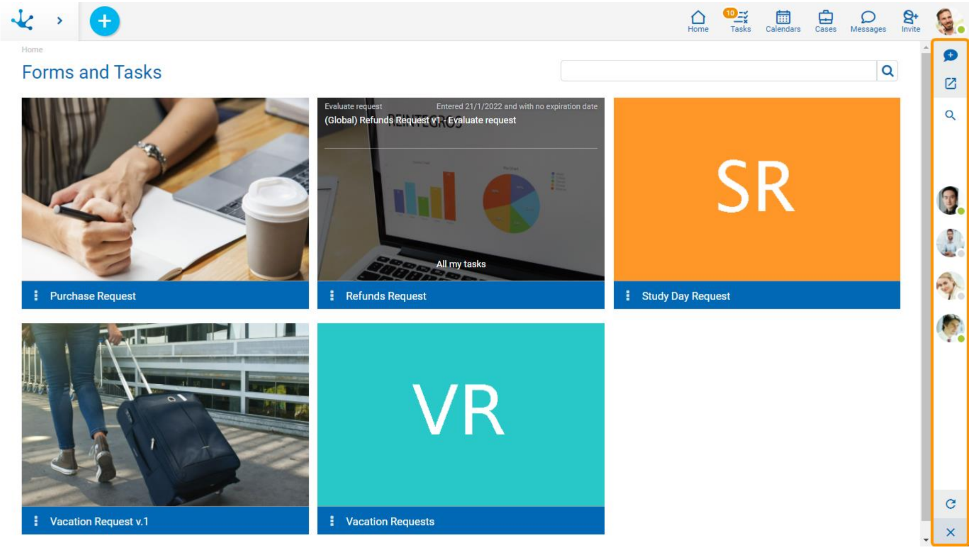
A guest user can only reply to messages from chats with previous messages from other users. The following actions are limited:

- See the list of users.
- Create new chats.
- Add and remove users in group chats.
- Modify the title of a group chat.

> *In case the guest user deletes the chat history, it cannot be accessed until they receive a new message.*

3.8.1.1. Chat Bar

The chat bar contains users icons and the chats in which the user participates. The bar can be displayed expanded.



New Message

It allows to open a window to select the recipient to send a new message, by using a wizard.

Full Screen

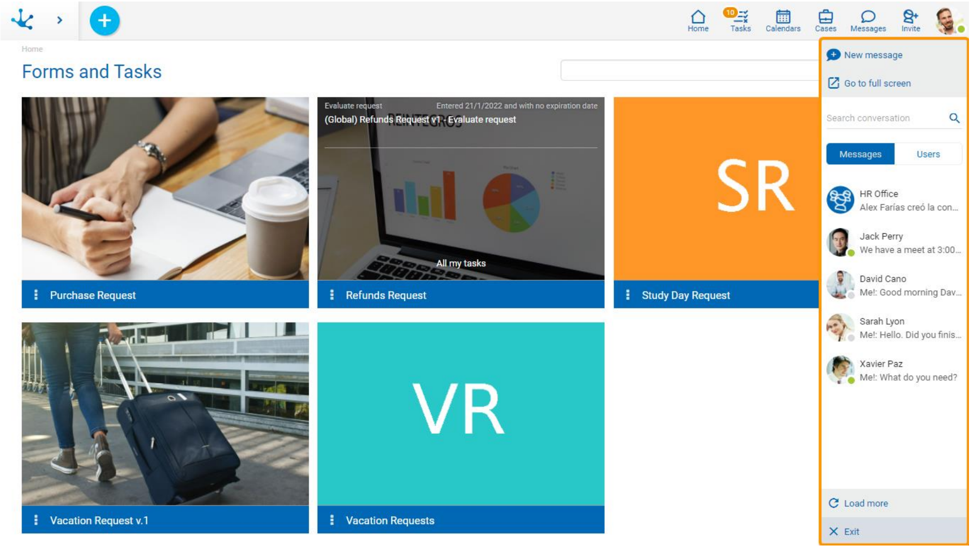
It allows switching to the full screen Tedis interface, in a new browser tab.

Expanded Bar

The chat bar can be displayed using the search icon, enabling tabs for messages and users. The bar returns to its original state when the cursor is moved away from it.

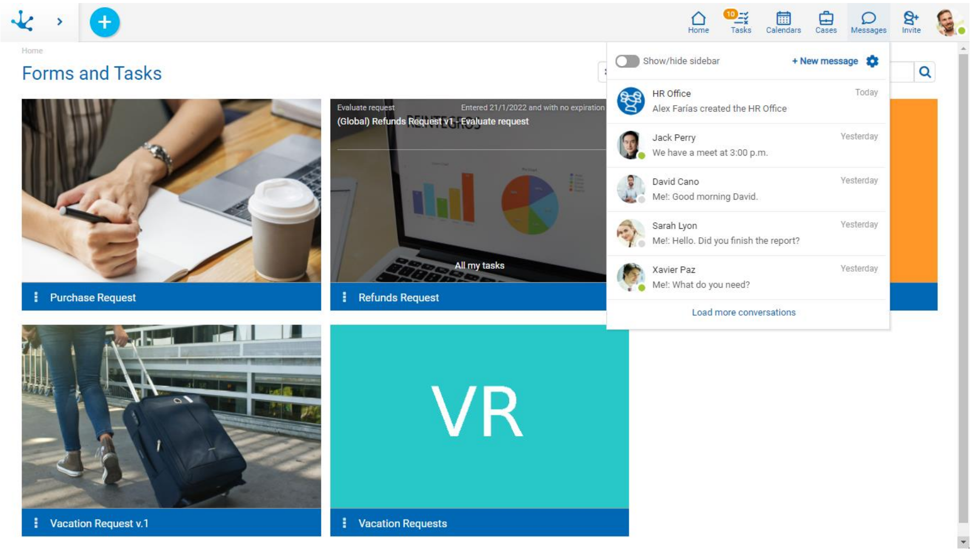
Messages

In this tab, users conversations can be displayed in chronological order, with the most recent ones at the top.



Users

This tab displays the users of **Deyel**, first those that are connected and then those that are not. In both groups, in ascending alphabetical order.



Connection State

Both in the messages tab and in the users tab, the connection state is displayed next to the user's name. The possible connection states are:

- Connected
- Not available
- Absent
- Disconnected

The connection state can be modified from the user profile.

Search Users/Chats

In the users tab, the icon allows users to be searched by first and last name, while in the messages tab, search can be done by message content or by the name of a group conversation.

The result of users or conversations is filtered as text is entered in the search line.

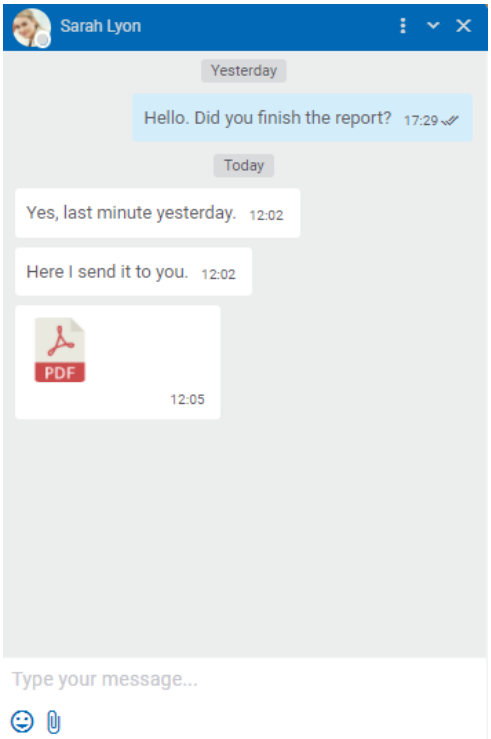
Load more Conversations

In the users tab, the icon allows to add users to the bar, while in the messages tab it allows to add previous conversations.

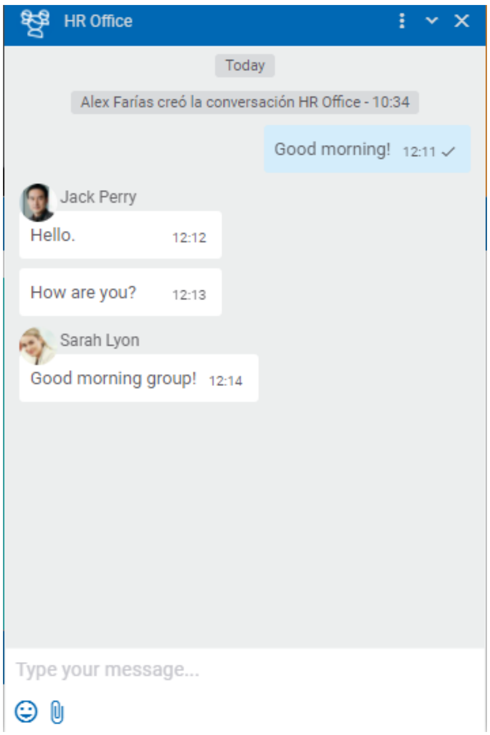
3.8.1.2. Chat Window

Users can exchange messages within a chat window. A separate window opens for each user's conversation. Conversations can be private or group.

Private Chat



Group Chat



Messages States

Each sent message has a state icon to its right that indicates whether it has been sent or already read.

Possible states are:

Sending: the message has not been sent yet.
Sent: The message has been sent and was received by the recipient.
Read: the message has been read by the recipient.

In the case of group chats, state will only appear once everyone in the group has read the message. By hovering over the state of the message, allows to get information about who has already read the message.

Menu

Access by pressing the icon located in the top bar of the chat window.

Actions

Delete history
Deletes all messages in the conversation for the user. For a group chat, once its history is deleted, it cannot be accessed until a new message is received.

Add user
For a private chat, this option allows to add users to the conversation, thus creating a new group chat. The window for adding new users to a conversation is similar to the one used to create a new message, only one required line is added so as to give the group a title. For group chats, just add users to the chat. Any participant in the group can add new participants.

Group chats have some additional actions.

Show participants
It allows to see users participating in the conversation, indicating the connection state. Selecting a user's image opens that user's private chat window.

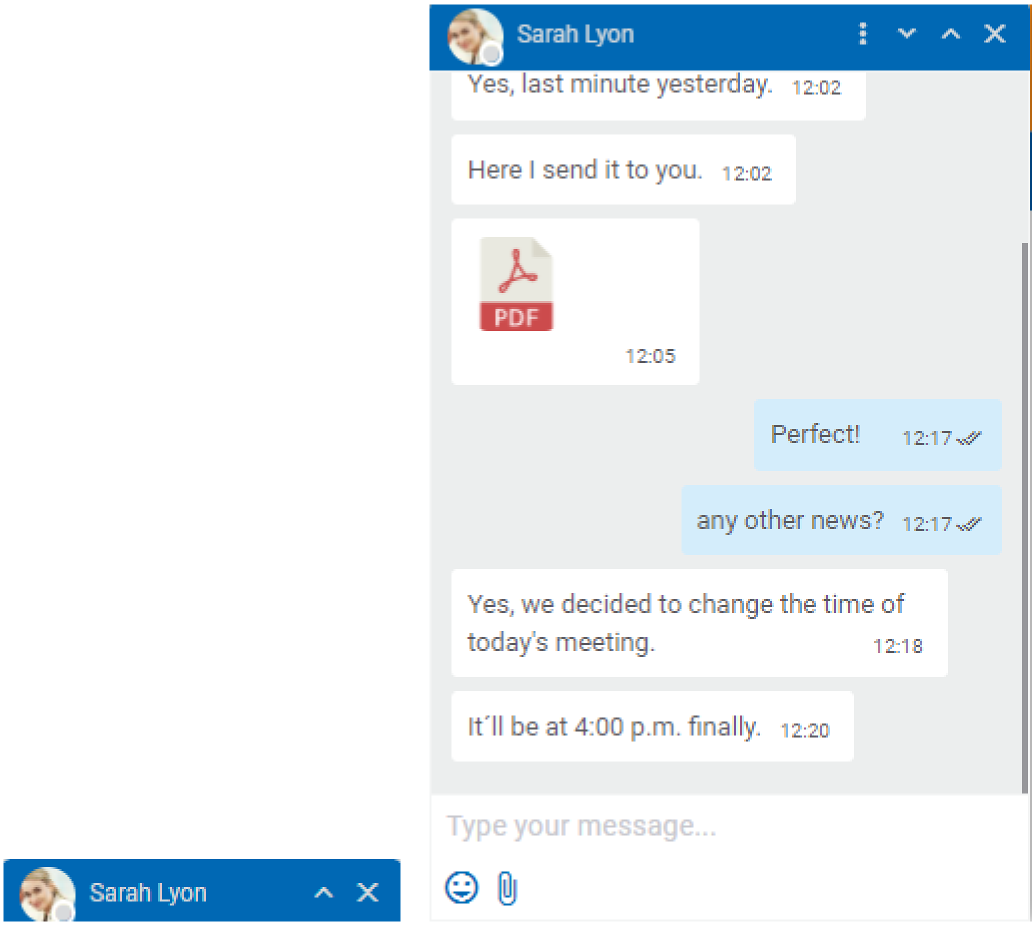
Modify title
Opens a window for modifying the title of the conversation.

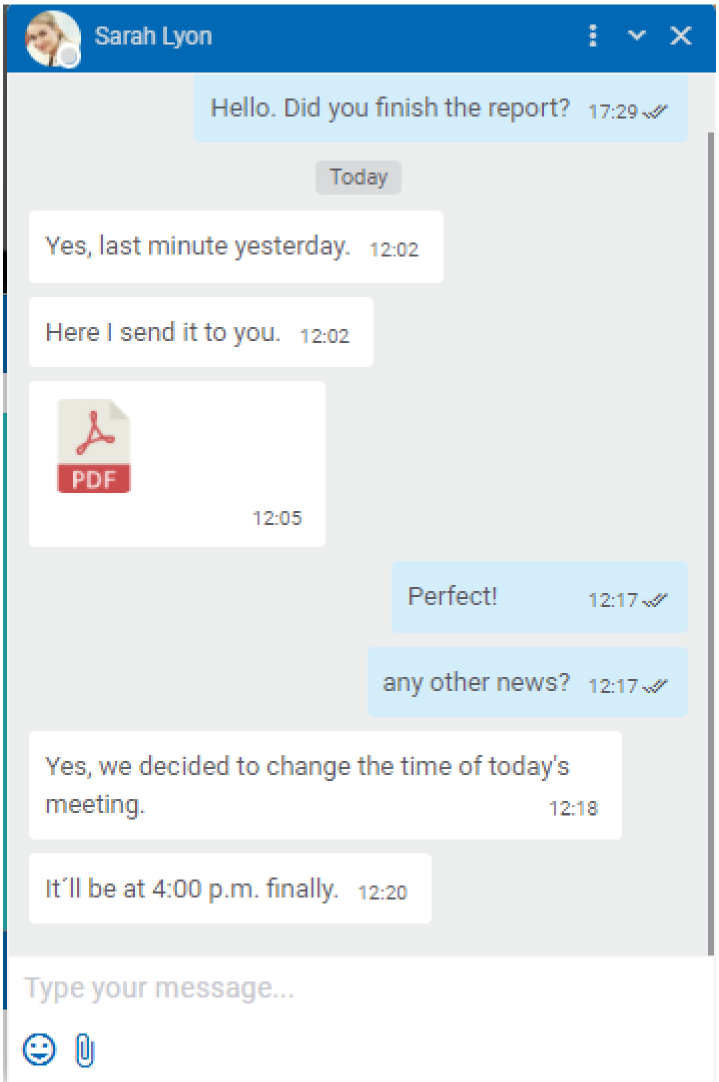
Remove user
It allows to remove one or more participants from a group chat by using a selection wizard. Only the creator of the chat can remove participants.

Leave conversation
It allows users to disassociate themselves from a group chat, not being able to access the conversation or its messages again.

Reduce and Expand

The chat window can be displayed maximized, reduced or minimized.


Sarah Lyon
Yes, last minute yesterday. 12:02
Here I send it to you. 12:02
PDF
12:05
Perfect! 12:17
any other news? 12:17
Yes, we decided to change the time of today's meeting. 12:18
It´ll be at 4:00 p.m. finally. 12:20
Type your message...
Sarah Lyon



It allows to reduce or minimize the chat window showing only the information of the top chat bar, depending on the current size.

For minimized windows, pressing this icon expands the window displaying messages again, while for reduced windows it maximizes them.

Close

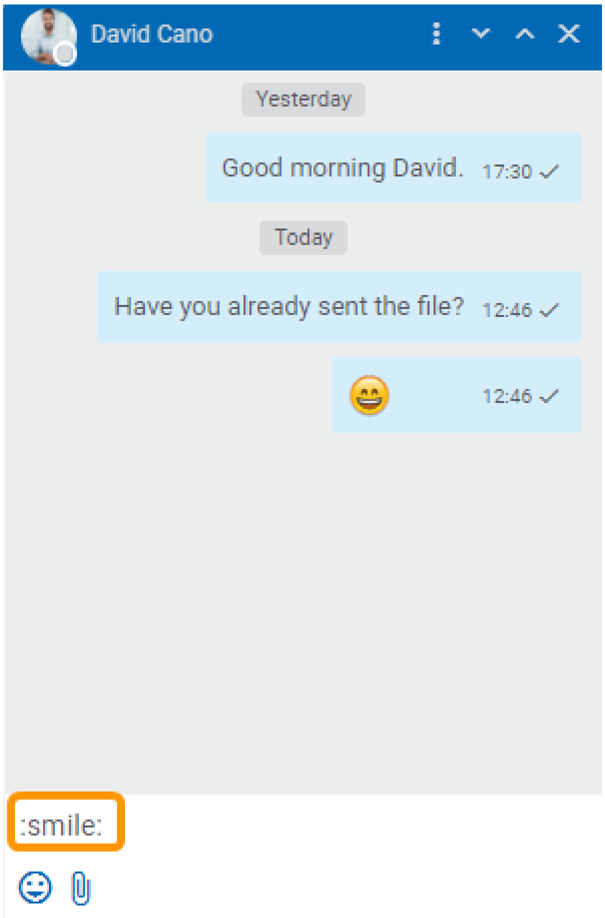
It allows to close the chat window, removing it from the set of open conversations.

Other Facilities

At the bottom of the chat window there are icons that facilitate collaboration among users.

Emoticons

It allows to include emoticons in messages, either by pressing the corresponding icon and selecting the emoticon from a palette, or by writing its code.

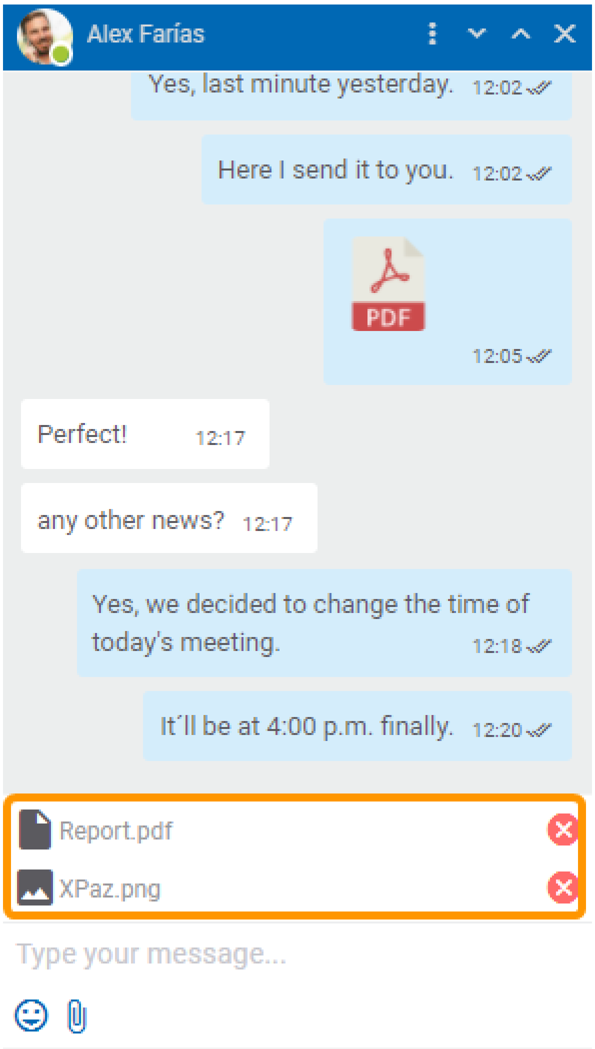


Attached files

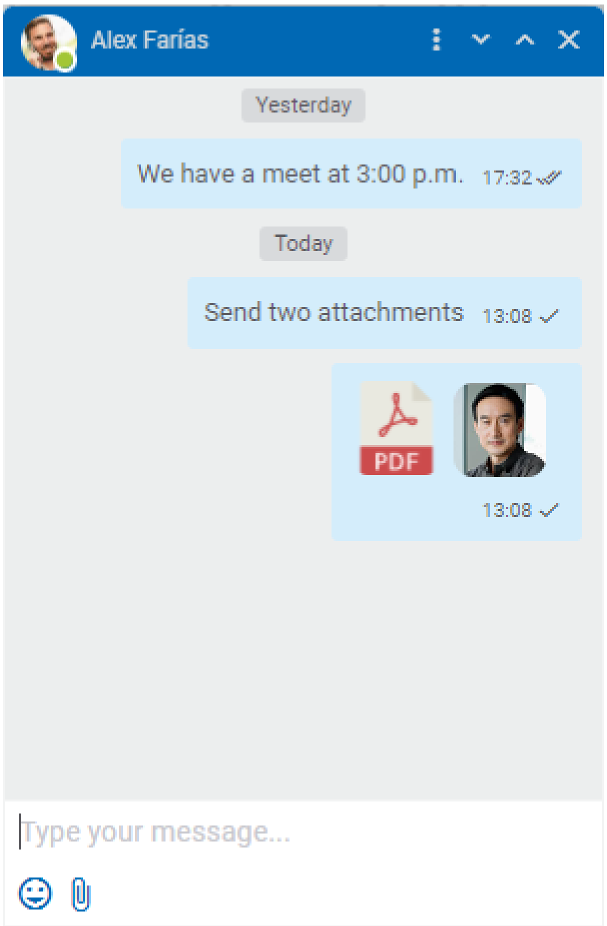
It allows to associate one or more attachments to the conversation. To do this, you should press the corresponding icon and select the files to send. It is also possible to drag files from a local directory to the chat window, if the chat window is expanded.

Once the files have been attached, they are displayed associated with the message. A maximum of 6 files per message can be attached, they must have extensions other than .exe and .msi.

A message with attachments can be sent with or without text. Pressing the icon located to the right of each file allows its removal from the set to be sent.



Once a file is sent, an icon identifying its type is displayed. If an image file is sent, a preview of it is included.



If due to some error a file could not be attached, an icon is displayed to the right of it to try again.

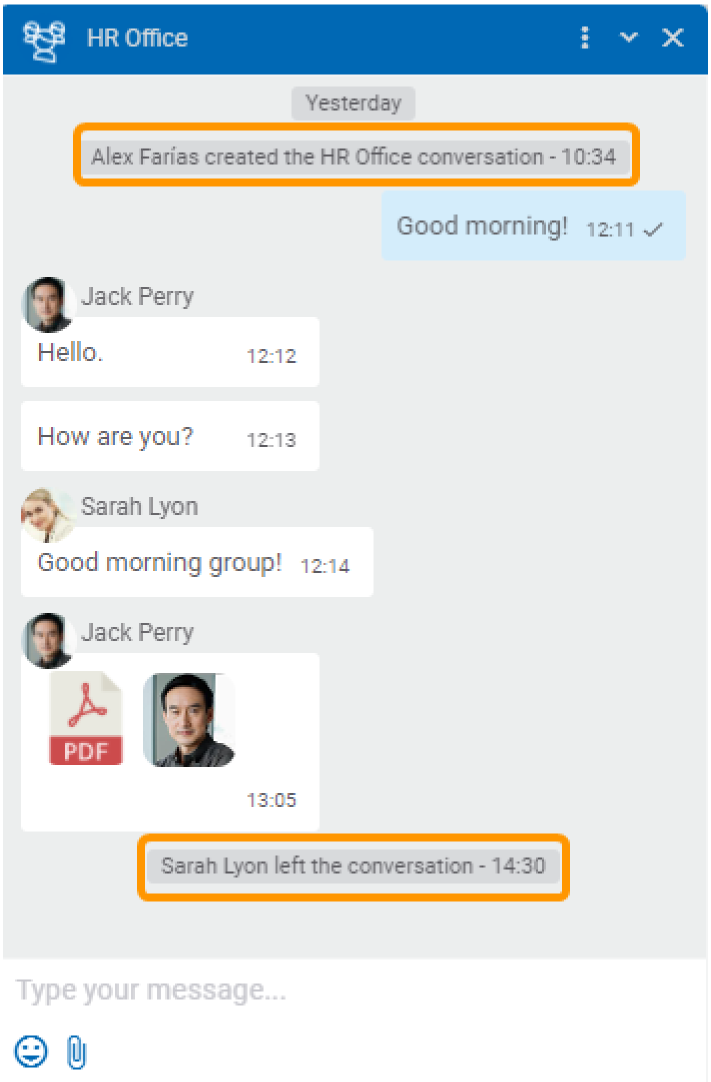
> *The maximum size in MB for an attachment depends on the value of the variable Maximum size for attachments defined for the environment.*

Commands

It allows the execution of commands previously defined.

3.8.1.2.1. Events

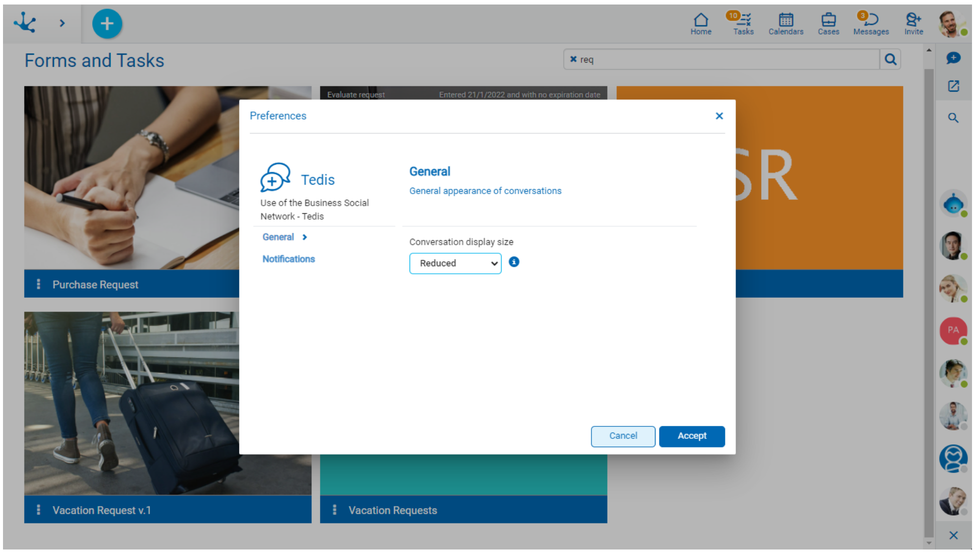
Events are a special type of messages that are generated in case of an occurence. These events are generated automatically when something happens that must be reported to the members of a chat, such as reporting that a user has left a conversation.



3.8.1.3. User Preferences

Deyel allows to modify user preferences when using Tedis business social network. The preferences window is opened by pressing the icon in the chat panel.

Preferences for the use of Tedis can also be defined when configuring the environment.



Conversations display size

Allows the user to define the initial size of chat windows, they can be seen in reduced or expanded form, this last value being the default.

New message notifications

Allows the user to enable or disable notifications when receiving a new message. These notifications are enabled by default.

Enabling these notifications allows the user to receive a notification at the bottom right of the screen every time they receive a new message.

Connected user notifications

Allows the user to enable or disable notifications when a user connects to **Deyel**. These notifications are enabled by default.

Enabling these notifications allows the user to receive a notification at the bottom right of the screen every time a user connects to **Deyel**.

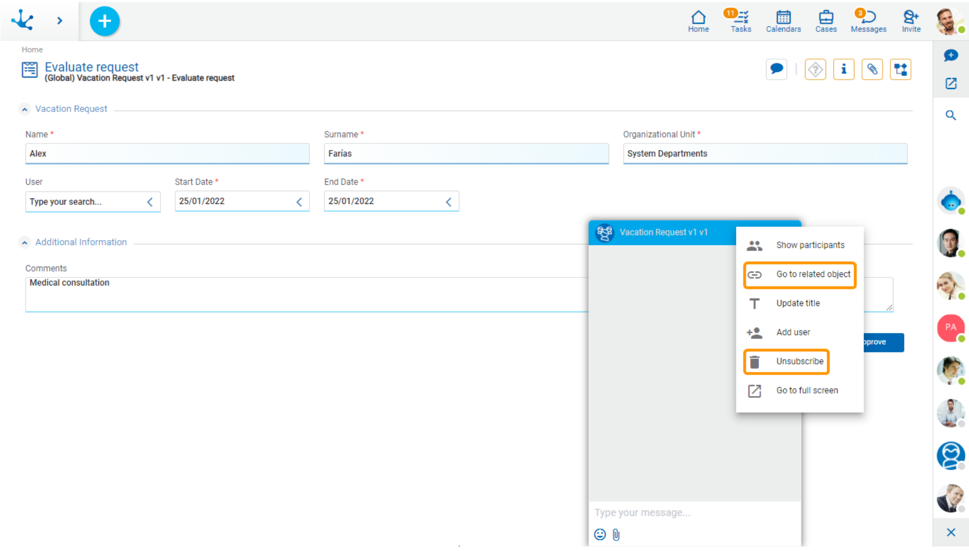
3.8.2. Comments Associated with Objects

When a user is running a case or updating a form instance, they may need to make a query to other users. This communication and exchange of additional information usually takes place without using applications, for example through phone calls, emails, etc. **Deyel** suggests to use a chat during the execution of processes cases and during the use of forms instances, in order to associate comments with the application.

These conversations have an additional behavior to the group conversations.

- Go to related object
  It allows the user to show directly the object related to the conversation.

- Subscribe / Unsubscribe
  A user that can show an object may participate in the comments on it. Those users that wish to be informed about any news added to the comments, can use the subscription function.
  A user that has subscribed to the comments of a case or form is notified every time a new message is entered in such chat. Besides, other users can be added to the chat so that they can also participate and be notified of new comments. A subscribed user may also leave the chat if they no longer want to receive notifications.

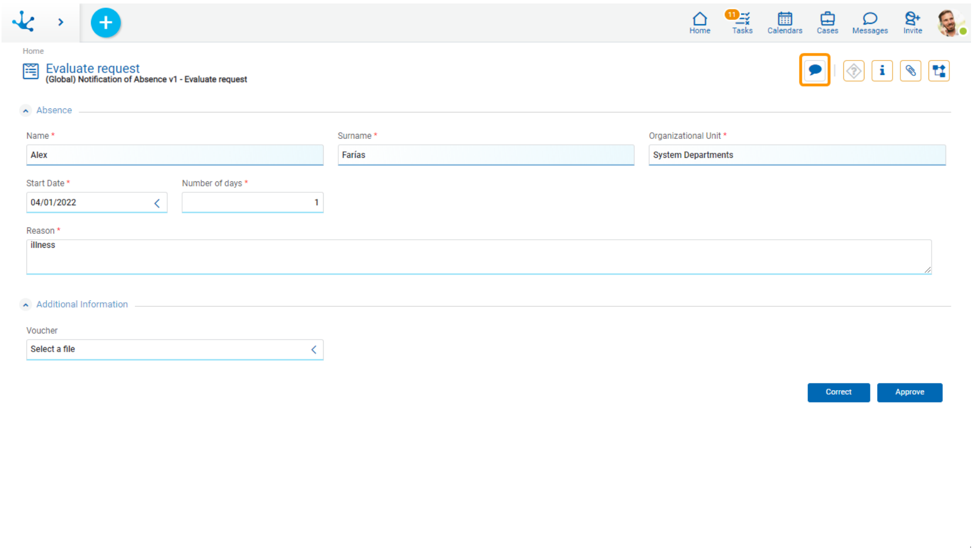


Comments Associated with Cases

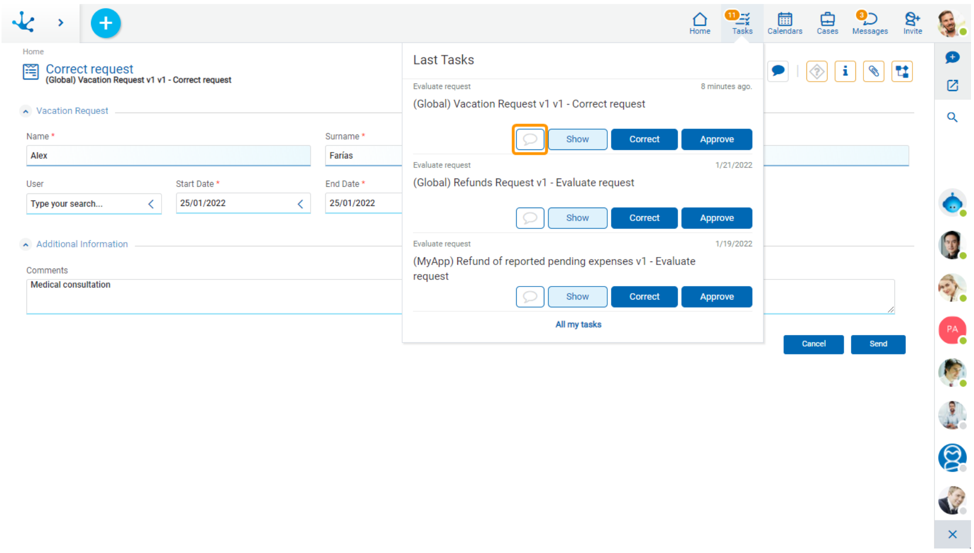
Having a case-specific conversation simplifies process modeling, as countless situations can be solved through user interaction rather than process modeling, as well as feeding the case with information used for decision making.

How to access comments associated with a case:

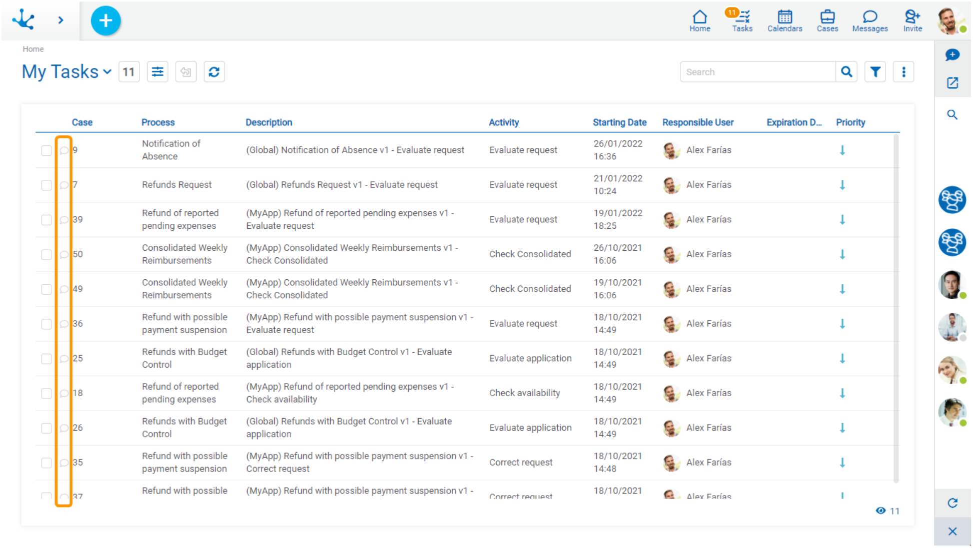
- Show of the case, selecting the "Case" option.



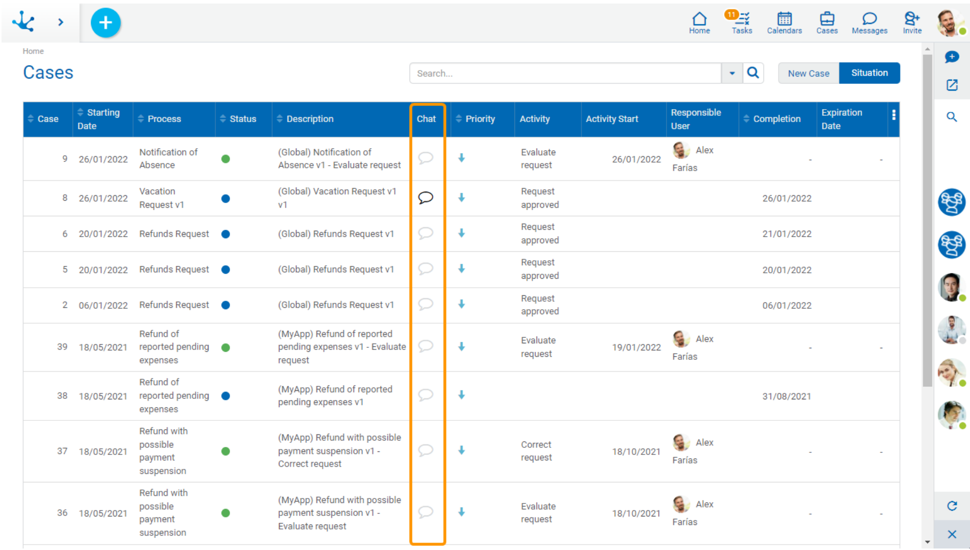
- From the last tasks panel.



- From the tasks grid.

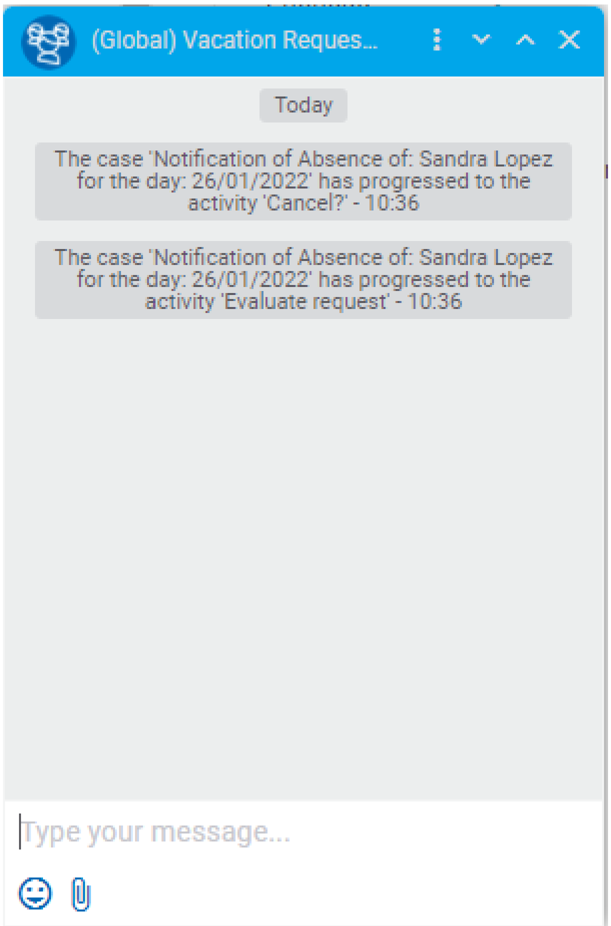


- From the cases grid



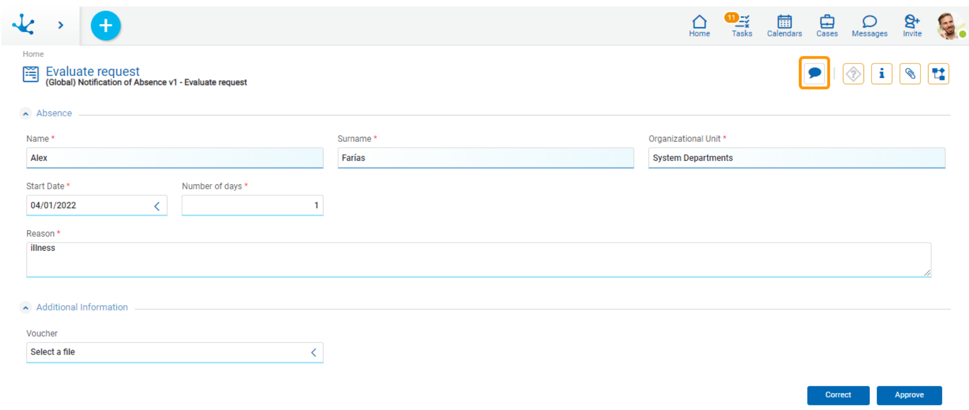
Events Generation

As the case progresses within the activities, events are generated informing of such progress.



Comments Associated with Cases

Within the continuous process improvement cycle, it is important for the responsible user or the owner of the process to be in contact with its users. For this, there is an exclusive chat for each process where its users can record messages related to modeling, thus allowing the modeling responsible users to receive these comments.

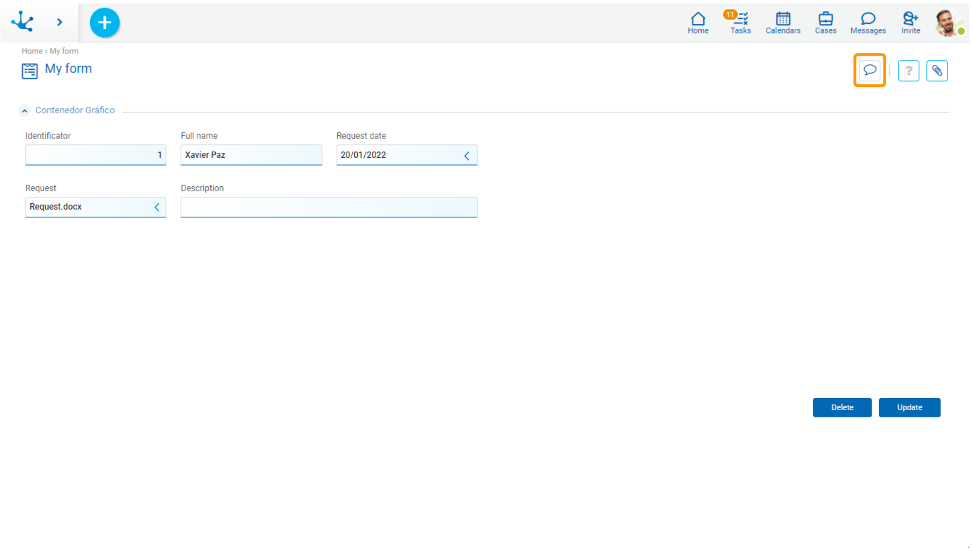


Comments Associated with Forms

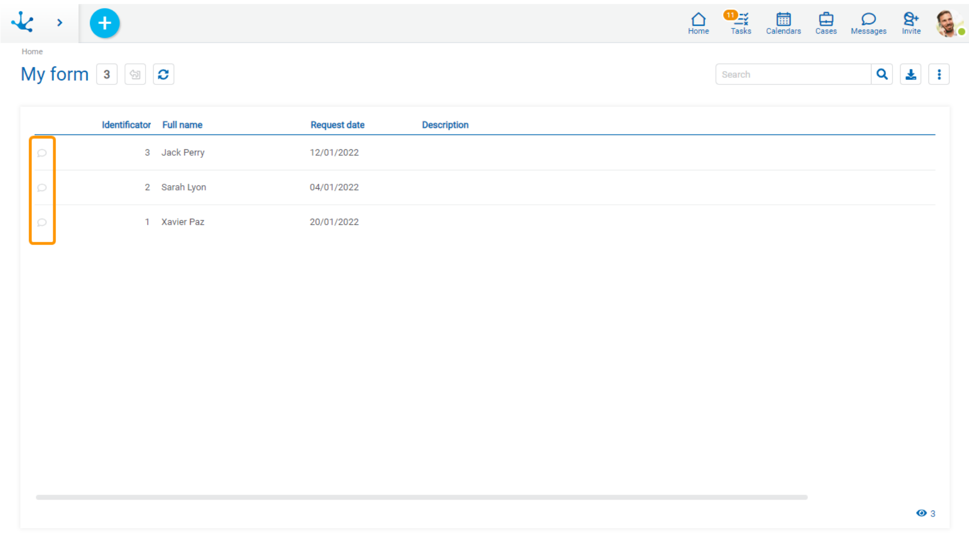
Deyel allows to create conversations associated with forms instances, so that users who use them can interact and collaborate on specific topics of the form. Users who have permissions on the form may subscribe to the conversation.

How to access comments associated with a form instance:

- Show of the form instance.



- From the grid of form instances.



3.8.3. Bots and Comands

A command is a specific instruction defined for a user or for a “Chatbot” type thing, which allows to start the execution of a specific business process. To do this, the start of process should have been modeled with a start event by command.

A chatbot or bot is a special type of user that is used for the execution of commands through a chat window.

3.8.3.1. Actionable Messages

An actionable message is an instant message from a chat, which in addition to text contains fields of a form associated with the process, where the user can enter information to execute an activity.

Actionable message fields have validations specified both in the modeling of the form and in the process activity in which it is located.

If the logic gateways of the process define buttons, these are shown in the chat window.

There is an additional button that is displayed in actionable messages, which allows to show the case being executed.

3.9. BAM and Process Analysis

▶ Phase 7: BAM

Deyel has a set of predefined reports that allow analyzing the operation of processes and their tasks, both historically (Analysis) and in real time (BAM).

Through these reports, it is possible to observe and understand the operation of processes and detect possible improvements.

Predefined reports summarize the behavior of processes and their tasks. They allow identifying what was done on time, behind schedule, deviations against maximum and expected durations, trends, participants performance, bottlenecks, etc.

The behavioral information is displayed in the form of a grid and through charts, always having the reference of the expected trend curves to contrast against reality. In this way, behavior can be graphically monitored. In all cases, the information can be drilled down, to reach the process level, task, executor, date range, case, etc.

Although the reports are predefined, multiple views of the information can be generated, when analyzing it by applying search criteria, such as time, priorities, participants, initiators, cases states and tasks, among others.

In the case of analysis in real time (real time), in addition to identifying the cases and tasks that are found on time and behind schedule, those that are found at risk are identified, thus providing tools to act on what is actually happening in the organization.

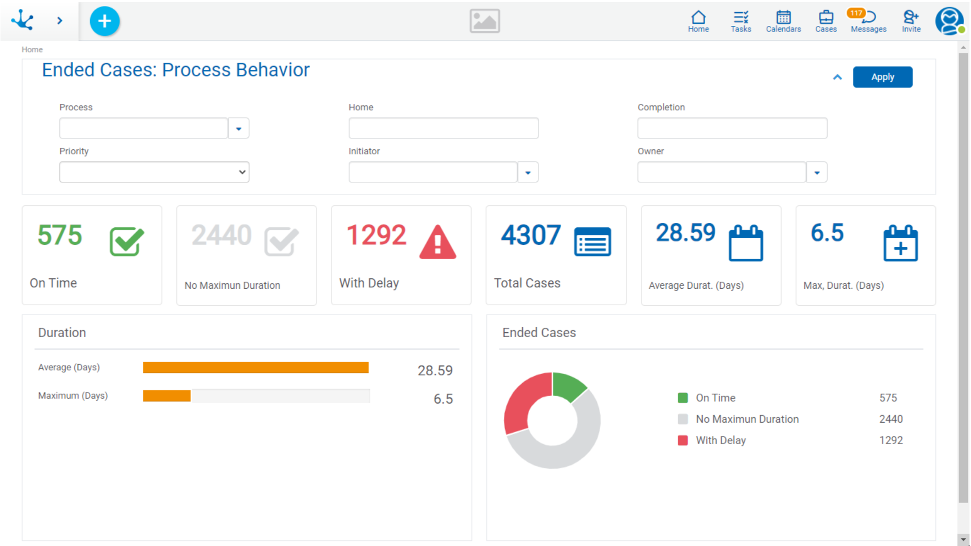
In addition to the predefined reports, user-defined reports can be incorporated based on existing or supplement them with specific characteristics of the organization.
Reports are accessed through the different menu options that are displayed by pressing "BAM and Analysis".

3.9.1. Process Analysis - Process Behavior

[Phase 7: BAM > Process analysis]

In this report, the behavior of processes is quickly displayed, indicating the cases that were completed on time, those behind schedule and the real average duration compared to the maximum duration.

The information can be displayed by applying the search filters shown in the upper section of the report.

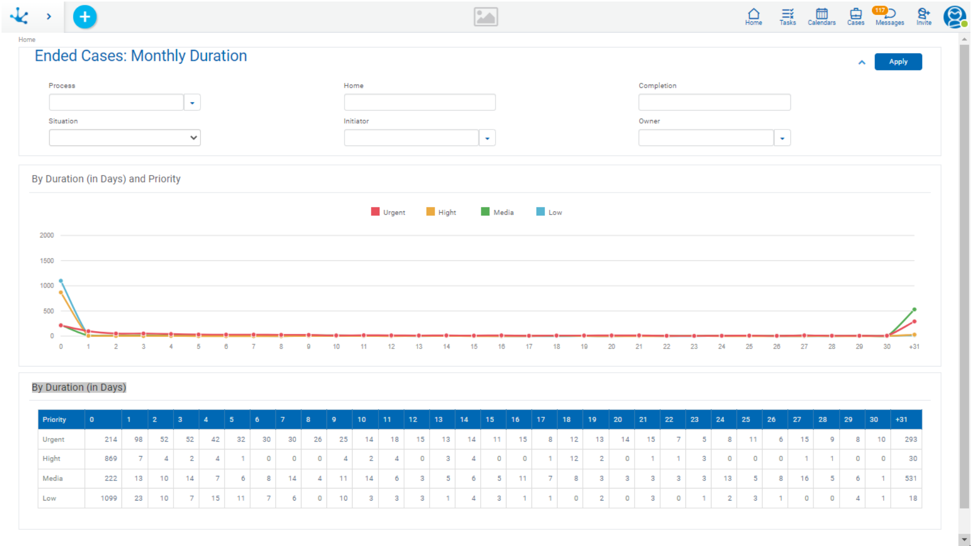


3.9.2. Process Analysis - Monthly Duration

[Phase 7: BAM > Process analysis]

The report on distribution of cases by duration must show a chart similar to a Gaussian bell, where the center of the bell is the average duration, provided that the behavior of the processes is adequate.
To analyze behavior in detail, drill down on the values of the grid in order to reach the cases that make up each value.

The information can be displayed by applying the search filters shown in the upper section of the report.



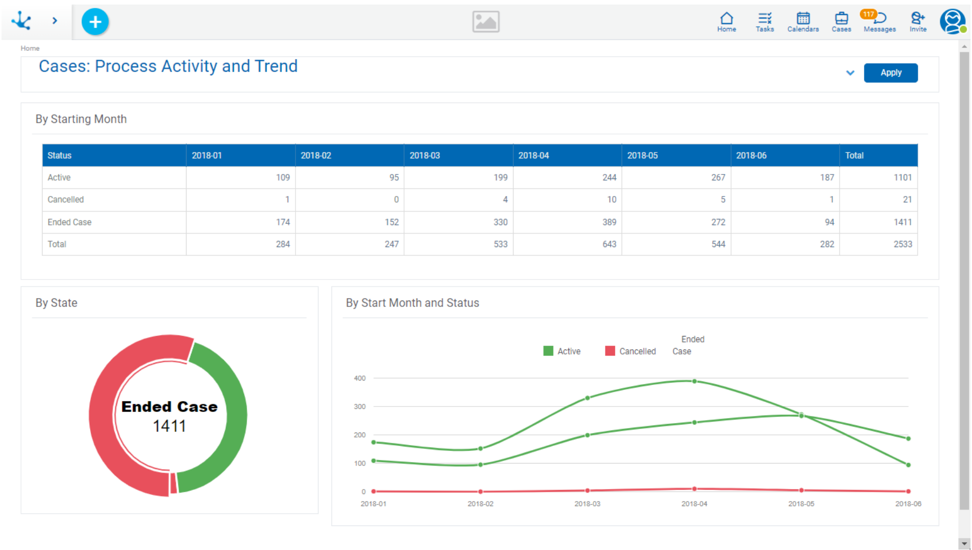
3.9.3. Process Analysis - Process Activity

[Phase 7: BAM > Process analysis]()

In this report, the activity carried out by the processes is displayed, showing the values of cases initiated by periods, how many were completed, how many remain in execution, and the cases suspended and canceled.

If the information on process activity for the last months is analyzed, it should be observed that as months go by, the cases in execution tend to increase, and the cases already completed tend to decrease. In other words, during the first months, a greater number of completed cases should be observed, while during the last months, there are more cases in execution. Any anomaly, that is to say that the chart shows a different trend, can be investigated by drilling down on the values.

The information can be displayed by applying the search filters shown in the upper section of the report.

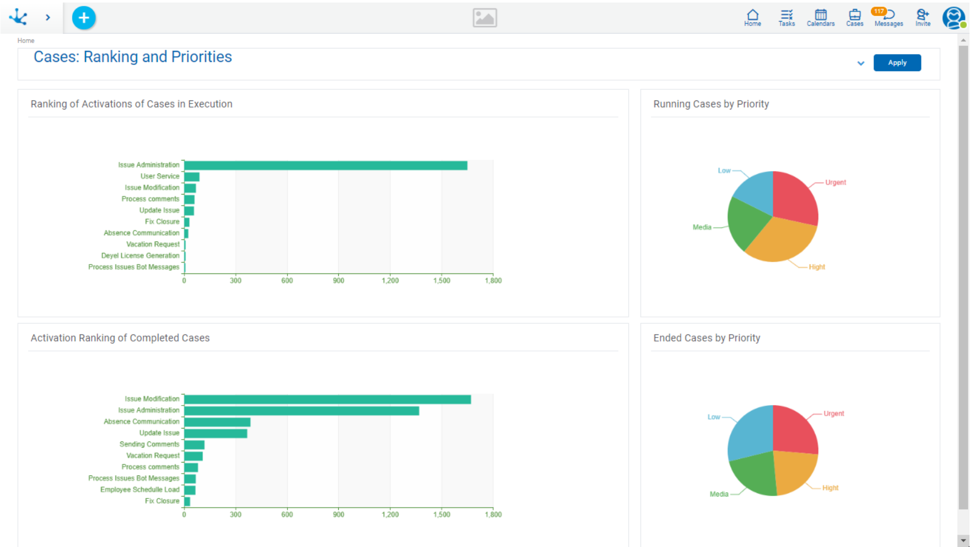


3.9.4. Process Analysis - Activation Ranking

[Phase 7: BAM > Process analysis]

This report shows a ranking of processes, through the number of cases initiated for each one, also considering their execution priority.

The information can be displayed by applying the search filters shown in the upper section of the report.

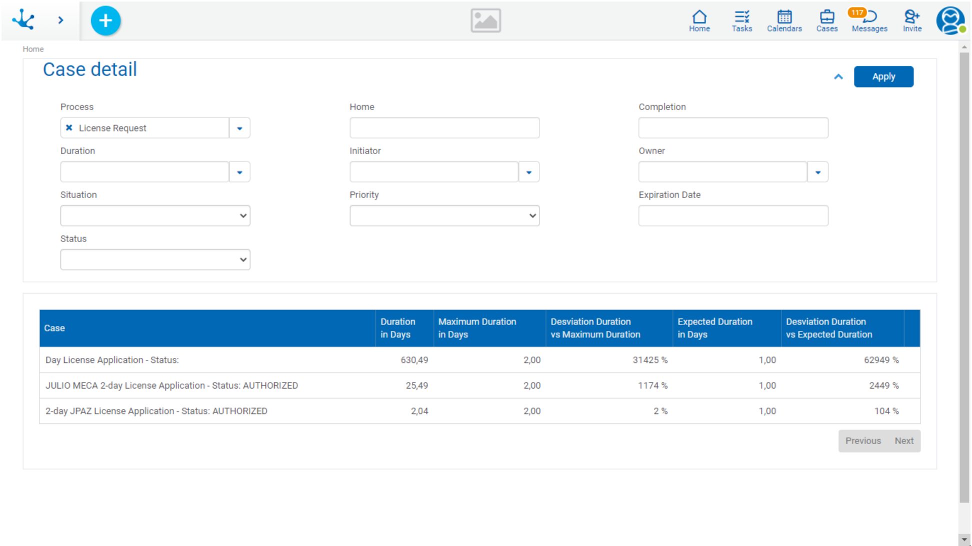


3.9.5. Process Analysis - Case Details

[Phase 7: BAM > Process analysis]

In this report, cases with their actual, maximum and expected duration can be displayed, together with comparisons of duration with maximum duration and duration with expected duration.

The information can be displayed by applying the search filters shown in the upper section of the report.

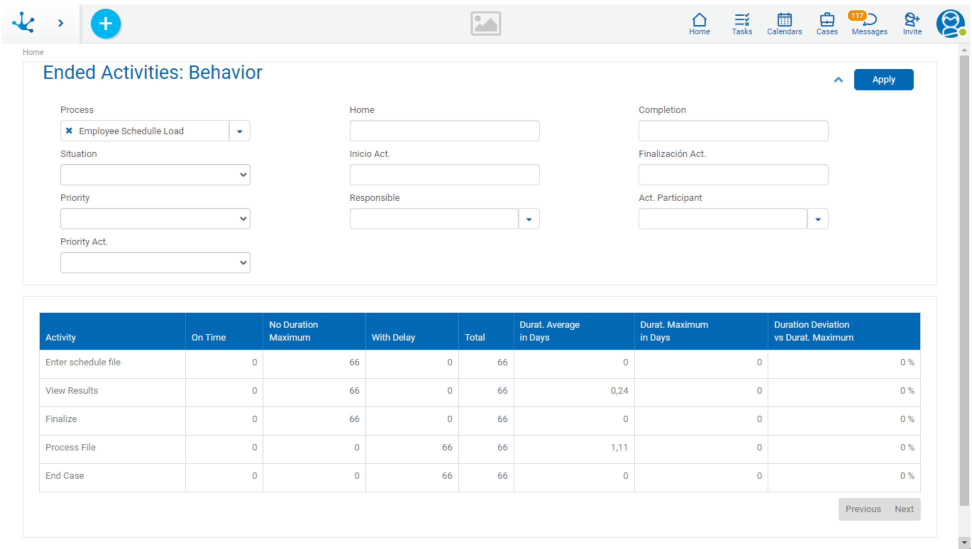


3.9.6. Activity Analysis - Activity Behavior

[Phase 7: Activity BAM - Activity analysis]

In this report, the behavior of a process completed activities can be analyzed (including or not all its versions). The amount of activities on time and behind schedule is detailed for each of them. Additionally, the average duration, the maximum duration and the deviation between both of them is mentioned.

The information can be displayed by applying the search filters shown in the upper section of the report.

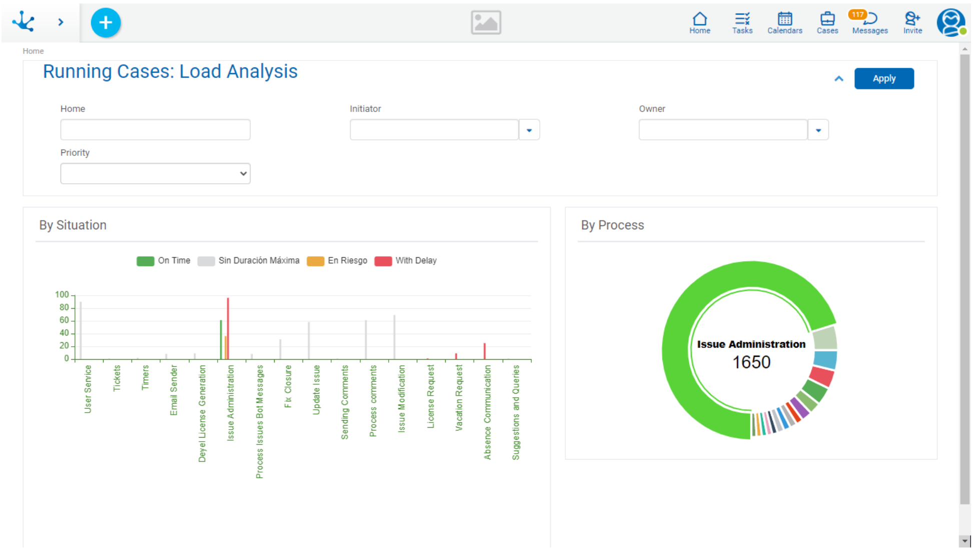


3.9.7. Process BAM - Load Analysis

[Phase 7: BAM > Process monitoring]

In this report, the current workload can be analyzed, considering the distribution of cases by process. For each process, it also shows how many cases are on time, how many at risk and how many are behind schedule.

The information can be displayed by applying the search filters shown in the upper section of the report.



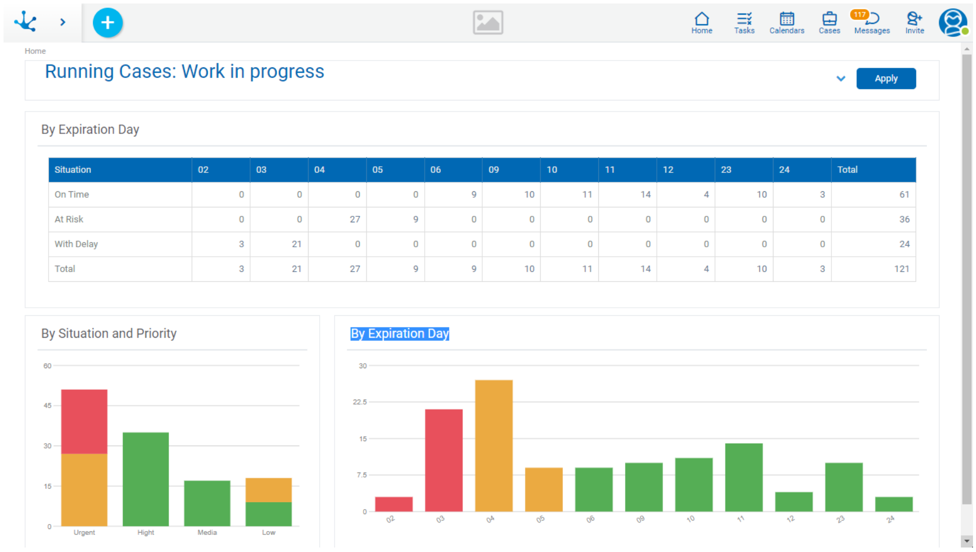
3.9.8. Process BAM - Work in Progress

[Phase 7 > Process monitoring]

This report shows the status of the cases that are in execution, together with their distribution according to their expected due date in periods of time.
Regarding the status of the cases, it is graphically displayed how many are on time, how many at risk and how many are behind schedule.

Regarding the distribution of cases according to due date, the chart indicates how many are scheduled to expire in the time period indicated, and it may or may not count those that are behind schedule. If those behind schedule are counted, they are shown in the first period considered in the chart.

The information can be displayed by applying the search filters shown in the upper section of the report.

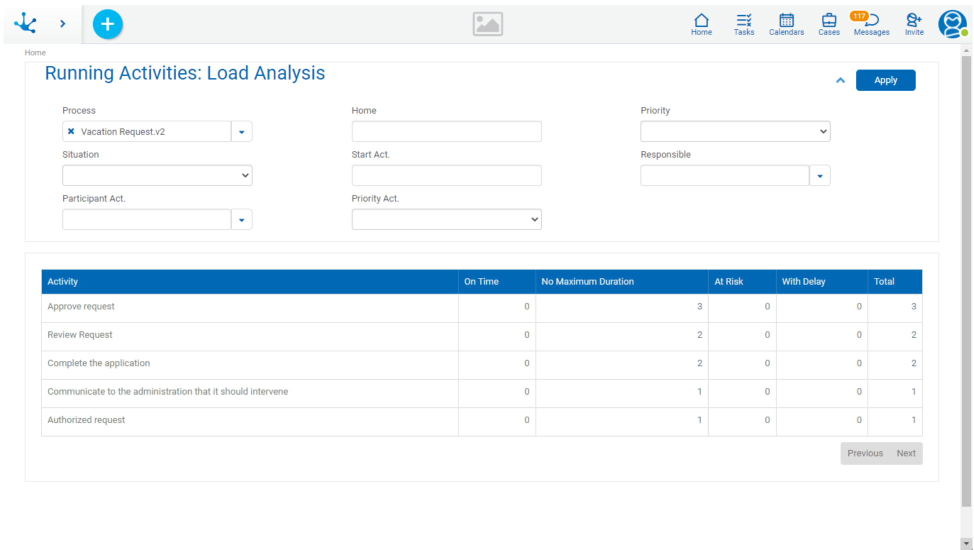


3.9.9. Activity BAM - Load Analysis

Phase 7 > Activity monitoring

In this report, the behavior of activities in progress of a process can be analyzed (including or not all its versions). The amount on time, at risk and behind schedule is detailed for each activity.

The information can be displayed by applying the search filters shown in the upper section of the report.



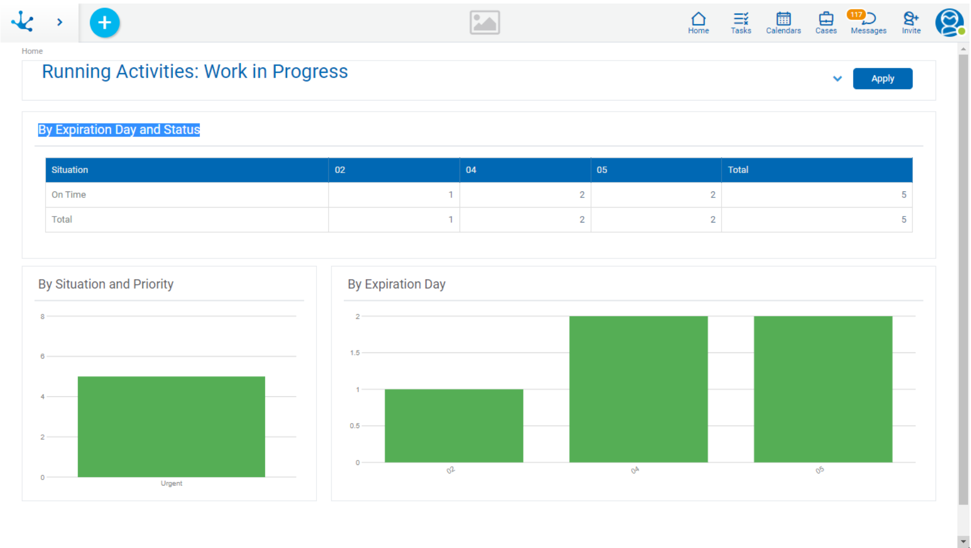
3.9.10. Activity BAM - Work in progress

[Phase 7 > Activity monitoring]

This report shows the status of the activities that are in execution, together with their distribution according to their expected due date in periods of time.
Regarding the status of the activities, it is graphically displayed how many are on time, how many at risk and how many are behind schedule.

Regarding the distribution of activities according to due date, the chart indicates how many are scheduled to expire in the time period indicated, and it may or may not count those that are behind schedule. If those behind schedule are counted, they are shown in the first period considered in the chart.

The information can be displayed by applying the search filters shown in the upper section of the report.



3.10. Configuration

[Phase 8: Configuration]

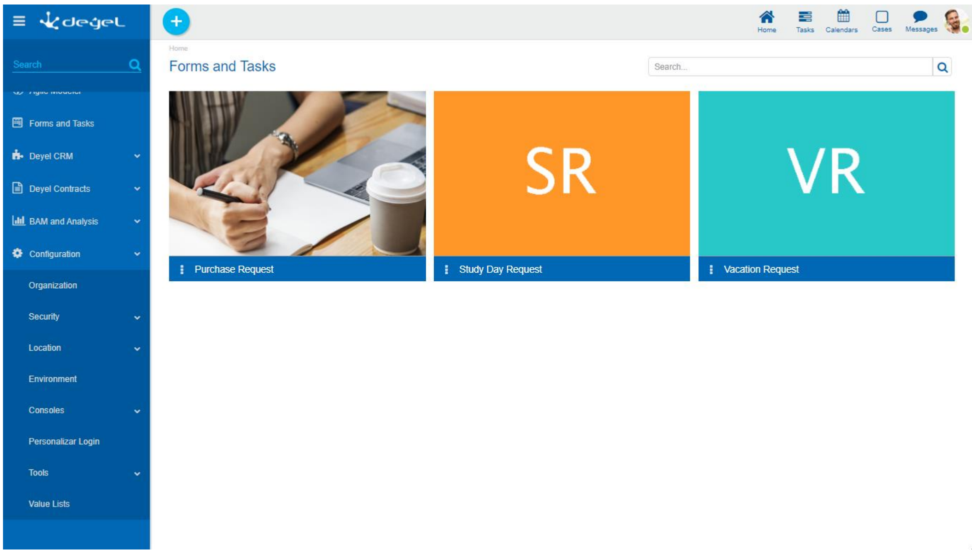
Configuration of **Deyel** is realized through the different menu options which are displayed by pressing "Configuration".

[Organization]
Allows to manage the organizational structure, defining the hierarchical relations between the different areas.

[Security]
Allows to define and administer the security scheme of **Deyel** through users, job positions, roles, agents, permissions and security functions.

[Environment](#)
Allows to define the preference settings for the use of **Deyel** through properties, that adapt the product operation to the specific requirements of the company.

[List of Values](#)
Allows to visualize the names on the lists of values of different applications and manage its values.



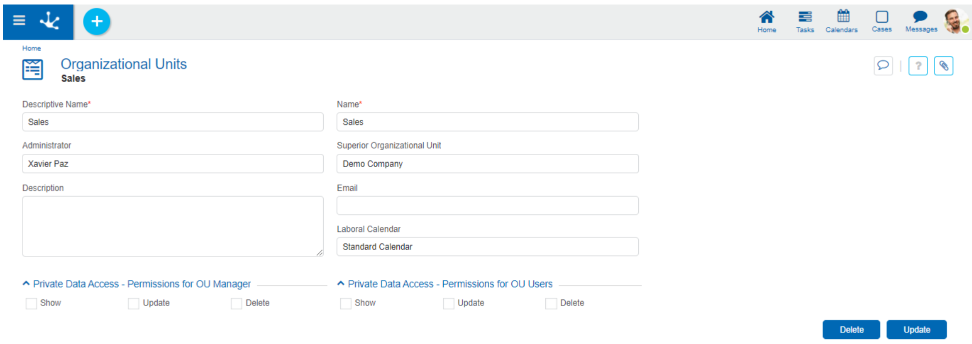
3.10.1. Organization

[Phase 8: Configuration > Organization](#)

The organizational structure of **Deyel** defines the areas or the offices from the company and the relation of hierarchy between them

When [modeling a process](#), the organizational units can be defined as owner, initiator and participant.

When defining the [users](#) the organizational unit in which each of them work is indicated.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Code
Identification code of the organizational unit. This property is visible if the environment property Type of encoding of organizational units takes values "Manual" or "Semiautomatic", while it is not visible if the value is "Automatic".

Descriptive Name
Complete name of the organizational unit. This text is the one visualized in the organizational structure and as a grid column.

Name
It is an abbreviated or reduced name. It is used when referring to the unit in an error message or when there is the need to abbreviate the descriptive name. No blank spaces admitted. This name must be unique.

Description
Property where the use of the organizational unit can be detailed so as to extend what is expressed in the Descriptive Name property.

Administrator
Optionally an user that performs as coordinator or head of the unit can be indicated.

Superior Organizational Unit
Allows to identify the superior organizational unit inside the hierarchical structure. Not allowed to select the "Organizational Structure" unit as a superior unit.

Work Calendar
Calendar code that is associated to the organizational unit, it is selected from a list. If a calendar is not defined for the organizational unit, **Deyel** uses the one of the closest higher-level unit with a defined calendar. The root unit of all the hierarchy has defined a calendar by default.

Email
Email associated to the organizational unit.

Private Data Access - Permissions for OU Manager
For the administrator of the unit, the access permissions to the private data of their work teams are established.

Show
Can the administrator of the unit see the private data of their subordinates? (Yes/No)

Modify
Can the administrator of the unit modify the private data of their subordinates? (Yes/No)

Delete
Can the administrator of the unit delete the private data of their subordinates? (Yes/No)

Private Data Access - Permissions for OU Users

For a user that is part of the unit which establishes the access permissions to private data of their colleagues.

Show
Can a user of the unit see the private data of their colleagues? (Yes/No)

Modify
Can a user of the unit modify the private data of their colleagues? (Yes/No)

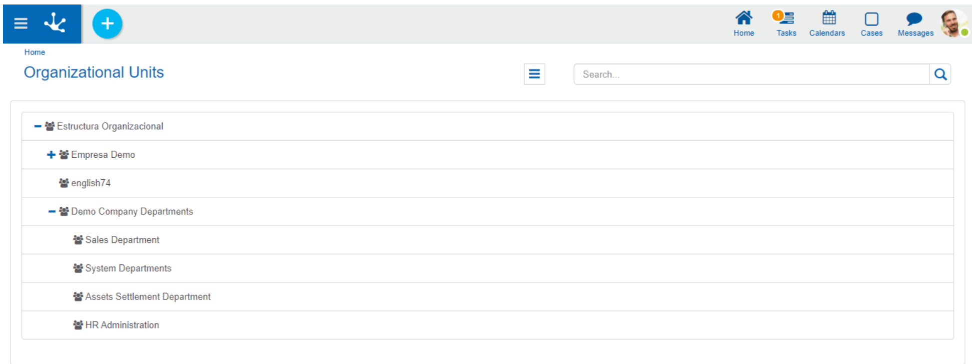
Delete
Can a user of the unit delete the private data of their colleagues? (Yes/No)

3.10.1.1. Organizational Structure

To do the creation and administration of the organizational units, the organizational structure can be accessed from **Deyel** menu.

- From the option "Configuration“, selecting “Organization”.
- From the search facility.

Organizational units can be visualized as a hierarchical structure or as an object grid.



Hierarchical View

The organizational units are visualized in the form of a hierarchical structure where each unit can be identified by Descriptive Name property. The location within the structure depends on the definitions realized in Superior Organizational Units property of each unit.

The icon ☰ allows to change the visualization to grid mode.

Grid

The grid of organizational units allows to visualize them with the standard presentation of **Deyel** grid, with facilities of:

- Order
- Paging
- Search Bar and Filters
- Data Download

The icon allows to change the visualization to hierarchical view mode.

The number displayed on the right of the grid title, indicates the amount of organizational units included in the grid.

The following properties of the organizational units are visualized as grid columns:

- Descriptive Name
- Name
- Administrator
- Superior Organizational Units

Operations

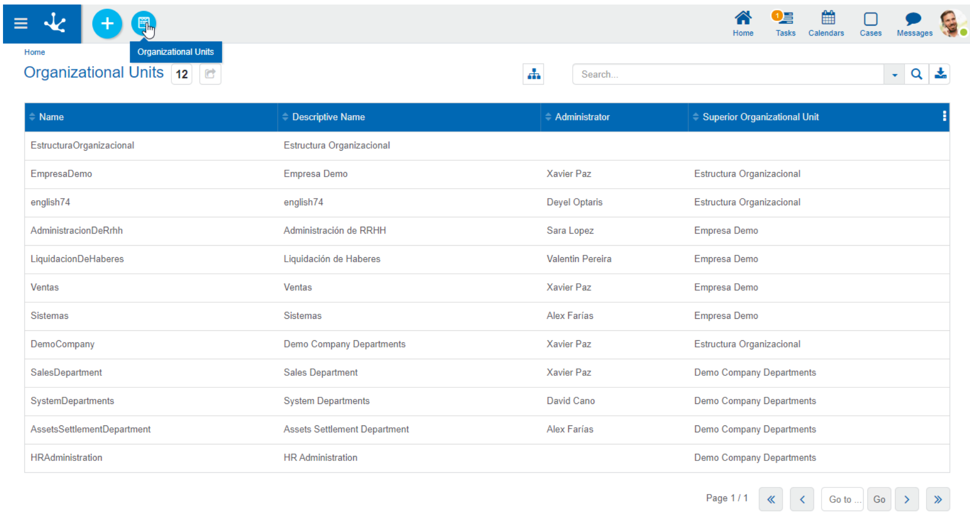
Both in hierarchical or grid view you can do operations on each unit, depending on the security permissions that the connected user has.

Hovering the mouse on each of the lines, buttons corresponding to the operations are visualized.

- Show
- Modify
- Delete

The exception is the operation “Create”, that may be done from the context menu in different ways.

- Hover the mouse over the icon and select the icon on its right. Organizational Units.
- Click on the icon and select the option Organizational Units on the vertical panel displayed.



Name	Descriptive Name	Administrator	Superior Organizational Unit
EstructuraOrganizacional	Estructura Organizacional		
EmpresaDemo	Empresa Demo	Xavier Paz	Estructura Organizacional
english74	english74	Deyel Optaris	Estructura Organizacional
AdministracionDeRrhh	Administración de RRHH	Sara Lopez	Empresa Demo
LiquidacionDeHaberes	Liquidación de Haberes	Valentin Pereira	Empresa Demo
Ventas	Ventas	Xavier Paz	Empresa Demo
Sistemas	Sistemas	Alex Farías	Empresa Demo
DemoCompany	Demo Company Departments	Xavier Paz	Estructura Organizacional
SalesDepartment	Sales Department	Xavier Paz	Demo Company Departments
SystemDepartments	System Departments	David Cano	Demo Company Departments
AssetsSettlementDepartment	Assets Settlement Department	Alex Farías	Demo Company Departments
HRAdministration	HR Administration		Demo Company Departments

3.10.1.2. Operations

The buttons to do operations on the organizational units are enabled hovering the mouse over a unit on the organizational structure, whether it is visualized as hierarchical or as a grid, with exception of the creation operation, that is initiated from the icon + corresponding to context menu.

> *The organizational units "Organizational Structure" and "External Units" cannot be deleted or modified, but units with lower levels in the hierarchical view can.*
> *The organizational unit "My Company" can be modified but not deleted.*
> *The organizational unit "Demo Company" can only be modified or deleted by a user that has "Account Administrator" permission.*

Create

Opens properties panel of the new organizational unit with all of them as editable. The creation is done by pressing the button "Accept" and the user receives a message indicating that the data has been saved.

Code

It is required when Type of encoding of organizational units property is configured as "Manual". When the value of this property is "Semiautomatic", it is optional and if the value is "Automatic" it is not visible.

Superior Organizational Unit

The unit "Organizational Structure" is not allowed to be selected as a superior unit.

Show

Opens properties panel of the selected organizational unit. The properties are visualized as not editable and depending on the security permissions of the user, the buttons available to operate on the organizational unit are enabled.

Buttons

- Modify
- Delete

Modify

Opens properties panel of the selected organizational unit, with those properties that can be modified, as editable. The modification is done by pressing the button “Accept” and the user receives a message indicating that the data has been saved.

Superior Organizational Unit

A unit with lower level in the hierarchical view is not allowed to be selected as a superior unit.

Administrator

When the unit has an administrator defined and the unit has been modeled as owner or participant of a process in use, this property can be modified entering a new administrator but not leaving it without any value.

Delete

Open the selected organizational unit and its properties are visualized as not editable. The deletion is done by pressing the button “Accept” and the user receives a message indicating that the data has been deleted.

> *There must not exist any user that belongs to the unit.*
> *The unit must not be actor in any role.*
> *The unit must not be owner or participant of any process that is “in use”.*

3.10.2. Security

Phase 8: Configuration > Security

Deyel uses a security scheme based on in two concepts:

- **Authentication** of the users, that allows to control who uses the product.

- **Authorization** for the specific functions that each user can use.

3.10.2.1. Authentication

Deyel keeps a register of all the users that are enabled to use the product, collecting their identifying data (user code, alias, email address) their personal and labor data, their state, etc.

The procedure of authentication ensures that all use of **Deyel** and its solutions are made by "someone" or "something" that can be identified as a user, inside the user register.

Also, to ensure that "someone" or "something" is who they say to be, they must inform their user code or alias and their password.

Deyel uses different authentication methods but in each context only one of them should be used.

The mechanism of authentication to be used is defined in the configuration of the **Deyel** execution environment.

Native Authentication
This is the predetermined mechanism of authentication. **Deyel** verifies that the user exists in its register and verifies the password, which is stored encrypted in its data base.

LDAP Authentication
When an organization uses directory services to register its users, **Deyel** can be configured to delegate to LDAP the authentication process.

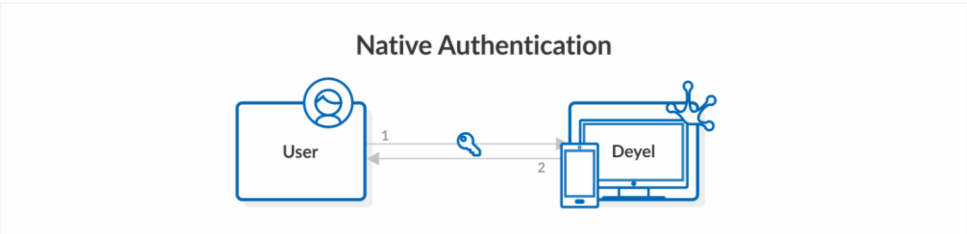
Federated Authentication
Deyel implements this type of authentication integrating with Google. When an organization uses Google accounts for its users, the authentication process can be delegated to Google.

Personalized Authentication
This kind of authentication delegates the authentication of the users to an advanced rule.

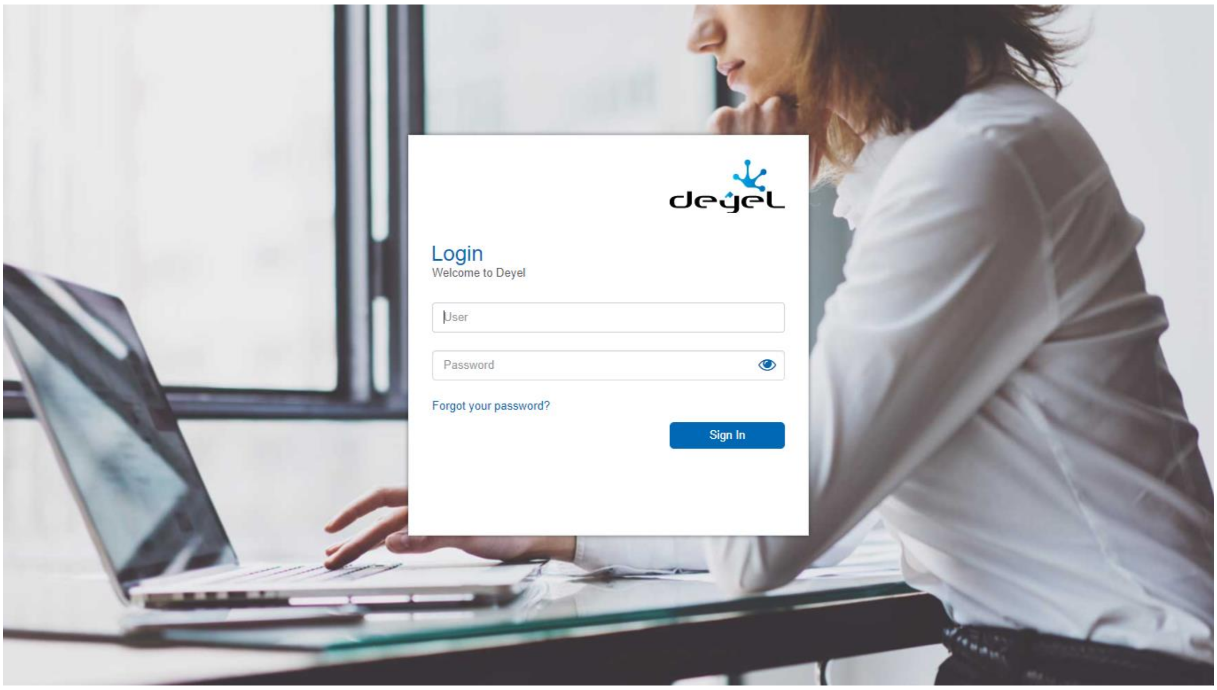
Mixed Authentication
Allows an organization to use simultaneously different types of authentication.

3.10.2.1.1. Native Authentication

This is the predetermined mechanism of authentication.



The user enters the user code or alias and the password on the user portal access page.

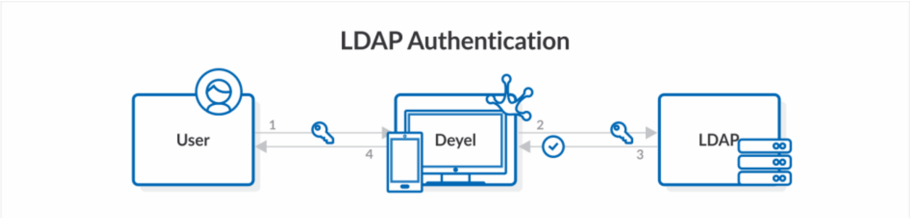


Deyel verifies that a user exists in its register, with the user code or alias informed and verifies the password. Access keys persist in **Deyel** database encrypted with SHA3.

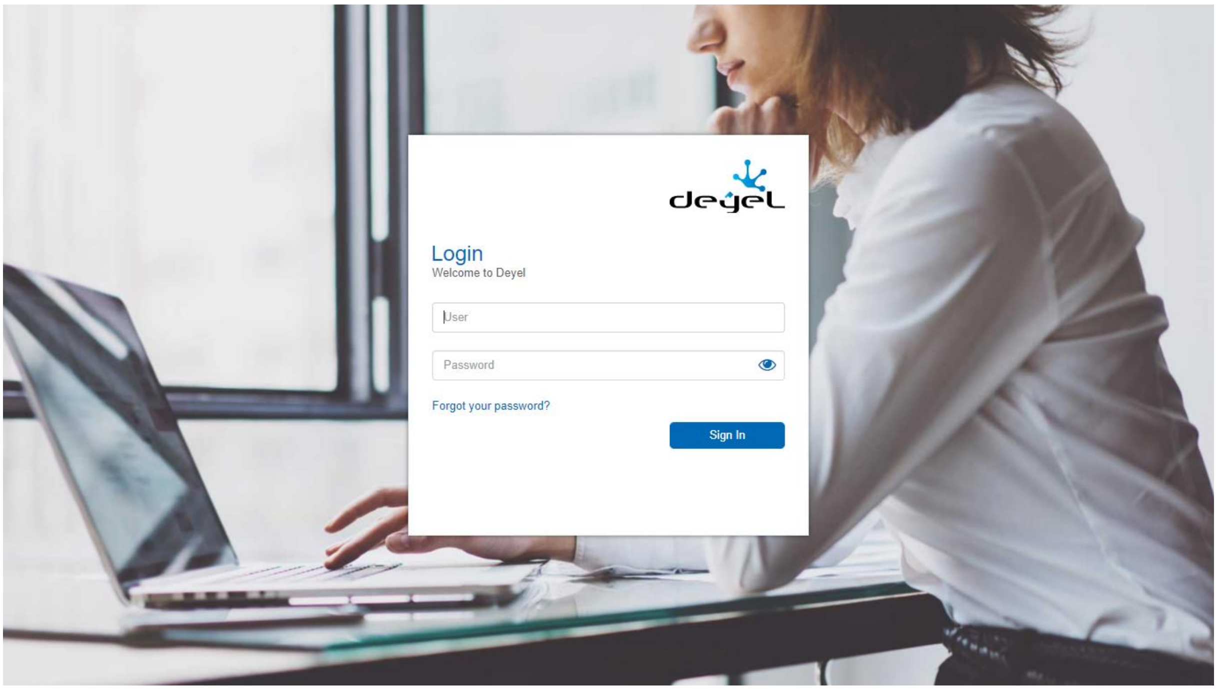
If the user or the password are incorrect, the access to the product is denied.

3.10.2.1.2. LDAP Authentication

When an organization uses directory services to register its users, **Deyel** can be configured to delegate the authentication process to LDAP.



The user enters the user code or alias and the password on the user portal access page.



Deyel verifies that a user exists in its register, with the user code or alias entered and delegates the authentication to LDAP. If the user is registered in **Deyel** and LDAP reports a correct authentication, then the access is allowed.

> *IMPORTANT*
>
> *Before activating LDAP authentication it must be ensured that a registered user exists in Deyel and can authenticate correctly in LDAP.*
> *If none of the users meet these conditions, it is not possible to enter the portal.*
>
> *Deyel verifies that the administator that is configurating the environment can authenticate correctly in LDAP.*
> *When LDAP is used as one of the Mixed authentication methods, this last verification is not done.*
>
> *When Deyel can not establish communication with LPAD server, an administrator is allowed to enter the portal by using Native authentication.*
> *In these cases, the user does not have all administration options available, but can only access to the environment configuration, to reconfigure the mechanism of authentication.*
>
> *With this mechanism of authentication the option "Forgot your Password" is not available.*
> *If the user does not remember their password, they must observe the procedures that the organization determines to solve the problem.*

In the configuration of the execution environment of **Deyel**, different aspects of the integration with LDAP can be configured.

LDAP - Server Connection
Configuration of access to LDAP server. All properties are required to activate LDAP authentication.

[LDAP - User Search](#)
Configuration of users search in LDAP Directory. Establishes the search subtree, LDAP attributes which are considered search keys and additional user selection filters.

[LDAP - Attribute Synchronization](#)
Configuration of **Deyel** user properties that are synchronized with LDAP attributes

Attribute Synchronization

Deyel allows certain properties of the users can be recovered from attributes of LDAP directory, avoiding that these properties can be modified in **Deyel**.

When **Deyel** connects correctly and determines that the user exists in LDAP, it is marked as a "Synchronyzed User". This indicates that some of their attributes have been obtained from LDAP and can not be modified in **Deyel**. In the same way, **Deyel** automatically removes the "Synchronized User" mark when it determines that the user does not exist in LDAP. This way its attributes can be modified in **Deyel**.

There are different moments in which these attributes synchronization is done.

Login

When the user authenticates correctly against LDAP, attributes are synchronized. If **Deyel** detects an error that does not enable to do this synchronization, a register of this is left in the logs console and log in to the portal is not allowed.

User Creation

When a user is created, by informing the user code or the alias, the existence in LDAP is verified. If the user exists in LDAP, attributes are obtained and remain protected. They can not be modified in **Deyel.** If the values recovered from LDAP are incorrect or the user does not exist in LDAP, creating the user in **Deyel** is not allowed.

User Modification

When a user is modified, **Deyel** syncs again the attributes before showing the information on the screen. If **Deyel** detects an error that does not enable to do this synchronization, a register of this is left in the logs console and the synchronization is not done. Then, there is access to the user information, but the synchronized properties can not be modified from **Deyel**.

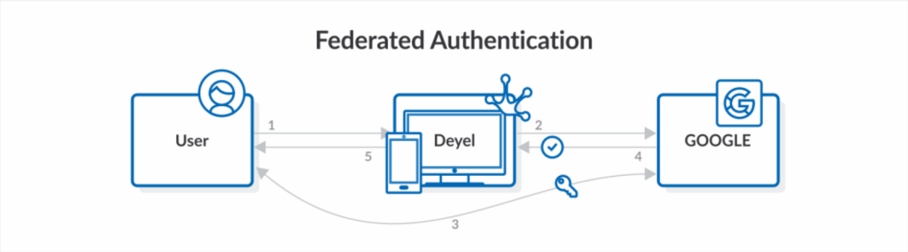
Query and Deletion of Users

When these operations are executed, an attributes synchronization is also done before showing the user information on the screen. If **Deyel** detects an error that does not enable to do this synchronization, a register of this is left in the logs console and the synchronization is not done.

3.10.2.1.3. Federated Authentication

An organization can use the services of an identity provider (IDP) to do the authentication of its users. In this way it grants a single access mechanism to the applications, avoiding users having to remember multiple login credentials.

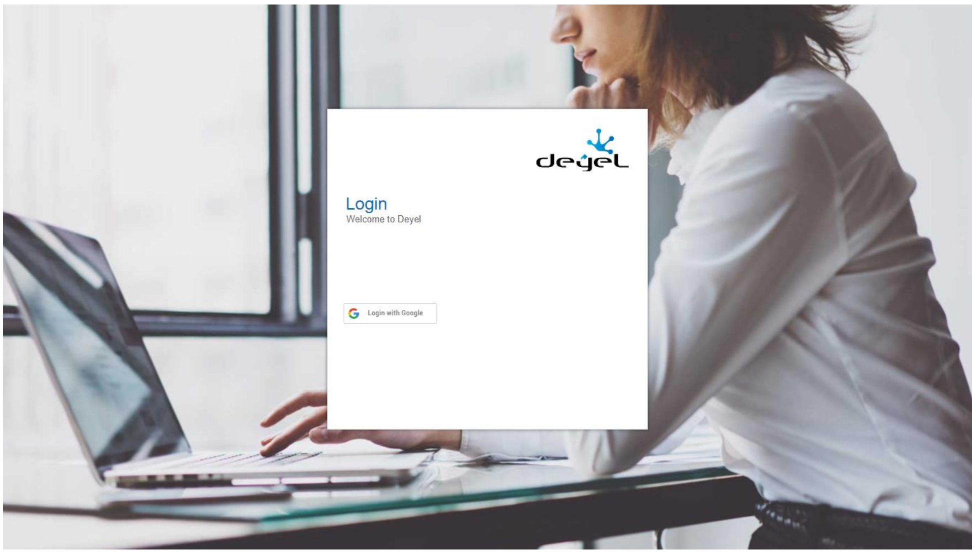
Deyel implements this type of authentication integrating with Google. When an organization uses Google accounts for its users, the authentication process can be delegated to Google.



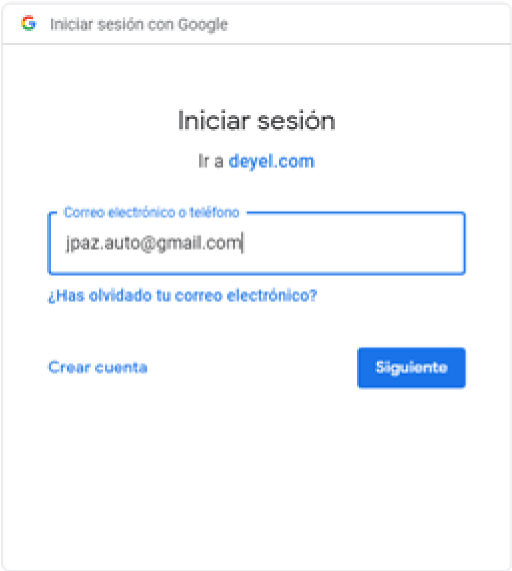
In the access page to the user portal there is a button that allows to redirect users to Google login in order to enter their credentials.

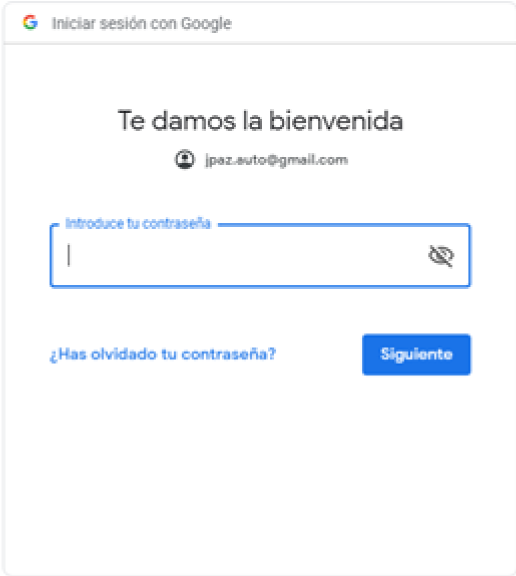
When users enter their account, Google informs **Deyel** that they have been successfully authenticated and the access code is never informed to **Deyel**.

Deyel only verifies that a user exists in its register, whose email account is the Google account entered. Users can use the product only when they are correctly authenticated to Google and they are defined in **Deyel**.



By pressing the button “Enter with Google” the users go to the login panel where they enter their credentials.

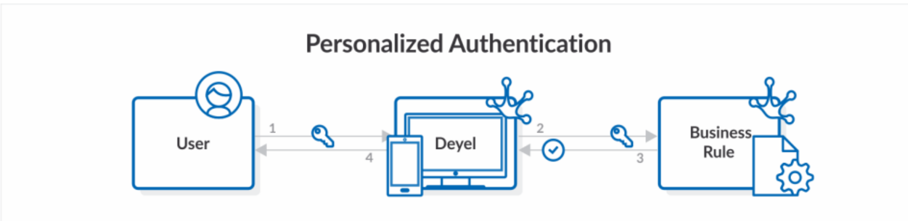




When users enter their account, Google informs **Deyel** that they have been successfully authenticated. **Deyel** verifies that the users are defined and their emails are the Google accounts they entered.

3.10.2.1.4. Personalized Authentication

This kind of authentication uses [an advanced rule] to authenticate users.



The user informs their user code or their alias and password, in the access page to the user portal. **Deyel** invokes this advanced rule, passing the data entered by the user. The advanced rule implements the authentication logic and returns if it is correct or not.

When **Deyel** receives that the authentication is correct, it is verified that the user exists in **Deyel** and allows entry.Passwords do not persist in **Deyel**.

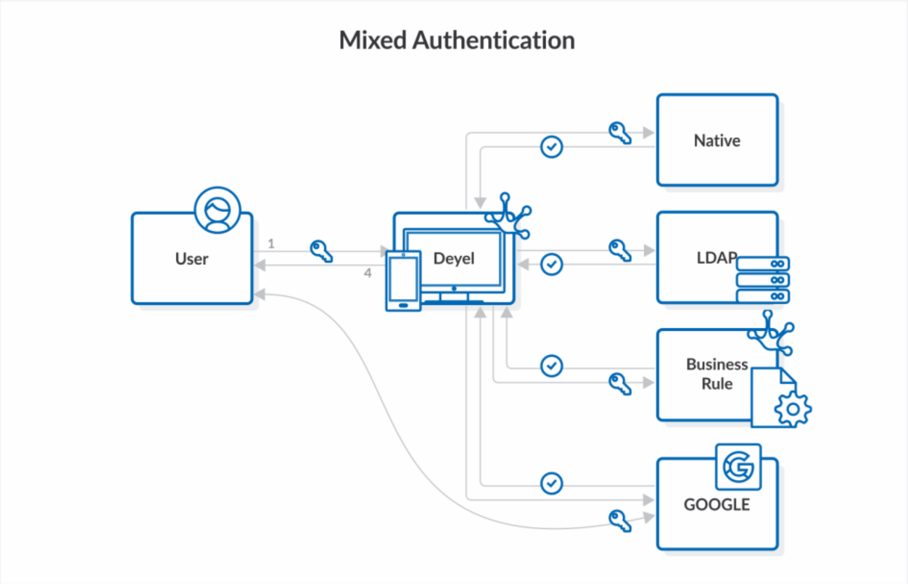
3.10.2.1.5. Mixed Authentication

The mixed authentication allows to combine multiple schemes of authentication, in a predetermined order.

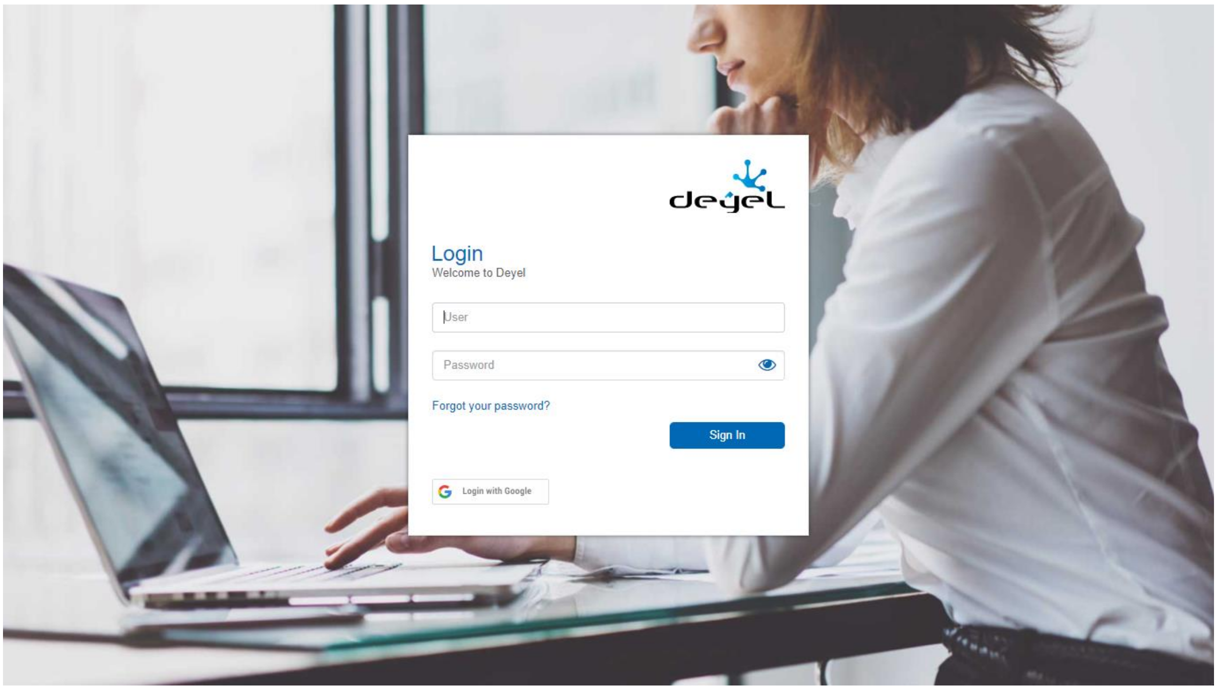
Let´s consider for example an organization that delegates in LDAP the authentication of its internal users, but needs to use addtionally the native authentication and the federated authentication (Google), to authenticate other groups of external users, which are not registered in the directory services.

This situation is solved by using the mixed authentication, indicating in the environment configuration which are the supported authentication methods and in what order should they be applied:

- First Method of Mixed Authentication = LDAP
- Second Method of Mixed Authentication = Native
- Third Method of Mixed Authentication = Google



The access page to the portal allows to use the different alternatives.



If the user presses the button “Enter with Google”, they are redirected to the Google login. The user can use the product only when they are correctly authenticated in Google and registered in **Deyel**.

If the user informs their user code or their alias and password, then **Deyel** tries to authenticate them first in LDAP and then by Native authentication.

When a mechanism authenticates correctly, **Deyel** allows the login of the user if it exists.

If a mechanism fails, it continues with the next one and if every configurated mechanism fails, the user receives an authentication error and the product can not be used.

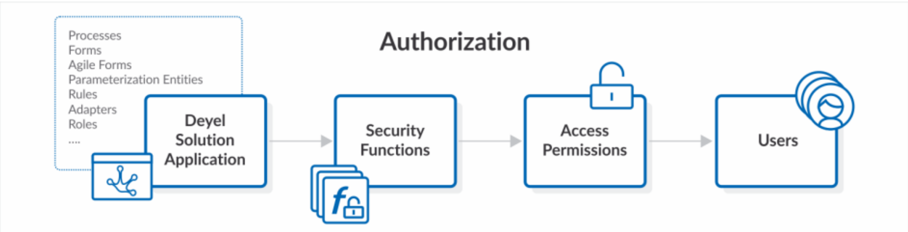
3.10.2.2. Authorization

The concept of authorization implies to verify which specific security functions each user can execute, preventing unauthorized actions to be carried out.

In the users profile they have predefined the access permissions and a user can only execute a security function, only if it is contained within their access permissions.

Modelers use **Deyel** to develop the applications the organizations needs and each application is modeled as a set of processes, business entities based on forms, rules, adapters, and roles, among other objects related to each other, with the objective of solving a determined requirement.

The design methodologies focused on the user contemplate the definition of the characters, to represent user groups that use the application similarly. Modelers can identify the characters in each application and determine which security functions they need to use. From this the access permissions assigned to the users are defined.

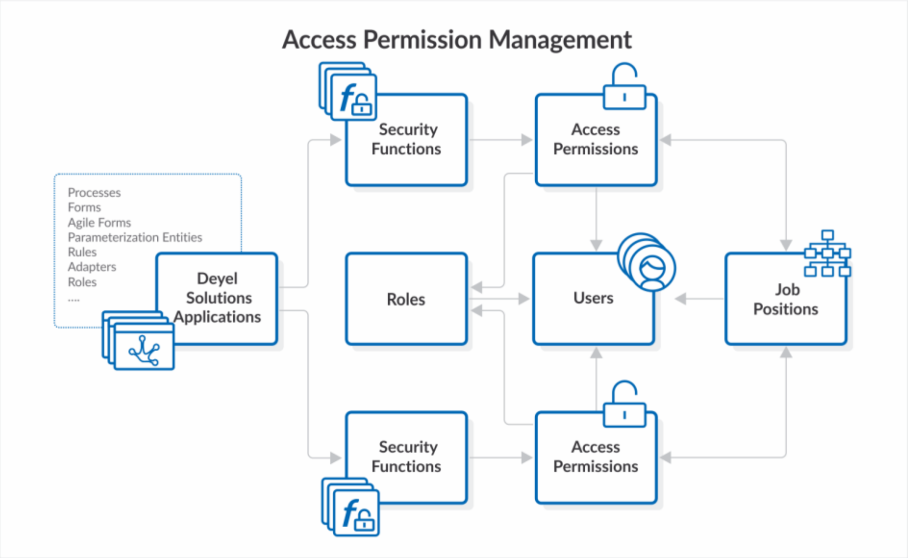


Access Permissions Management

Access permissions of each user need to adjust dynamically. The appearance of new applications, new features or changes on the user work assignments, imply that the access permissions that the user has assigned must be redefined.

The security administrator can add or remove access permissions to each of the users individually.

In organizations with great number of users or applications, this task can be complex. The concepts of roles and job positions allow to simplify it, assigning permissions to multiple users and not individually.



Predefined Access Permissions

Deyel and its solutions have a set of predefined access permissions, designed so that the different characters can use the feature they require.

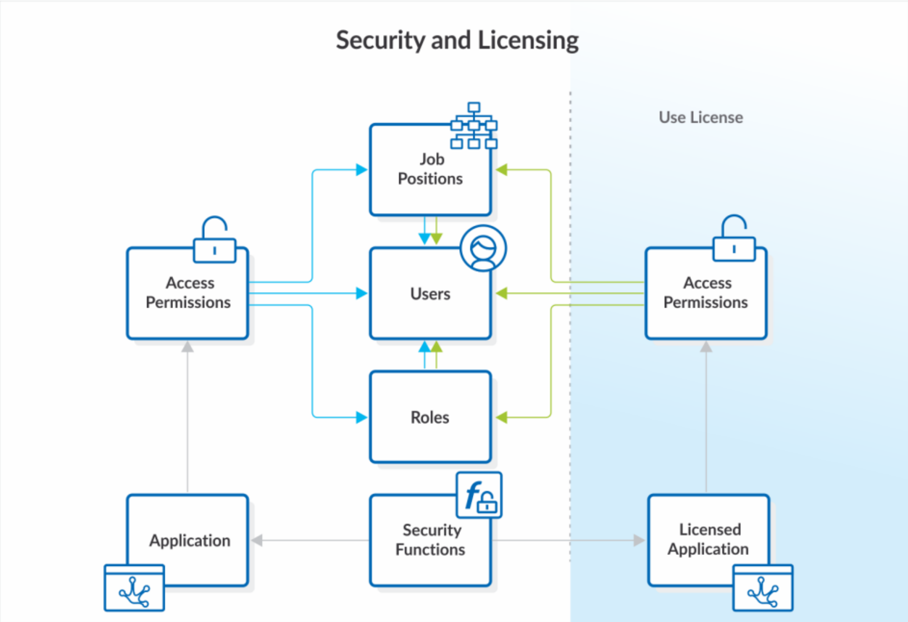
For example, **Deyel** has access permissions defined for end users, for business modelers, for IT modelers and for security administrators, among others. In the same way, **CRM** has access permissions designed for sellers and sales managers.

Predefined access permissions cannot be modified, in case of needing it a copy of them can be made.

3.10.2.3. Security and Licensing

Phase 8: Configuration > Licensing

The licensing scheme uses different concepts and affects the operation of the security scheme.



Licensed Application

A licensed application is the one that requires a use license to be used.

Use License

A use license is generated by the manufacturer and distributed in an XML file digitally signed. Each **Deyel** environment must import the corresponding use license.

A use license determines:

- The name of the company for whom the license is defined.
- Its identification.
- The platform or modality (Cloud, On-Premise).
- The license type (Subscription, Perpetual).
- The environment (Development, Test, Production).
- The validity period, with its issuance and renewal dates.
- The licensed applications and for each of them the available amount of user licenses.

User License

Each of the licensed applications defines different types of user licenses. The use license defines for each licensed application, the maximum quantity of user licenses of each type, that can be assigned in the environment.

In the case of **Deyel** the types of users licenses are:

- Participant
  A participant uses **Deyel** to participate in the defined processes, as well as using forms, calendars, chats, etc. either initiating a case or performing some subsequent activity inside that same case.

- Agile Modeler
  An agile modeler is a business user that uses the platform **Deyel** to define their web forms based on predefined templates or doing its complete design. They can adequate them to business needs, by adding a process or defining access permissions and their visibility, to finally publish them for use.

- Deyel Modeler
  A Deyel modeler is an IT user that uses **Deyel** platform to design and build their object models for the development of applications of low code. Uses tools of graphical processes modeling and forms to build, document and implement the processes and business entities of the organization. This type of modeler also defines the roles and agents, can implement more complex business logic using assistants what allows them to incorporate Java components. They can implement the integration with other applications or external databases, behavior or more complex validations in forms, using the advanced edition of scripting. They use tools to export and import their models and information of the environment.

In the case of solutions as CRM and Contracts, the type of user licenses are:

- Participant
  A participant can use the solution according to the access permissions they have been assigned.

- Administrator
  An administrator user of the solution is a user that uses **Deyel** platform for extending the solution.

Example:

- Enable the use of **Deyel**, considering up to 100 users of participant type, up to 50 of agile modeler type and up to 10 of Deyel modelers type.
- Enable CRM use considering up to 100 participant users.

Access Permission - Required User License

The access permissions of a licensed application establish what type of user license is required. In the case of **Deyel** there are predefined permissions that require a license of Deyel modeler type, others require a license of agile modeler type and others only require a license of a participant type.

Assignment of User Licenses and Access Permissions

On the profile of each user, it is indicated:

- The licensed applications that can be used and the type of user license that they are assigned to use them.
- The assigned access permissions.

When access permissions of a licensed application are assigned, it is controlled that:

- The licensed application can be used by the user.
- The type of user license is compatible with the required one by the access permission.

To authorize the execution of a security function, it is verified if it is in any of the access permissions assigned to the user.

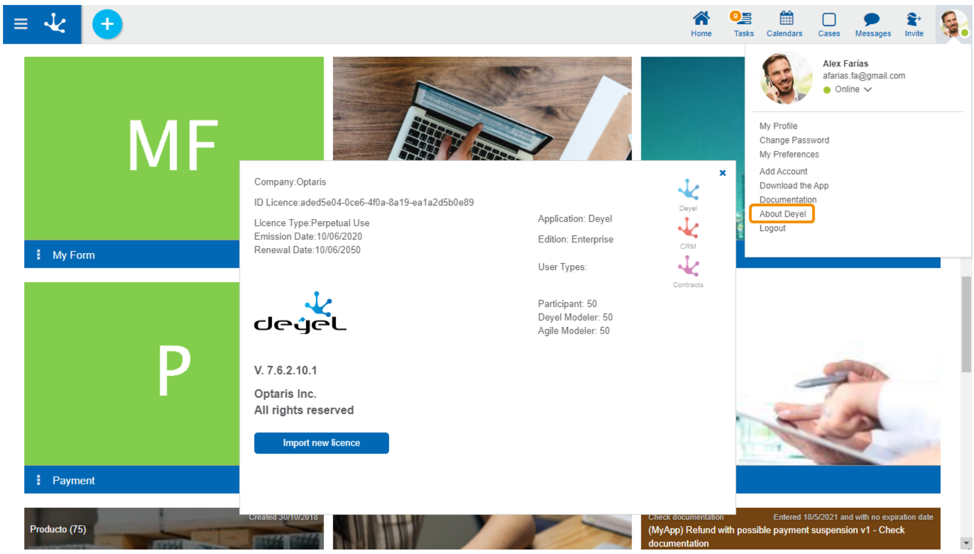
> *The corresponding permissions of a licensed application, are ignored when:*
> - *The use license does not enable the use of such licensed application.*
> - *The use license does not enable the type of use license required by the security permission.*
> - *The user does not have the use license type required by the security permission.*

3.10.2.3.1. Showing Use License

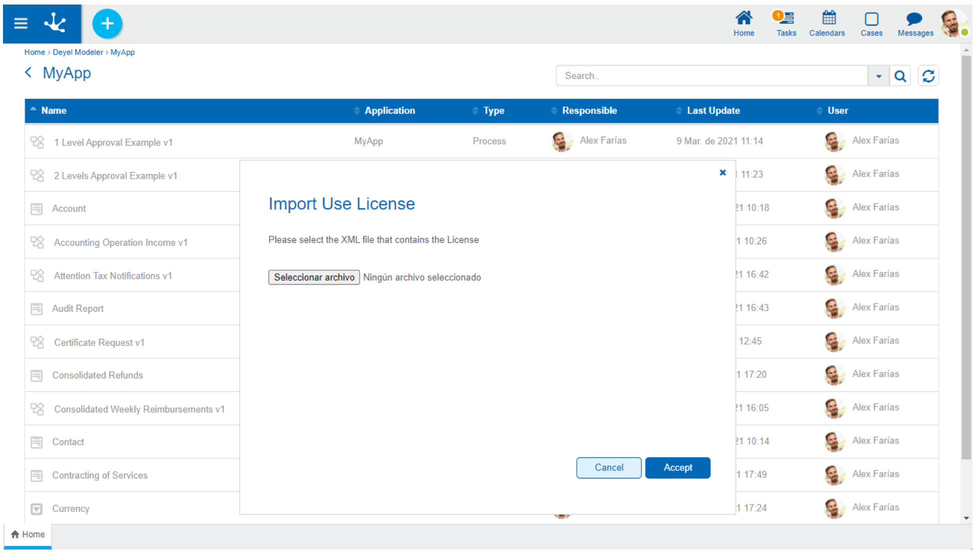
The information contained in the current use license can be shown from the functionality "About" on the top toolbar of the users portal.

About Deyel

When opening this panel the information about the use license can be seen.



When the user has access permission "Administrator", they can import a new use license. Date and time when the user imported the current license are informed under the button "Import". When pressing this button, a window which allows to upgrade the use license of the environment is displayed.



The XML file that contains the use license must be selected before pressing the button “Accept”.

Deyel verifies the digital signature of the XML file to ensure its integrity and verifies that the new license has been generated in the environment and that it has the correct validity.

After importing the use license, a button that allows to restore the previous license is temporarily enabled. This option allows to restore situations where the use license was improperly imported.

3.10.2.3.2. Licensing Controls

Deyel controls the environment licensing and sends out alerts when users enter it.

Non-existent License

If the use license is not detected, a panel is opened to initially load the license.

Invalid License

The use license exists but the validity of the digital signature is not verified, then the license is invalid and the user is notified when entering the portal.

User Level Licensing

It is verified that the connected user has user licenses granted and are compatible with the use license. If the user has not user licenses assigned, they receive a message informing them of the situation.

Number of Licensed Users

For every licensed application it is controlled that the number of user licenses assigned do not exceed what is defined in the use license. This control is performed for each type of user license.

Expired Licenses

The use license has a specified renewal date. It is considered that the license expires the day after such date.

3.10.2.4. Users

Every person using **Deyel** or any of its applications based on this platform are called users. As such, they have a code that uniquely identifies them, a password which allows them to authenticate and initiate the work session and a user profile, that collects their personal information, working information, their preferences, additional data, etc.

There is a type of user that does not represent a person, called "Smart Thing". It is about devices, virtual or physical, that have the capacity of communicating with other devices, reacting to events and executing specific functions. Smart things can participate of business processes, as initiators of them or as responsible of executing activities, so as to optimize the execution of such processes. For example, the execution of daily tasks or calculation tasks can be delegated to them.

Chatbots

Among the users of type "Smart Thing" there is a special type that is the chatbot.

A chatbot can communicate with other users using Tedis, interpreting specific messages. Each chatbot can define a process to model the way in which it responds to each of the messages received. The answer can be simple, for example responding with a predefined sentence, or it can be more complex and shoot the execution of a business process.

Chatbots are defined to interact with users through the messages, delegating this way the execution of tasks. Human users can use the chatbots as their assistants, so that they automate the actions the user wants and reply to their messages.

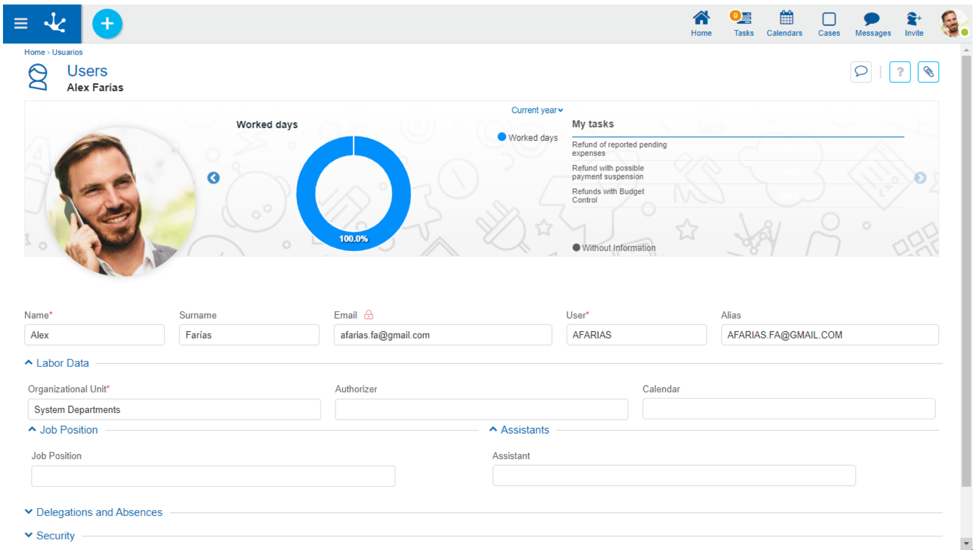
Properties

For each user a profile is kept with the following information:

- User Identification
- Labor Data
- Delegations and Absences
- Security

- [Personal Information]()

- [Configuration]()
  For users of type "Smart Thing" this group of properties must be defined.



> *An asterisk "*" on the label indicates that the property is required.*

User Identification

Profile Image
Each user can upload to their profile an image from a file. In case of not informing it, an image with the user´s initials is automatically generated.

User
Code that uniquely identifies the user.

Alias
The value entered in this property works as an alternative code for the user. For example, email address can be used or any other coding that uniquely identifies the user. **Deyel** checks that there are not two users with the same alias.
When entering the portal, the user can enter either his code or their alias to authenticate.

Behavior Indicators
Information about usual tasks, days worked and the last tasks of the user are graphically displayed.
- With the indicator "Most usual activities" a ranking of the most executed activities is displayed.
- With the indicator "Worked days", it is seen how was their workplace attendance. When clicking on this indicator, the profile form is displayed so that absences and licenses with their type and period covered are displayed.
- With "My tasks" a summary of the assigned tasks is displayed, together with their state regarding their due date. By clicking on these tasks, the grid of the task with its cases is displayed.

Cover Image
It can be personalized selecting an image to use as background from the icon .

Name - Surname
These properties may not be informed for smart things.

Email
The value entered in this field works as an alternative code for the user. **Deyel** checks that there are not two users with the same email.

If a user shows their profile the icon is seen on the right of Email property. When pressing it a field that allows entering the password of the email box is displayed. This configurarion is necessary so that the user can do the email sending when using forms.

Labor Data

Organizational Unit
Indicates the organizational unit in which the user works.

Authorizer
Indicates the one in charge of authorizing or approving the processes started by the user.
It is an optional property, that makes reference to another user belonging to the same organizational unit or to a different one.
This property can be recovered from the business processes so as to assign to those activities that require an authorization, the responsible user by using the agent Authorizer.

Calendar
Identifies the calendar that establishes the dates and working hours of the user.
This property can be defined for each user individually.
When the user has not a special calendar defined, then the current calendar at the level of the organizational unit to which they belongs is considered. If there is no definition of a calendar in such unit, it is sought at the higher levels of the organizational structure, until detecting the calendar to apply.
The root organizational unit of all the hierarchy has a predetermined calendar defined.

Job Position

Optionally the job positions which correspond to the users can be indicated.

Job Position
Defines the job position held by the user.

Assistant

Optionally the chatbots can be selected to work as assistants of the user.

Wizard
A user can define one or more chatbots as their assistants.
Each time the user receives a message, each of their assistants verify if they recognize that message as a command they can execute.
Each chatbot exposes the commands they can execute and defines which participants can invoke their execution.
On the other hand, those who communicate with this user can see the commands they can use when pressing the command icon on the chat window.

Delegations and Absences

Delegates

The list of delegated users is indicated and the period during which the delegation of tasks is valid.
When the user is inactive or absent then those current delegates can:

- Do the tasks assigned to the user.
- Initiate the processes authorized for the user.

Delegate of

Informs the list of users that have delegated tasks in the user and the corresponding period.
This list is dynamic and is completed at the moment of opening the user profile.

Absences

Each element of the list indicates the type of absence and the corresponding period.
During these periods of absence the mechanisms of tasks delegation are activated.

> *Absences can be indicated considering a start and end time.*

Security

State and Expiration

User State

Indicates if the user is active or not.
An inactive user cannot enter the environment as their account is deactivated.

Due Date

The user account is automatically deactivated when the date entered in this property is exceeded. This automatic deactivation does not use the tasks delegation scheme.
This mechanism is not applied when the authentication of users is not made by **Deyel** but it is delegated to LDAP or Google.

Password Expiration

It allows to establish a term of validity of 30, 60 or 90 consecutive days, starting to count from the last modification made on the user data.
After that deadline, when the user logs into the portal it is required they renew their password. It can also be stated that the password does not expire.
This mechanism is not applied when the authentication of users is not made by **Deyel** but it is delegated to LDAP or Google.

Licenses

Each environment of **Deyel** has use licenses that enable the use of licensed applications during a period of time and by a certain number of users.
In this section the list of licensed application the user can use is indicated and which type of user license they have assigned.

Product

Indicates the licensed application the user can use.

License Type
Indicates the type of user license that is assigned to the user to use the product.

Permission

The access permissions the user has assigned are displayed. Each element from the list indicates the name of the permission and the application they belong to.

In the first positions the permissions the user inherits for belonging to an organizational unit, to a role or to a job position are displayed. These elements are displayed protected and it is not possible to delete them from the list. Hovering over each of these elements, it is displayed from which object the permission is inherited.

Following the inherited permission, the permissions assigned directly to the user are displayed. When creating or modifying the user you can add or delete elements from the list.

First the application is selected and then the permission of such application that you want to assign to the user.

When permissions from a licensed application are assigned, this one must be able to be used by the user. If the application is not available in the use license of the environment, the permission is protected and it is possible to delete it from the permission list, but not modify the element

> *The permission "Account Manager" can only be assigned to a unique user.*
> *In On-Premise installations of **Deyel**, this permission can be assigned or removed from a user by the security administrator.*
> *In Cloud installations, the site of **Deyel** must be used to change the user defined as " Account Manager".*

In every installation there exists a set of predefined permissions that can be assigned to the users.

Roles

The roles the user performs are displayed. The list is dynamically conformed when accessing the user profile, recovering the roles where the user or their organizational unit are actors. Each element indicates the role name and the application it belongs to.
In the first positions the roles the user inherits for belonging to a unit are displayed and then the roles where the user is an actor.

Personal Data

The user profile includes the following properties:

Nationality
Birth Date
Identification Type / ID Number
Phone Number / Extension

Addresses

The user can have multiple addresses, with the following properties for each of them:

Country
State
City
Postal Code
Street
Number
Department

Social Networks

The user profile includes information about the identity of the user in the different social networks (Linkedin, Twitter, Facebook, YouTube y Skype).

For Twitter, when publishing the corresponding adaptor the option "Sign in with Twitter" is enabled. If the user has their Twitter session opened in the browser, the permission that allows **Deyel** to publish tweets in the name of the user can be enabled. If the user has not their Twitter session opened opened in the browser, they are redirected to Twitter site for opening their session first.

When finishing the authorization, the authorized account is displayed in the user profile, under the user´s image.

Users can unlink their Twitter account in different ways:

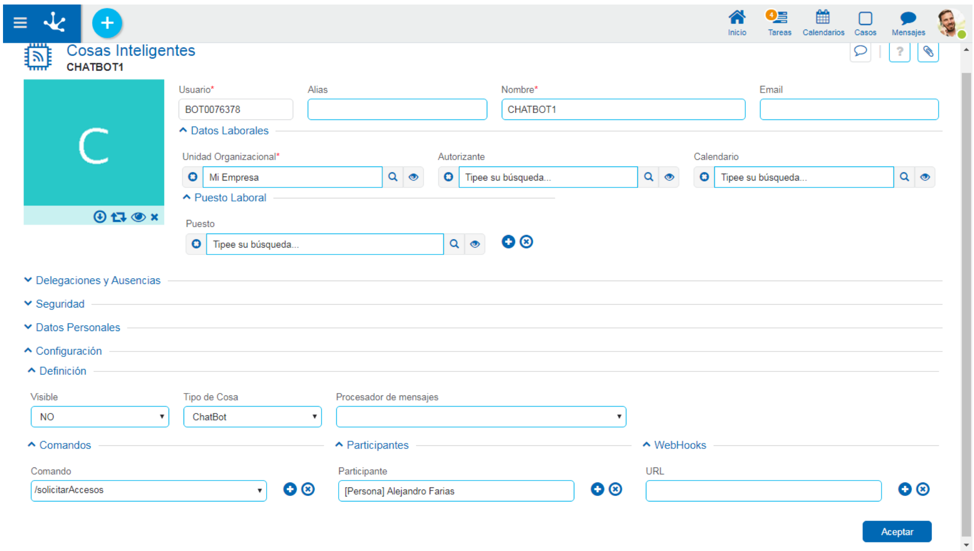
- From their profile, by clicking on the icon ✖ that is displayed on the right of the property Twitter.
- From Twitter, the authorization that allows **Deyel** publishing tweets in the user name is disabled.

Additional Information

Observations
Allows to load complementary data of the user.

Configuration

This section is only available for users of type "Smart Thing".



Definition

Visible

Indicates if the chatbot is visible in the users list of the business social network Tedis.
When a chatbot is not visible, it can work as an assistant, but it is not possible to send them messages directly in a chat.

Thing Type

Deyel incorporates the concept of chatbot as a type of smart thing.
In future versions other types of smart things will be supported.

Message Processor

The chatbot can define the business process that implements the processing of the messages it receives. Each time a chatbot receives a message, it starts a case of this process to generate the corresponding answer.

Commands

This section defines the list of commands the chatbot can understand and answer.
Executing a command implies executing the business process that implements it.

Participants

This section defines the participants that can use the chatbot as assistant.
If an organizational unit is selected, then any user from that unit can use the chatbot.

WebHooks

Webhooks are interfaces that allow to integrate applications, that is, they allow to connect and exchange data between applications.
A chatbot can use multiple webhooks, each of them defines the URL used to contact other application, sending it data in JSON format.
When a chatbot receives a message, it forwards it to each of its webhooks.

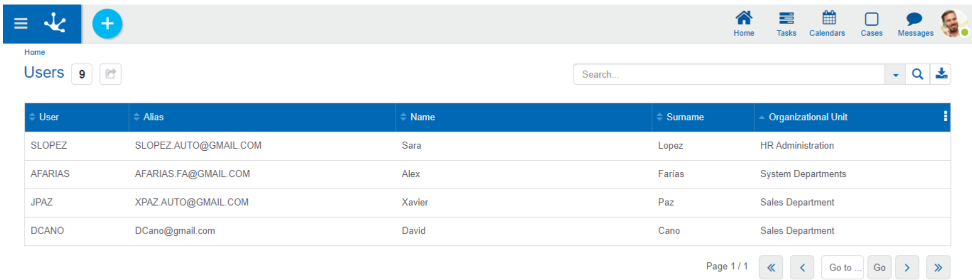
System User

To make internal operations automatically, **Deyel** uses a predefined user called SYSTEM USER (SYS-USER).
This user is displayed in the user grid, it is not possible to modify or deactivate it and it does not require user licenses.
The initial load of the use license or its subsequent update or the execution of programmed tasks, among others, are operations which execution is made using this user and so it remains registered in the audit trails.
It is not possible for someone to enter the user portal authenticating as the system user. **Deyel** uses it only for doing and registration of internal tasks.

3.10.2.4.1. Grid

To do the creation and administration of users, you can access the grid from the **Deyel menu**.

- From the option "Configuration", selecting "Security" and then "Users".
- From the search facility.



The users are visualized as a grid with the standard presentation of **Deyel** grids, with facilities of:

- Order
- Page
- Search Bar and Filters
- Download Data
- Operations

The number displayed on the right of the grid title, indicates the amount of users included in the grid.

The following properties of the users are visualized as grid columns:

- User
- Alias

- Name
- Surname
- Organizational Unit

It is possible to perform operations on each line of the users grid. By clicking on the line the display of the selected user is done, while by means of the icons and its modification or elimination is done, respectively.

3.10.2.4.2. Operations

It is possible to do operations on each user, depending on the security permissions that the connected user has defined. When hovering over each of the lines of the grid the icons with available operations are visualized.

The exception is the operation "Create" that can be executed from the context menu in different ways.

- Hover the cursor over the icon and select one of the icon on its right or corresponding to the option "Users" or "Smart Things".
- Click on the icon and select the option "Users" o "Smart Thing" on the vertical panel displayed.

Create

Opens properties panel of the new user or smart thing with all the properties as editable. The creation is done by pressing any of the buttons available and the user receives a message indicating that data have been saved.

Buttons

- Accept and Create: Confirms the creation of a user or smart thing and opens a new panel to create another one.
- Accept: Confirms the creation of a new user or smart thing.

> ***Deyel** can do users authentication against LDAP directory, in this case some of the user properties can be disabled, as such information can be recovered from LDAP directory.*

Considerations

When creating users some considerations are applied to entered properties.

Name - Surname
These properties are not informed for user type "Smart Thing".

Email
There cannot be more than one user with the same email. This property is optional for user type "Smart Thing".

User

The user code is made up automatically based on the name and surname. It is made up of the first initial of the name followed by a maximum of nine letters of the surname. It can be modified by the security administrator. There cannot be more than one user with the same code.

Alias
Takes the same value the property Email does. It can be modified by the security administrator. There cannot be more than one user with the same alias.

Profile Image
The profile image is entered by the users themselves. It is not a property that the security administrator can define when creating the user. **Deyel** assigns by default an image with the user´s initials.

Labor Data

Organizational Unit.
The organizational unit "My Company" is proposed by default. It can be modified by the security administrator.

Security

State and Expiration

Due Date
It must be greater than or equal to the current date.

User Licenses

In the properties Product and License Type the first product available in the use license is initially proposed. The security administrator can change this proposed value.

> *The list of applications only includes licensed applications available in the use license.*
> *When creating a new user, **Deyel** verifies that the amount of enabled users in the use license is not exceeded.*

Permission

Considering the values entered for the properties Product and License Type, the initial permission is proposed by **Deyel**.

Type of Use License	Initially Proposed Permission
Deyel - Participant	Deyel.EndUser
Deyel - Agile Modeler	Deyel.AgileModeler
Deyel - Deyel Modeler	Deyel.DeyelModeler
CRM - Administrator	CRM.Administrator

Type of Use License	Initially Proposed Permission
CRM - Participant	CRM.Seller
Contracts - Administrator	Contracts.Administrator
Contracts - Participant	Contracts.Seller

The security administrator can change the permission initially proposed.

> *The list of applications only includes licensed applications if they are available in the use license.*
> *The list of license types only shows the ones available in the use license.*

When permissions of a licensed application are assigned, it is verified that:

- The licensed application is in the list of applications the user can use.
- The type of the user license is compatible with the one required by the access permission.

> *The permission "Account Manager" can only be assigned to a unique user.*

Show

Opens the properties panel of the selected user, where the properties are not editable. Depending on the security permissions, buttons available to operate with such user are enabled.

- Modify
- Delete

Modify

Opens properties panel of the selected user, with those properties that can be modified, as editable. The modification is done by pressing the button “Accept” and the user receives a message indicating that data have been saved.

> ***Deyel** can do users authentication against LDAP directory, in this case some of the user properties can be disabled, as such information can be recovered from LDAP directory.*

Considerations

Users can update their profile, modifying properties like their profile image, their delegated users and inform absences, among others. However some properties can only be modified by the security administrator, who has permission to execute the security function "Deyel - Modify users data".

Name - Surname
These properties are not informed for user type "Smart Thing".

Email
There cannot be more than one user with the same email. This property is optional for user type "Smart Thing".

Alias
There cannot be more than one user with the same alias.

Profile Image
The profile image is entered by the user themselves. It is not a property that the security administrator can define when modifying the user.

Delegations and Absences

Delegates
When a user is modified:

- Delegations occurred in the past, cannot be modified nor deleted.
- Current delegations, that is the ones that have the current date within the period, can be modified but the date must be kept within the period.
- Future delegations can be freely deleted or modified.

Absences
This list can be administrated by the users themselves or by the administrator user. Each element contains the absence type and its period.
Only the absences occurred during the last year are visualized, however the administrator user can see all of the absences.
When a user is modified:

- The absences occurred in the past can be modified or deleted only by the security administrator.
- Current absences, that is the ones that have the current date within the period, can be modified but the date must be kept within the period. The security administrator can delete or modify current absences.
- Future absences can be freely deleted or modified.

Security

State and Expiration

Due Date.
It must be greater than or equal to the current date.

User Licenses

Elements from the list of licensed applications can be added o deleted when modifying a user.

> *If an element is created or modified, only licensed applications available in the use license can be selected.*
> *Those elements from the list that make reference to applications not available in the environment are displayed protected, it is possible to delete them from the list but it is not possible to modify them.*
> ***Deyel** verifies that the amount of enabled users in the use license are no exceeded..*

Permissions

Elements from the list can be added or deleted when modifying the user.

The Application must be selected first and then the Permission for such application.

When permissions of a licensed application are assigned, it is verified that:
- If the application is not available in the environment at the moment of the modification, the permission is seen as protected and it is possible to delete it from the permissions list, but not modify it.
- If the application is available in the environment at the moment of the modification, it is verified:
  - The licensed application is one of the products the user can use.
  - The type of user license is compatible with the one required by the security permission.

> *The permission "Account Manager" can only be assigned to a unique user.*

Delete

Opens the properties panel of the selected user or smart thing, where their properties are not editable. The deletion is done by pressing the button “Accept” and the user receives a message indicating that data have been deleted.

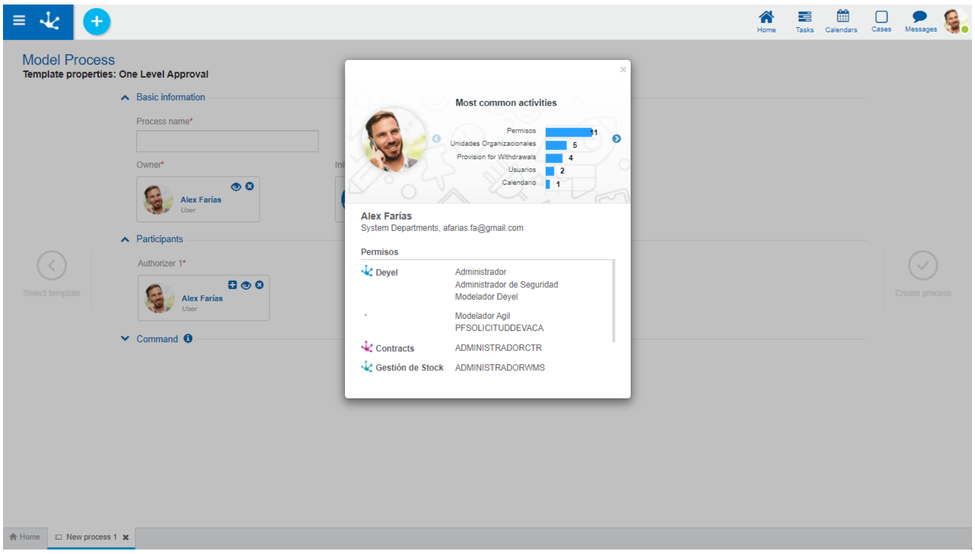
Considerations

When deleting users some verifications are made.

- The administrator of an organizational unit cannot be deleted.
- A coordinator or actor of a role cannot be deleted.
- A user with permission "Account Manager" cannot be deleted.
- Responsible or participant users of a process in use cannot be deleted.
- A logged in user cannot delete its own profile.

3.10.2.4.3. Show User Profile

From the different modelers, as well as from execution of processes and forms the query of the user profile can be made by pressing the icon  and an informative panel is displayed.



Panel Elements

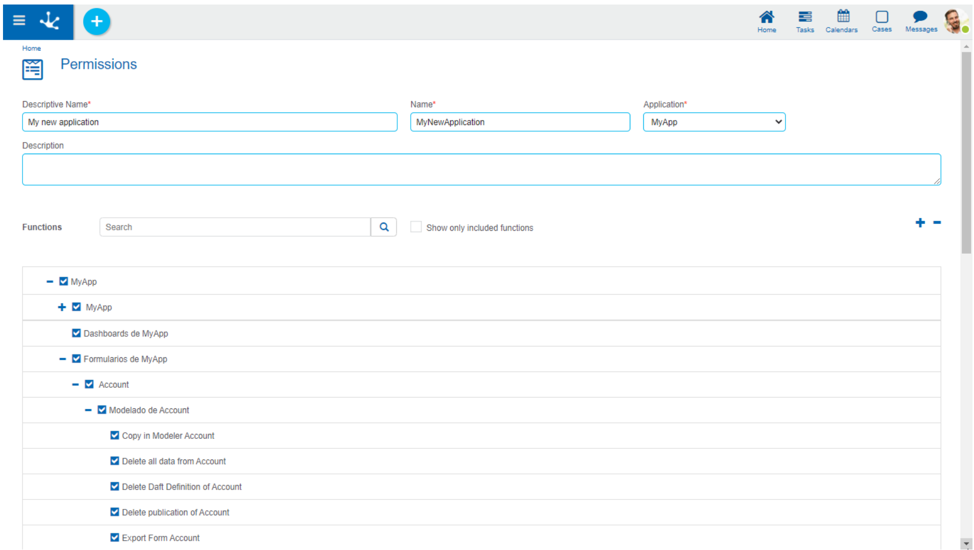
Some of the properties which were defined for the user are displayed, such as Name, Surname, Organizational Unit, Email and Permissions. These last are seen within a container where the scroll bar can be used.

At the top of the panel behavior indicators are seen, the icon  allows to advance to the following indicator and the icon  allows to return to the previous indicator.

3.10.2.5. Permissions

An access permission is an object that groups security functions.

Each user has assigned one or more security permissions that indicate which functionality they can execute within each application. This way, the operations that a user can execute are determined by the access permissions that they have been assigned.



An asterisk "" on the label indicates that the property is required.*

Properties

Descriptive Name
Complete name of the permission. This text is the one visualized on the permissions grid.

Name
It is an abbreviated or reduced name. It is used when referring to the permission in an error message or in any mention that needs to abbreviate the descriptive name. This property does not admit blank spaces.

Application
Defines the application the permission belongs to, through the selection grom a list of available applications. The permission is made up of security functions of such application.
The licensed applications are included in such list only if the use license in the environment allows their use.
Access permissions of a licensed application, can only be assigned to users that have user license of such application. When a permission is created or modified, **Deyel** verifies that the authorized security functions are compatible with the license type required by the permission. For example, a permission that requires only a participant license cannot authorize functionalities that are typical of an agile modeler or a **Deyel** modeler.
When a permission belongs to a not licensed application, it can include functionalities of **Deyel** or of a solution, but they can be executed by a participant user.

> *Any permission can contain security functions of **Deyel** application.*
> *Any permissions of **Deyel** application can contain global security functions.*

Description
Details the information about the permission, extending what is expressed in the property Descriptive Name. Allows to enter a description of the facilities that the permission grants, without analyzing in detail the list of authorized functions.

Functions
Panel in which the set of security functions defined by the permission are authorized. They are visualized with the defined hierarchical structure.

Search
On top of the panel the bar of search of functions is visualized, from where filters can be applied to the function names.
The icon allows to delete the defined selection criteria and all lines on the panel are displayed again without highlighting.

Expands the hierarchical structure of security functions.

Reduces the hierarchical structure of security functions only to higher level ones.

3.10.2.5.1. Grid

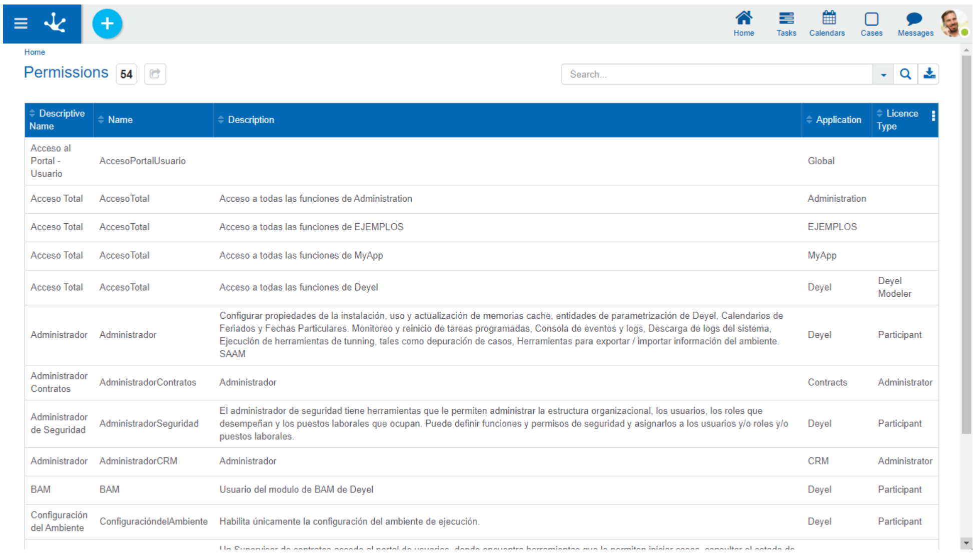
For creating and managing permissions, it is posible to access the grid from the menu of **Deyel**.

- From the option “Configuration”, selecting "Security" and then “Permissions”.
- From the search facility .

Permissions are visualized as a grid, with the standard presentation of the grids of **Deyel**, with facilities of:

- Ordering
- Paging
- Search Bar and Filters
- Data Download
- Operations

The number displayed on the right of the grid title, indicates the amount of permissions included in the grid.



The following properties of permissions are visualized as grid columns:

- Descriptive Name
- Name
- Description
- Application
- License Type

It is possible to perform operations on each line of the permissions grid. By clicking on the line the display of the selected permissions is done, while by means of the icons and its modification or elimination is done, respectively.

3.10.2.5.2. Operations

It is possible to perform operations on each permission, depending on the security permissions that the connected user has defined. When hovering over each of the lines of the grid the icons with available operations are visualized.

The exception is the operation "Create" that can be executed from the context menu in different ways.

- Hover over the icon and select the icon on its right, corresponding to the option "Permissions".
- Click on the icon and select the option "Permissions" on the vertical panel displayed.

Create

Opens properties panel of the new permission with all the properties as editable. The creation is done by pressing any of the buttons available and the user receives a message indicating that data have been saved.

Buttons

- Accept and Create: Confirms the creation of a permission and opens a new panel to create another one.
- Accept: Confirms the creation of a new permission.

Functions

In the panel in which the set of security functions authorized through the permission is defined, functions included in the panel can be selected.

Show

Opens the properties panel of the selected permission, where the properties are not editable. Depending on the security permissions of the user, buttons available to operate with the permission are enabled.

Buttons

- Modify
- Copy
- Delete

Modify

Opens properties panel of the selected permission, with those properties that can be modified as editable. The modification is done by pressing the button “Accept” and the user receives a message indicating that data have been saved.

Copy

Opens a panel with the same properties of the selected permission, with its properties as editable. The necessary modifications must be done and when pressing the button “Accept”, the user receives a message indicating that data have been saved. When the permission corresponds to a licensed application, it can only be copied if its license is valid.

Descriptive Name

This property takes the value of the origin permission, adding a suffix indicating the number of copy generated. However this value can be modified.

Name

This property takes the value of the origin permission, adding by default a suffix indicating the number of copy generated. However this value can be modified.

Delete

Opens the properties panel of the selected permission, where the properties are not editable. The deletion is done by pressing the button “Accept” and the user receives a message indicating that data have been deleted.

> *The permission cannot be deleted if there are users or roles who have it assigned..*
> *The permission "Account Manager" is a protected permission and it cannot be deleted.*

3.10.2.5.3. Predefined Permissions

There are security permissions predefinded in **Deyel** with different features.

> *These predefined permissions are protected by **Deyel** and cannot be modified, imported or deleted.*

Deyel

End User

- Accesses the users portal, where they find tools which allow them to initiate cases, show the state of the cases they have initiated, show their pending tasks list and execute them, use messages, etc.
- Uses forms to manage business entities, being able to show or modify each entity according to the access rights they have on the entity.

Agile Modeler

- Includes end user features.
- Uses forms modeling wizard to build, document and implement forms, processes and business entities of the organization.
- Defines roles and parameterization entities.

- Defines business rules to include logic in their processes.
- Uses tools to export and import their models and information of the environment.

Deyel Developer

- Includes end user features.
- Uses tools of graphical forms modeling and processes modeling to build, document and implement process and business entities of the organization.
- Defines roles, agents and parameterization entities.
- Implements more complex business logic using wizards that allow them to incorporate Java components.
- Implements the integration with other applications or external data bases.
- Implements behavior or more complex validations in forms, using the advanced edition of scripting.
- Uses tools to export and import their models and information of the environment.

Tester

- Includes end user features.
- Has tools that allow them to define and maintain test plans of different processes, record individual test cases and define random scenarios.
- Uses tools to automate execution of test plans and monitors the results.

BAM

- User of BAM module of **Deyel**.

Guest in Tedis

- Includes end user features.
- It is used to limit the use of this collaborative platform. For example, a guest user can participate in conversations, but not initiate them.

Security Administrator

- Includes end user features.
- It has tools that allow them to manage organizational structure, users and roles they play.
- It can define functions and security permissions and assign them to users and roles.

Administrator

- Includes end user features.
- Uses tools to configure:
    - Properties of the installation (DB connection, integration with mail server, etc.).
    - The use and upgrade of cache memories.
    - Parameterization entities of **Deyel**.
    - Holiday calendars and particular dates.
    - Glossaries
- Uses habitually the following features:

- Monitoring and reboot of programmed tasks.
- Events console and logs.
- System log download.
- Execution of tuning tools, such as case debugging.
- Tools to export and import information of the environment.

Environment Configuration

- It only allows entry to the environment configuration.

Global

Account Manager

Allows to identify the user that performs as " Account Manager". This is a protected security permission, that cannot be removed from the installation or modified.
Only one user can have this security permission assigned. This is controlled in the creation and in the modification of users.

> *In On-Premise installations, this permission can be assigned or removed from a user by the security administrator.*
> *In Cloud installations, the site of **Deyel** must be used to change the user that performs as " Account Manager".*

Besides, this permission cannot be assigned to roles or job positions.

Modeler

Groups all modeling and usage security functions of the objects, giving agility to the assignment of permissions particularly at the moment of creating objects. Every created object has its security functions assigned to this permission.

CRM

Seller

- Includes the features of **Deyel** end users, without the access to agile forms.
- Includes access permissions for CRM sellers.

Sales Manager

- Includes the features of **Deyel** end users.
- Includes access permissions for CRM sales managers.

Administrator

- Includes the features of **Deyel** end users.
- Includes access permissions for security and CRM administration features.

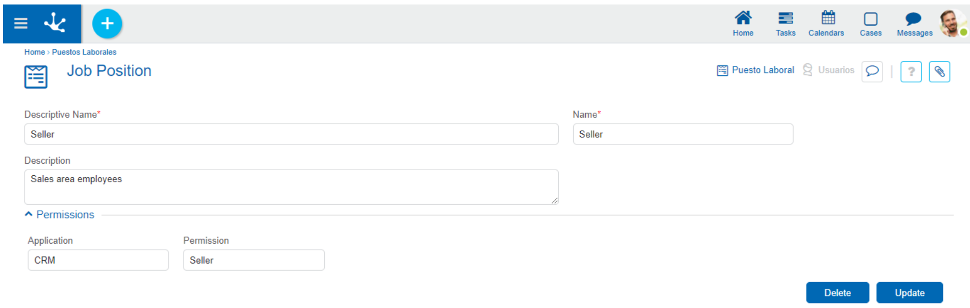
3.10.2.6. Job Positions

[Phase 8: Configuration > Roles and job positions]

A job position defines in **Deyel** the activities that a user or group of users develop within the organization.

Each job position can have assigned a set of security permissions, that are inherited by the users who occupy that position, which allows to simplify assigning permissions to users.

This concept is used to associate users to the job position they occupy and know which are their skills. From a job position it can be visualized the relation with the users in the upper right section, with the number of users that are associated to the job position consulted. If you click on the name of the relation “Users”, a grid with the users associated to the job position is visualized if the number is greater than 1, or the properties panel of the user in case that such number is 1.



An asterisk "" on the label indicates that the property is required.*

Properties

Descriptive Name
Complete name of the job position. This text is the one visualized on the grid of job positions.

Name
It is an abbreviated or reduced name. It is used when referring to the job position in an error message or in any mention that needs to abbreviate the descriptive name. This property does not admit blank spaces.

Description

Details the information about the job position, extending the property Descriptive Name.
Allows to include a detailed description of the tasks that the user occupying that job position does.

Assigned permits
Security permissions can be added to the job position.

Application
Allows to define the application list that can be used by the users who have the job position assigned within their profile.

Permits
Allows to define a predefined security permission for each application entered in the property Application.

3.10.2.6.1. Grid

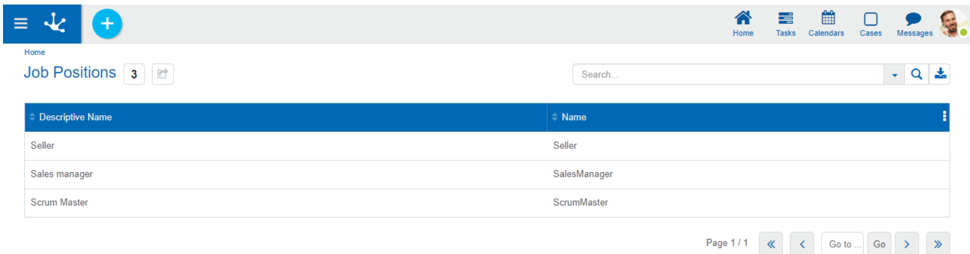
For creating and managing job positions, it is posible to access the grid from the menu of **Deyel**.

- From the option "Configuration", selecting "Security" and then "Job Positions".
- From the search facility.

Job positions are visualized as a grid, with the standard presentation of **Deyel** grids, with facilities of:

- Ordering
- Paging
- Search Bar and Filters
- Data Download
- Operations

The number displayed on the right of the grid title indicates the amount of job positions included in the grid.



The following properties of job positions are visualized as grid columns:

- Descriptive Name
- Name

It is possible to perform operations on each line of the job positions grid. By clicking on the line the display of the selected job position is done, while by means of the icons and its modification or elimination is done, respectively.

3.10.2.6.2. Operations

It is possible to perform operations on each job position, depending on the security permissions that the connected user has defined. When hovering over each of the lines of the grid the icons with available operations are visualized.

The exception is the operation "Create" that can be executed from the context menu in different ways.

- Hover the cursor over the icon and select the icon on its right corresponding to the option "Job Position".
- Click on the icon and select the option "Job Position" on the vertical panel displayed.

Create

Opens properties panel of the new job position, where they are editable. The creation is done by pressing any of the buttons available and the user receives a message indicating that data have been saved.

Buttons

- Accept and Create Confirms the creation of a job position and opens a new panel to create another one.
- Accept: Confirms the creation of a new job position.

Show

Opens the properties panel of the selected job position, where the properties are not editable. Depending on the security permissions of the user, buttons available to operate with such job position are enabled.

Buttons

- Modify
- Delete

Modify

Opens properties panel of the selected job position, with those properties that can be modified, as editable. The modification is done by pressing the button “Accept” and the user receives a message indicating that data have been saved.

Delete

Opens the properties panel of the selected job position, where its properties are not editable. The deletion is done by pressing the button “Accept” and the user receives a message indicating that data have been deleted.

3.10.2.7. Roles

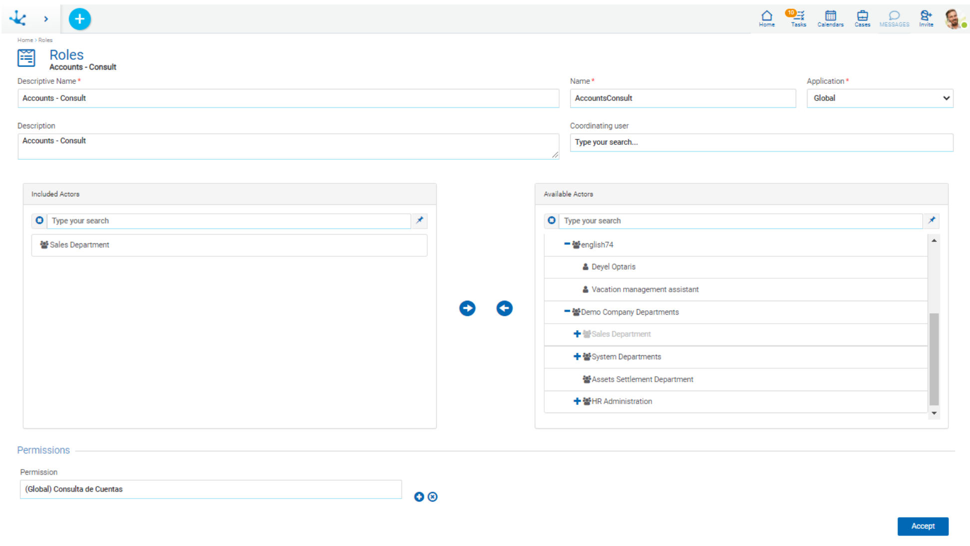
▶ Phase 8: Configuration > Roles and job positions

While the organizational structure of **Deyel** defines the areas or offices of the company, the hierarchical relations between them and the actors that make it up, the roles allow to define groups of actors that have activities and common responsibilities, but are cross or parallel to the organizational structure.

The actors of a role can be users, organizational units or users that belong to these units. Each role can have defined a set of security permissions, that are assigned to the users comprising such role or to the users whose organizational unit integrates the role.

In the modeling of business processes, this concept is used to define that an activity can be executed by any of the members of the role. In agile forms, roles can be used to define who can do operations on form instances.

An organizational unit and a user can belong to multiple roles.



An asterisk "" on the label indicates that the property is required.*

Properties

Descriptive Name

Complete name of the role. This text is the one visualized on the roles grid.

Name

It is an abbreviated or reduced name. It is used when referring to the role in an error message or in any mention that needs to abbreviate the descriptive name. This property does not admit blank spaces.

Application

Defines the application the role belongs to, through the selection of a list of available applications. The licensed applications are included in such list only if the use license of the application is valid in the environment.

Description

Details the information about the role, extending the property Descriptive Name. Allows to document the purpose for which the role has been generated, in which process is used, etc.

Coordinator User

A coordinator user of the role is optionally defined, doing the selection from the user search.

Current Actors

Panel in which the users and organizational units that are role actors, can be defined and visualized as a grid.
The role must have at least a current actor, that is the list of current actors cannot be empty.
On top of the panel a search bar of actors is visualized, from where filters can be applied to the user names and organizational units to reduce the grid.
It is possible to move elements from this panel from or to the panel Available Actors, as detailed under the title Transfer of Actors.

Available Actors

Panel from where you can select users and/or organizational units available to be defined as role actors.
On top of the panel a bar of search of actors is visualized, from where filters can be applied to the user names and organizational units to reduce the grid.
It is possible to move elements from this panel from or to the panel Current Actors, as detailed under the title Transfer of Actors.

Permissions Associated to the Role.

This property allows to define security permissions to the role actors, that is that actors who integrate the role or that play in units which are role actors, inherit the security permissions defined here. It is an indirect way of assigning security permissions.

> *It is not allowed for the permission "Account Manager" to be associated to roles.*

Actors Transfer

The transfer of actors between the panels Current Actors and Available Actors is done by selecting the actors to transfer in the source panel and pressing the icon corresponding to the direction.

Transfers the selected actors in the panel of available actors to the panel of current actors.
Transfers the selected actors in the panel of current actors to the panel of available actors.

The icon allows to select all the actors of the corresponding panel, or remove the selection.

Actors Search

The search of actors is done by clicking on the selected lines, or using the search facility of each panel of actors. If a text is entered and the key "Enter" is pressed, the panel is updated showing only the actors whose name contains the text entered. The results are highlighted in yellow.

The icon allows to delete the defined selection criteria and all lines are displayed again on the panel.

3.10.2.7.1. Grid

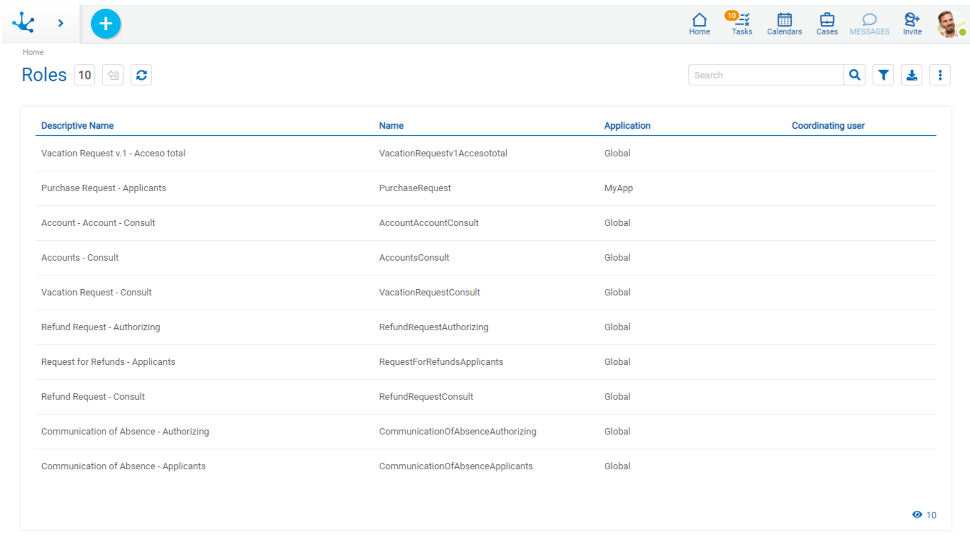
For creating and managing roles, it is posible to access the grid from the menu of **Deyel**.

- From the option “Configuration”, selecting "Security" and then “Roles”.
- From the search facility.

Roles are visualized as a grid, with the standard presentation of **Deyel** grids, with facilities of:

- Ordering
- Paging
- Search Bar and Filters
- Data Download
- Operations

The number displayed on the right of the grid title indicates the amount of roles included in the grid.



Descriptive Name	Name	Application	Coordinating user
Vacation Request v.1 - Acceso total	VacationRequestv1Accesototal	Global	
Purchase Request - Applicants	PurchaseRequest	MyApp	
Account - Account - Consult	AccountAccountConsult	Global	
Accounts - Consult	AccountsConsult	Global	
Vacation Request - Consult	VacationRequestConsult	Global	
Refund Request - Authorizing	RefundRequestAuthorizing	Global	
Request for Refunds - Applicants	RequestForRefundsApplicants	Global	
Refund Request - Consult	RefundRequestConsult	Global	
Communication of Absence - Authorizing	CommunicationOfAbsenceAuthorizing	Global	
Communication of Absence - Applicants	CommunicationOfAbsenceApplicants	Global	

The following properties of roles are visualized as grid columns:

- Descriptive Name
- Name
- Application
- Coordinator User

It is possible to perform operations on each line of the roles grid. By clicking on the line the display of the selected role is done, while by means of the icons and its modification or elimination is done, respectively.

3.10.2.7.2. Operations

It is possible to do operations on each role, depending on the security permissions that the connected user has defined. When hovering over each of the lines of the grid the icons with available operations are visualized.

The exception is the operation "Create" that can be executed from the context menu in different ways.

- Hover the cursor over the icon and select the icon on its right corresponding to the option "Roles".
- Click on the icon and select the option "Roles" on the vertical panel displayed.

Create

Opens properties panel of the new role with all the properties as editable. The creation is done by pressing any of the buttons available and the user receives a message indicating that data have been saved.

Buttons

- Accept and Create: Confirms the creation of a role and opens a new panel to create another one.
- Accept: Confirms the creation of a new role.

Show

Opens properties panel of the selected role, where properties are not editable and the icons for the transfer of actors are not visualized, however the search of actors is enabled. Depending on the security permissions of the user, buttons available for operating with the role that is being consulted are enabled.

Buttons

- Modify
- Delete

Modify

Opens properties panel of the selected role, where properties that can be modified are editable. The modification is done by pressing the button “Accept” and the user receives a message indicating that data have been saved.

Application

It is not allowed to modify the role if the [application is licensed](#) and its [use license](#) is not valid.

Coordinator User

When the role is responsible or participant of a process that is in use, it is not possible to delete the definition of the coordinator, although it is possible to define a new one.

Delete

Opens properties panel of the selected role, where properties are not editable and the icons for the [transfer of actors](#) are not visualized, however the search of actors [is enabled](#). The deletion is done by pressing the button “Accept” and the user receives a message indicating that data have been deleted.

> *A role cannot be deleted if it is responsible or participant of a process in use.*

3.10.2.8. Agents

An agent is a type of participant that allows to dynamically determine a user, an organizational unit or a role, based on certain logic during the execution of a process.

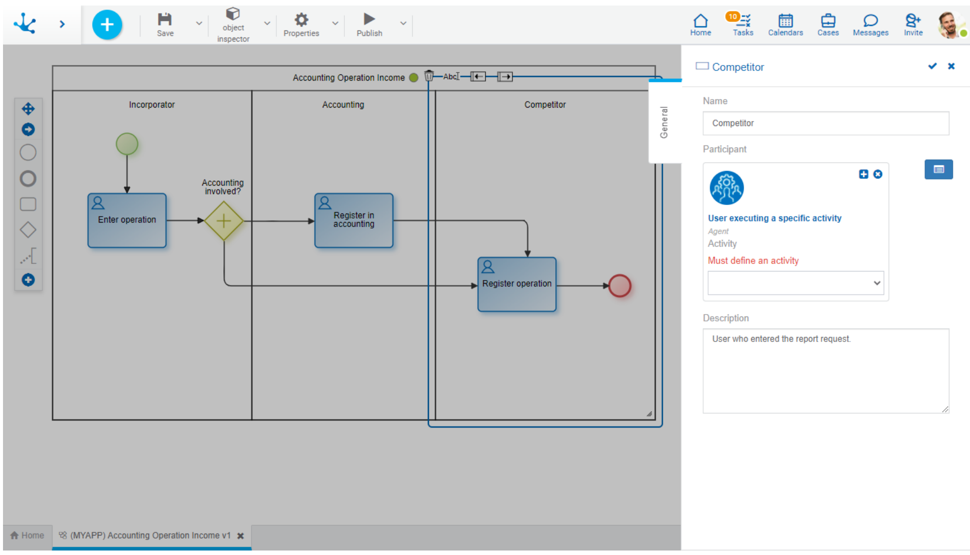
Predefined Agents

When modeling processes, a set of predefined agents can be used to establish who can execute the activities found in a lane.

User Executing a Specific Activity

This agent returns the user that executed a specific activity. This agent is used when there is the need to indicate that an activity is made by the same user that executed the activity defined.

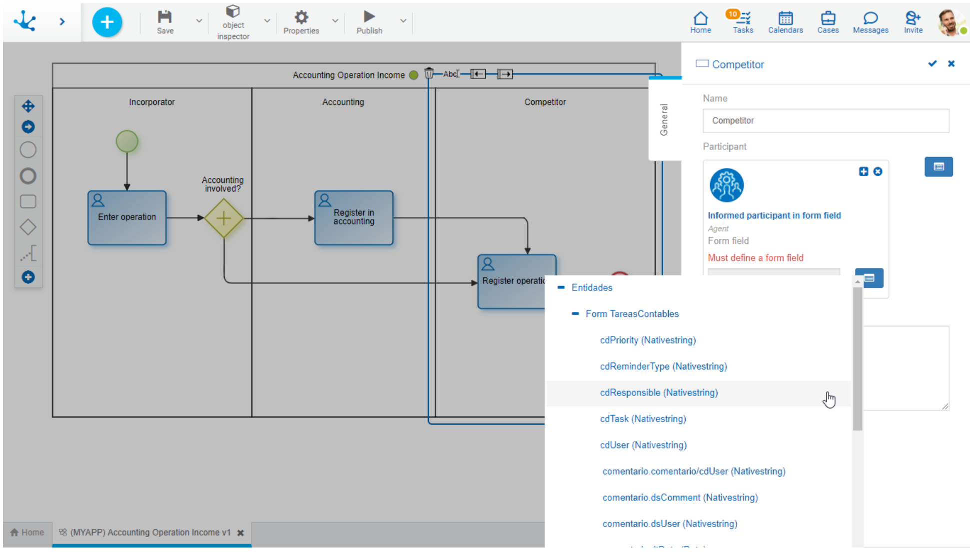
Usage Example: The activity “Register operation” is executed by the same user that executed the activity “Enter operation”.



Participant Informed in Form Field

This agent returns the participant from a form field. This agent is used when there is the need to indicate that an activity is made by the user indicated in the defined field of a form related to the process.

Usage Example: The activity “Register operation” is executed by the user shown in field “cdUser” of the form"TareasContables".



Administrator of the User OU

This agent returns the user that is administrator of the organizational unit the executing user of the last activity belongs to.

Any User

This agent returns the the user that is currently logged in. If a process has this agent as the participant of the initial lane, every **Deyel** user can initiate the case.

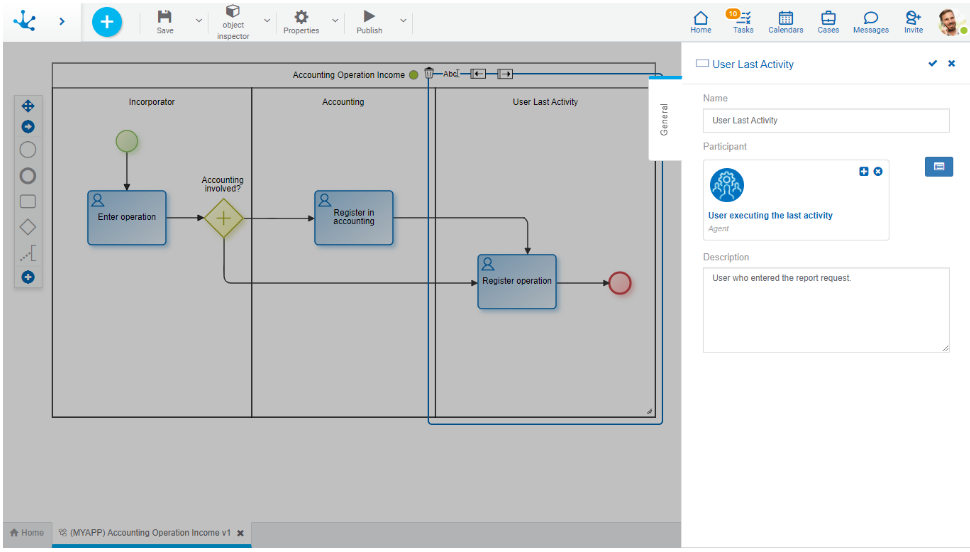
Authorizer

This agent returns the user defined as authorizer in the profile of the user that executed the last activity.

User Executing the Last Activity

This agent returns the user that initiated the execution of the last activity. This agent is used when there is the need to indicate that an activity is made by the same user that executed the activity that goes before.

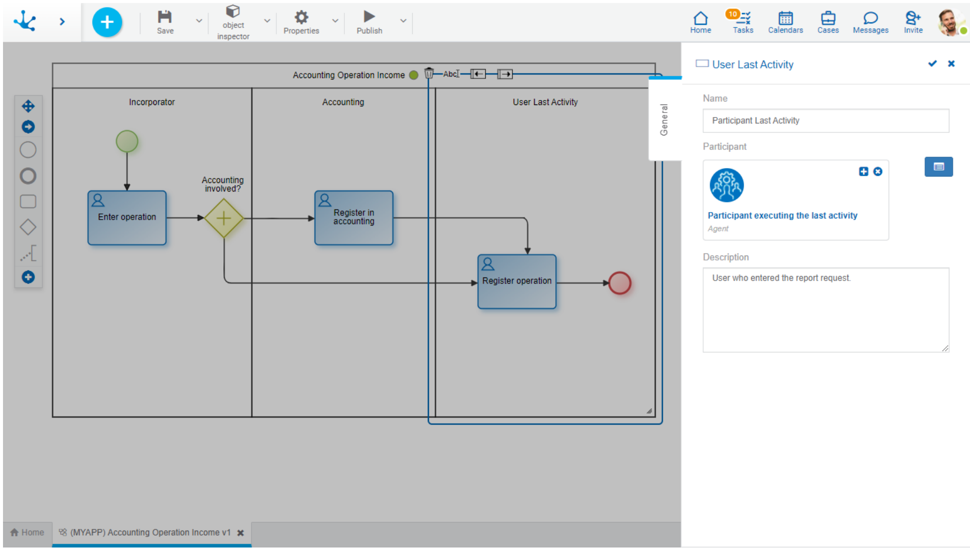
Usage Example: The activity "Register operation" is executed by the user that initiated the case or by the user that executed the task "Register in accounting", if the case involved the accounting department.



Participant Executing the Last Activity

This agent returns the participant that initiated the execution of the last activity. It is used to indicate that an activity is done by the same participant..

Usage Example: The activity "Register operation" is executed by the same user that initiated the case or by the organizational unit "Accountant", if the case involved the accounting department.



Initiator

This agent returns the user that executed the first activity of the process. It cannot be used in the first lane of a process.

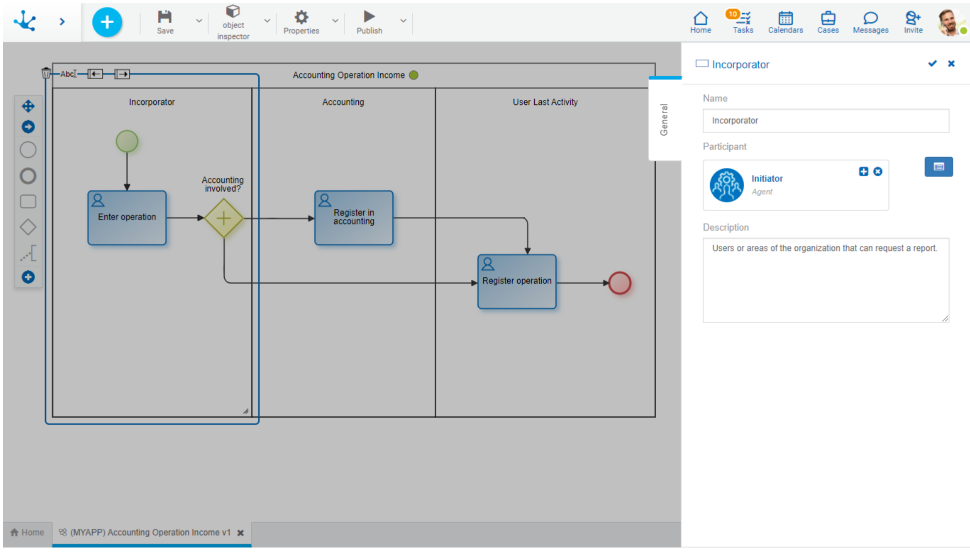
CRM User

Returns the user that is currently logged in as participant only if they have CRM Solution license. If a process has this agent as participant of the initial lane, every user with CRM license can initiate the case. It is recommended to use this agent only to define the participant of the initial lane of the process.

Initiator Restricted by Function

This agent evaluates if the current user has in their permissions the security function "Initiate Process" corresponding to the current process. This agent can only be used in the first lane of the process.

Usage Example: The activity "Register operation" must be executed by a user that has a permission permit with the security function "Start by agent Entering Accounting Operation" enabled.



3.10.2.9. Security Functions

A security function represents an operation that can be done on an object. It can be included in one or more permissions thus authorizing the users that have those permissions to do such operation.

Every operation available in **Deyel** or in its solutions has a corresponding security function defined. Besides, every object that is modeled has a set of security functions that are automatically created when saving and publishing the object.

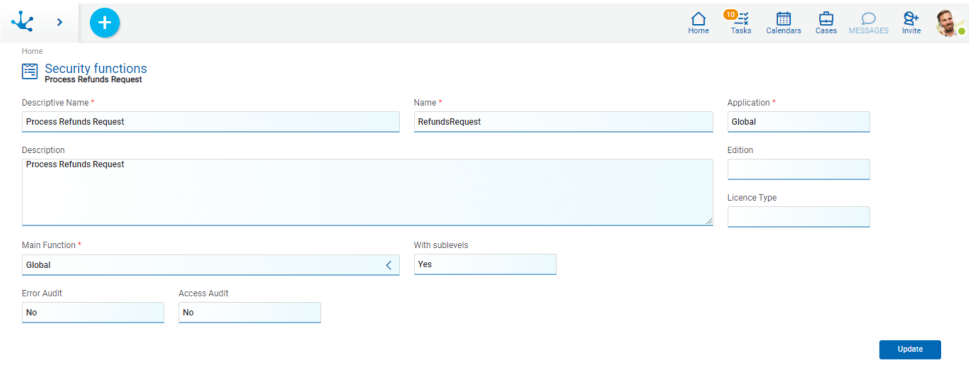
Security functions can be shown or assigned to permissions from the option "Permissions" on the menu and particularly security functions of the modeled objects, from the object modeler as well.

Of Modeling

They authorize the execution of the modeling operations, such as save, publish, export, delete. They are generated when saving the object and their assignment to permissions has an immediate impact when saving or publishing an object.

Of Use

They authorize the execution of the operations on the instances of the objects, like create, modify, delete, show, when they are used from the portal. They are generated when the object is published. The modifications in the assignment of use functions do not have a real impact on the use of the object, until it is published.



> *An asterisk "*" on the label indicates that the property is required.*

Properties

Descriptive Name

Complete name of the security function.This text is visualized on security functions grid.

Name

It is an abbreviated name. It is used when referring to the security function in an error message or in any mention that needs to abbreviate the descriptive name.

Application

Indicates the applications to which the security function belongs to, it is the same as the one his Father Function.

Edition

It indicates the edition of **Deyel** or of the licensed application required for the execution of the function. Some functions are available only in the edition "Enterprise" of **Deyel** or "Professional" of the solutions.

License Type

Indicates the type of license the user needs to have assigned in order to execute the function. It is used for **Deyel** functions or licensed applications functions.

Description
Details information about the security function, extending what is expressed in the property Descriptive Name.

Superior Function
Allows to identify the superior security function inside the hierarchical structure. There exists a father function for each available solution and for each modeled application.

With Sublevels
Indicates that the security function has subordinated functions.

Audits for Access
When the value “YES” is defined an entry is generated in the audit registry each time a user executes the security function. Using the Logs Console these audit trails can be recovered and evaluated the use of the different security functions.

Audits for Errors
When the value “YES” is defined an entry is generated in the audit registry each time an error occurs during the execution of the security function. Using the Logs Console these audit trails can be recovered and evaluated the occurrence of these type of errors.

3.10.2.9.1. Functional Structure

For creating and managing security functions, it is possible to access the functional structure from the menu of **Deyel.**

- From the option “Configuration”, selecting “Security” and then “Security Functions”.
- From the search facility.

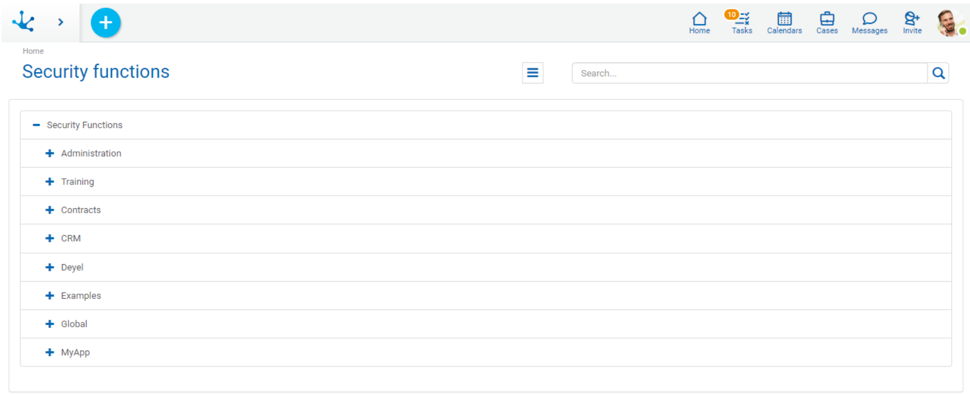
Security functions are identified from its property Descriptive Name and automatically generated when objects are modeled. They can be visualized as a hierarchical view or as an object grid.

It is possible to perform operations on each security function from hierarchical view and from the grid mode by using buttons.

Hierarchical View

Father element, which name is the name of the application, is located as sublevel of the top element “Security Functions” and security functions of the application and its objects are visualized under it. For each modeled object, its corresponding modeling security functions and of use are created.

The icon ≡ allows to change the visualization to grid mode.



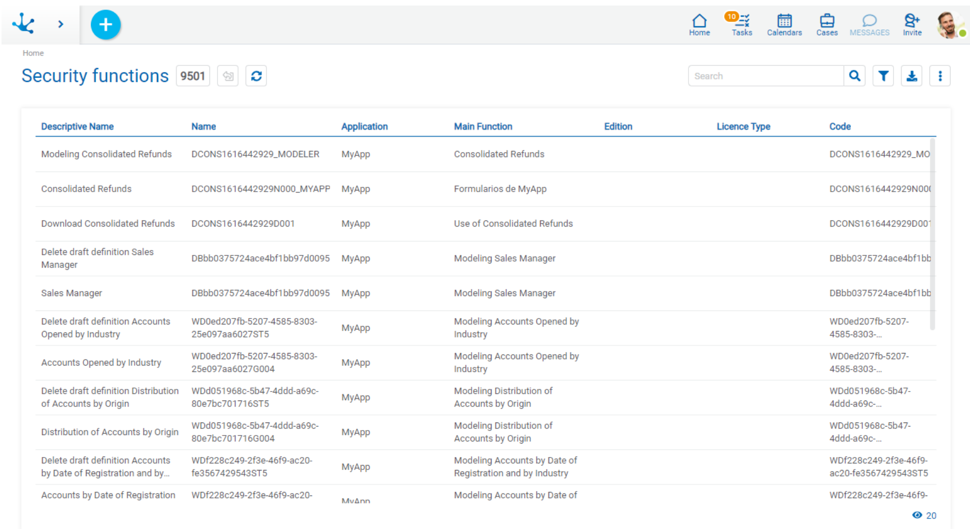
Grid

Security functions are visualized as a grid, with the standard presentation of **Deyel** grids, with facilities of::

- Ordering
- Paging
- Search Bar and Filters
- Data Download
- Operations

The icon allows to change the visualization to hierarchical view mode.

The number displayed on the right of the grid title indicates the amount of security functions included in the grid.



The following properties of security functions are visualized as grid columns:

- Name
- Descriptive Name
- Application
- Superior Function
- Edition
- License Type
- Code

It is possible to perform operations on each line of the security functions grid. By clicking on the line the display of the selected security function is done, while by means of the icon the modification is done.

3.10.2.9.2. Operations

It is possible to perform operations of show and modification from hierarchical view and from grid mode, depending on the security permissions that the connected user has defined. When hovering over each of the lines the buttons or icons with available operations are visualized, depending on the visualization mode.

Show

Opens properties panel of the selected security function. Properties are visualized as not editable and depending on the security permission of the user, the button to modify the selectede security function is enabled.

Modify

Opens properties panel of the selected security function, with those properties that can be modified as editable. The modification is done by pressing the button "Accept" and the user receives a message indicating that data have been saved.

> *When the security function belongs to a licensed application, only the attributes that define the audits for access and audits for errors can be modified.*

3.10.2.10. Security in Entities

Phase 2: Form Modeling > Advanced Tips > Entities Privacy

Security in an entity is related to the access the users have to the instances of such entity, through their user interface which is named form. An instance of an entity corresponds to a created form, that contains data in its fields.

Entities Classification According to the Security Level

Public

The only security that controls the access to a public entity is the one given by the user profile.

Private

An entity is private when in addition to the security definded in the user profile, there is one additional check per entity instance.

The verification takes into account the following concepts:

- Instance Owner
  Identification of the user that has access permissions to show, modify and delete the particular instance of an entity.

- Access according to Hierarchy
  The access to instance data in addition to the owner, takes into account the definition of the organizational unit which the owner user belongs to. If a user belongs to a unit that has private data access properties defined, the coordinator of such unit can have any of the accesses defined for the instances of his subordinates.

- Security to Functions
  Allows a user that is not an instance owner to access these instances despite being private, through security functions assigned to a permission. The user is allowed to show, modify or delete private instances.

- Access from a Process
  Allows access to the instances of a form from a case even if the user does not have the necessary security functions for the form or the form has privacy defined

3.10.3. Environment

In the **Deyel** environment, a set of properties can be defined to adapt the operation of the product according to specific needs of the client.

The environment properties can be set from the menu of **Deyel**.

- From the “Configuration” option, select "Environment".
- From the search facility.

Each user may select the values for some properties using the facility "My Preferences".

Precedence for properties is as follows:

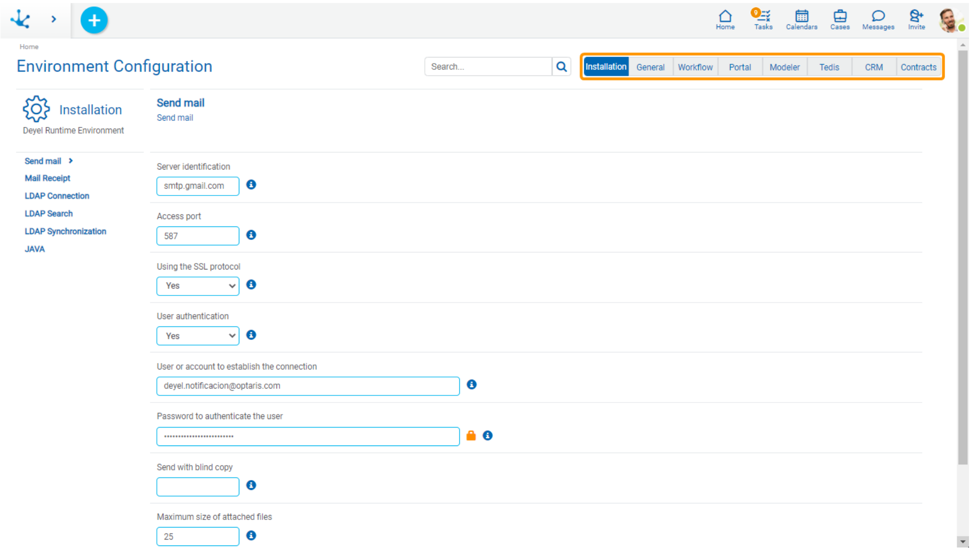
- Preferred value of the connected user.
- Value configured in the environment.
- Default value of the property.

Categories

The tabs at the top right define the groups into which the configurable properties are categorized.

- [Installation]
- [General]
- [Workflow]
- [Portal]
- [Modeler]
- [Tedis]
- [CRM]

Selecting each tab expands a menu for each category, containing options that group properties by theme.



Configurable Properties

For each property, its descriptive name and current value are displayed, which can be modified by the user. In some cases this value can be entered and sometimes it is selected from a list of possible values.

All properties have a default value, which can be null.

When the user updates a property value, they can press the "Undo Change" button to cancel the modification. This option to undo a change is available until the "Apply Configuration" button is pressed. This is when all the properties are stored in the repository of **Deyel** and the user is notified with a successful operation message.

When a property has a value other than the default value, the "Remove preference" button is displayed in order to change the current value to the default value.

Some properties that can be updated dynamically but in other properties the new value is applied when the environment is restarted.

Properties that require the environment to be restarted are identified by the icon .

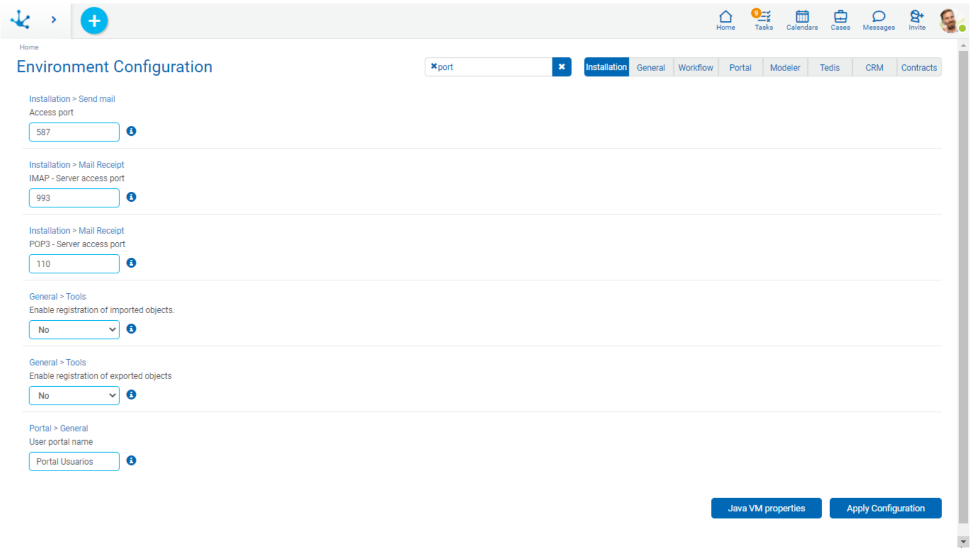
Some properties are encrypted and their content is displayed protected. They are displayed with the icon , for example user passwords.

Pressing the icon gives access to a detailed description of the property.

Search

The search facility can be used indicating the code, name or description of the property sought, in full or in part.

A breadcrumb is displayed on each one of the properties that indicates to which category the property belongs. This breadcrumb can be used for positioning in the indicated category.



Java VM Properties

They are displayed by pressing the "Java VM Properties" button and correspond to the Java Virtual Machine of the application server in use, for example: IBM Websphere or Apache Tomcat. These properties cannot be updated and depend on the Java version that is being used, for example Java for Linux, Java for Windows, etc.

3.10.3.1. Installation

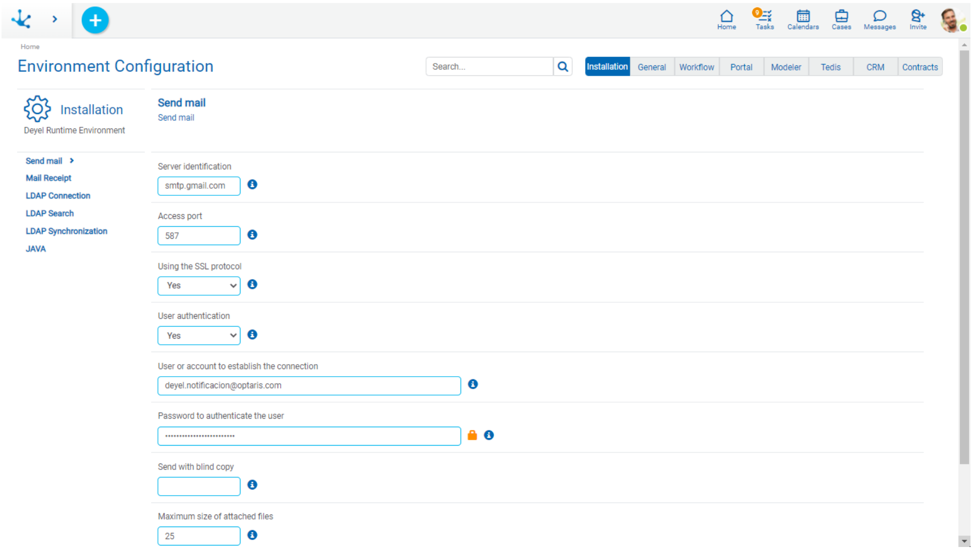
It allows configuring the execution environment properties of **Deyel**.

These are properties that establish how the product is installed and how it integrates with other software components, for example, with the email server or with an LDAP server.

Options

- Sending Mail

- [Receiving Mail]
- [LDAP Connection]
- [LDAP Search]
- [LDAP Synchronization]
- [Java]



3.10.3.1.1. Sending mail

Access to mail server and account used to send emails.

> *IMPORTANT.*
> *If the **SendMailServer** property is not informed, **Deyel** does not send notifications by mail.*
> *When the property is informed, **Deyel** tries to connect to the mail server and authenticate using the indicated username and password.*
> *In this way, the administrator is assured that when configuring, access to the mail server works correctly.*

Configurable Properties

Server identification

Indicates the name or IP address of the mail server used for sending Emails. For example, your.domain.com

Name	ServerSendMail
Code	MAIL_SERVER
Configuration Levels	

• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	your.domain.com

Access Port

Indicates the access port to the mail server. For example, 25.

Name	PortSendMail
Code	MAIL_SERVER_PORT
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	25

Using the SSL protocol

Determines if you use SSL for sending emails (enable for Gmail or similar accounts).

Name	SSLEmail
Code	SMTP_USES_SSL
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—

Dynamic	✓
Encrypted	—
Possible Values	• Yes • No (Predetermined)

User authentication

Indicates whether the mail server requires user authentication.

Name	AuthenticationSendMail
Code	MAIL_SERVER_AUTHENTICATE
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Possible Values	• Yes (Predetermined) • No

User or account to establish the connection

User or account with which the mail is sent.

Name	UserSendMail
Code	MAIL_SERVER_USER
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—

Default Value	your@user.com

Password to authenticate the user

Password used to authenticate the user.

Name	PasswordSendMail
Code	MAIL_SERVER_PASSWORD
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	✔
Default Value	

3.10.3.1.2. Receiving Mail

Access to mail server and account used to receive emails.

Configurable Properties

Protocol used by the incoming mail monitor to connect to the server

Name	MailReceptionProtocol
Code	MAIL_SERVER_MONITOR_PROTOCOL
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• IMAP (Predetermined) • POP3

IMAP - Server Identification

Name	IMAPServerReceptionMail
Code	MAIL_SERVER_IMAP
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	your.domain.com

IMAP - Server access port

Name	IMAPPortReceptionMail
Code	MAIL_SERVER_PORT_IMAP
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	993

IMAP - Account username

Name	IMAPUserReceptionMail
Code	MAIL_SERVER_USER_IMAP
Configuration Levels	
• Installation	✓

• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

IMAP - Account User Password

Name	IMAPPasswordReceptionMail
Code	MAIL_SERVER_PASSWORD_IMAP
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	✔
Default Value	

POP3 - Server Identification

Incoming POP3 mail server identification

Name	POP3ServerReceptionMail
Code	MAIL_SERVER_POP3
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—

Default Value	pop.your.domain.com

POP3 - Server access port

Name	POP3PortReceptionMail
Code	MAIL_SERVER_PORT_POP3
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Possible Values	• Yes • No (Predetermined)

POP3 - Password to authenticate the user

Name	POP3
Code	MAIL_SERVER_PASSWORD_POP3
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	✔
Default Value	

POP3 - User or account to establish connection

Name	POP3UserReceptionEmail
Code	MAIL_SERVER_USER_POP3

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

POP3 - Use of SSL protocol for user authentication

It determines if it uses SSL for the reception of mails (enable for accounts type Gmail or similar).

Name	POP3SSLProtocol
Code	POP3_SSL_PROTOCOL
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

3.10.3.1.3. LDAP Connection

Configuration of access to LDAP server. All properties are required to be able to activate the LDAP authentication.

Configurable Properties

URL to connect to the LDAP server

It is required in order to enable LDAP authentication.
Example: ldap: // localhost: 389 /

Name	LDAPUrl

Code	LDAP_PROVIDER_URL
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

User to connect to LDAP

Identification of the user with which Deyel accesses LDAP to make the queries.
The distinguished name (DN) of that user is indicated. Example: cn

Name	LDAPUser
Code	LDAP_USER
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

Password for connection to LDAP

Name	LDAPPassword
Code	LDAP_PASSWORD
Configuration Levels	
• Installation	✓
• Application	—

• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

3.10.3.1.4. LDAP Search

Configuration of user search within the LDAP directory.
Sets the search subtree, the LDAP attributes that are considered search keys, and additional user selection filters.

Configurable Properties

LDAP directory root node

Sets the root node of the LDAP tree considered by **Deyel** for user search. Example: ou

Name	LDAPDirectoryRoot
Code	LDAP_ROOT_DIR
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

User search filter

Deyel uses the user code and/or alias as default search fields.
This property allows to establish additional conditions to the search criteria.
To enter a condition in which operators and user attributes participate.
The value must be indicated according to the LDAP standard. For example: (objectClass=inetOrgPerson)

Name	LDAPUserFilter

Code	LDAP_USER_FILTER
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

User code

Indicates the LDAP attribute whose value is mapped to the **Deyel** user code.
The informed attribute must uniquely identify the user within the LDAP directory.
If this property is not informed, then the user code must be entered in **Deyel**.

Name	LDAPUsercode
Code	LDAP_USER_FIELD_cdUsuario
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

User aliases

Indicates the LDAP attribute whose value is mapped to the **Deyel** user alias.
The informed attribute must uniquely identify the user within the LDAP directory.
There cannot be two users with the same alias.
If this property is not informed, then the user alias can be entered in **Deyel**.

Name	LDAPAliasUser
Code	LDAP_USER_FIELD_dsAlias

Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Default Value	

3.10.3.1.5. LDAP Synchronization

Configuring properties of **Deyel** users that are synchronized with attributes of LDAP.

Configurable Properties

Surname

Indicates the LDAP attribute whose value is mapped to the **Deyel** user last name.
If not informed, then the user last name must be entered in **Deyel**.

Name	LDAPSurnameUser
Code	LDAP_USER_FIELD_dsApellido
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Default Value	sn

Name

Indicates the LDAP attribute whose value is mapped to the **Deyel** user name.
If not informed, then the user name must be entered in **Deyel**.

Name	LDAPUsername

Code	LDAP_USER_FIELD_dsNombre
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Default Value	givenName

E-mail

Indicates the LDAP attribute whose value is mapped to the **Deyel** user email.
There cannot be two users with the same email.
If this property is not informed, then the user email can be entered in **Deyel**.

Name	LDAPEmailUser
Code	LDAP_USER_FIELD_dsEmail
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Default Value	email

Condition

Indicates the LDAP attribute whose value is mapped to the **Deyel** user state.
If not informed, then the user state can be entered in **Deyel**.

Name	LDAPUserState
Code	LDAP_USER_FIELD_dsActivo
Configuration Levels	

• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

Telephone

Indicates the LDAP attribute whose value is mapped to the **Deyel** user phone.
If not informed, then the user phone can be entered in **Deyel**.

Name	LDAPPhone
Code	LDAP_USER_FIELD_dsTelefono
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

Organizational Unit

Indicates the LDAP attribute whose value is mapped to the **Deyel** user organizational unit.
The value must be an existing unit code in **Deyel**.
If not informed, then the user unit must be entered in **Deyel**.

Name	LDAPUnitUser
Code	LDAP_USER_FIELD_cd_oRG_Unit
Configuration Levels	
• Installation	✔
• Application	—

• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

3.10.3.1.6. JAVA

Java virtual machine used by **Deyel** to compile advanced rules.

Configurable Properties

JDK Installation Directory

Used for online compilation of advanced rules.

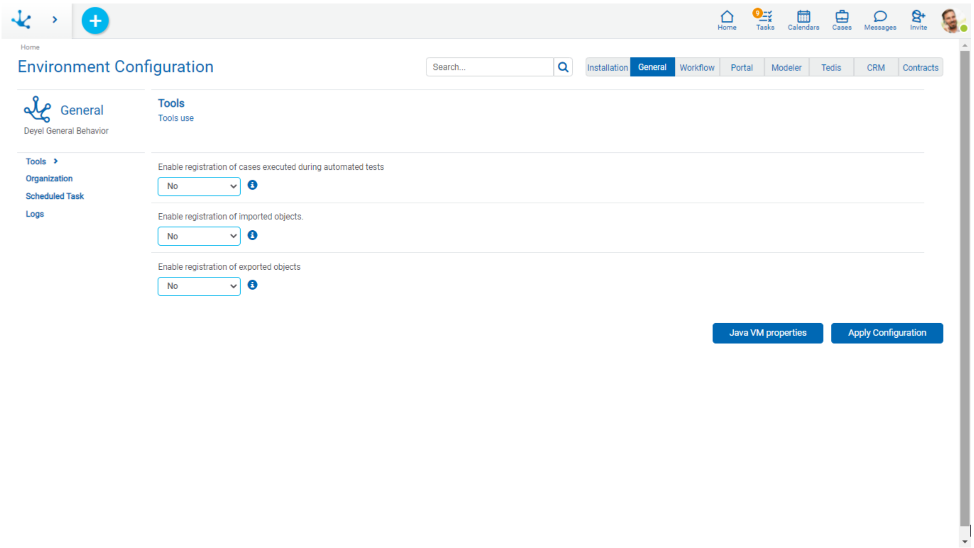
Name	DirectoryInstalationJDK
Code	JDK_HOME
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	

3.10.3.2. General

It allows configuring properties that define the general behavior of **Deyel**.

Options

- Tools
- Organization
- Scheduled Tasks
- Logs



3.10.3.2.1. Tools

Configuring properties related to the use of **Deyel** tools.

Configurable Properties

Enable registration of cases executed during automated tests

When the automated test cases are executed, this property determines whether the information of each executed case should be saved in the User Case Execution (UEC) form.

Name	EnableCaseExecutionRegister
Code	ENABLE_STRESS
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• Yes • No (Predetermined)

Enable registration of imported objects

By enabling this property, each import operation that is carried out is recorded in the Import Registration form and can be viewed in detail.

Name	ImportRegistration
Code	REGISTER_IMPORTS
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• Yes • No (Predetermined)

Enable registration of exported objects

By enabling this property, each export operation that is carried out is recorded in the Export Registration form and can be viewed in detail.

Name	EnableRegisterExported Objects
Code	REGISTER_EXPORTS
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• Yes • No (Predetermined)

3.10.3.2.2. Organization

Configuring properties related to the administration of the organizational structure.

Configurable Properties

Organizational unit coding type

It allows to choose the way in which the code of the organizational units is generated.

Name	TypeCodingUnits
Code	AUTOMATIC_ORG_UNIT_ID
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• Manual • Semiautomatic • Automatic (Default)

Possible Values

- Manual: Must be informed by the user.
- Semi Automatic: Can be informed by the user. If it is not informed it is coded automatically.
- Automatic - The code is assigned by the **Deyel**.

3.10.3.2.3. Scheduled Tasks

These properties define the automatic start of scheduled tasks and the parameters used by specific scheduled tasks of **Deyel**.

Configurable Properties

Automatic start of scheduled tasks

Defines whether when starting the execution of **Deyel** automatically starts the execution of scheduled tasks.
When No is indicated, scheduled tasks must be started manually, by accessing the scheduled tasks monitor.

Name	HomeAutomaticProgrammedTasks
Code	TASK_SCHEDULER
Configuration Levels	
• Installation	✔

• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Possible Values	• Si (Predeterminado) • No

Activation period for the debugger for temporary files associated with forms and cases

Activation interval (expressed in seconds) of the debugging process for files uploaded to the repository.
This is one of the system's scheduled tasks, whose execution periodicity is defined with this property.

Name	PeriodActivationDebuggerArchives
Code	CLEAN_UPLOADED_FILES_PROCESS_ PERIODICITY
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	18.000 (5 hours)

Minimum backup time considered by the debugger for temporary files associated with forms and cases

Minimum time (expressed in seconds) during which a file uploaded to **Deyel** cannot be deleted.
Even if the file purging process detects that the file is not related to any case or form, will not be deleted until the time indicated in this property has elapsed.

Name	MinimumTime
Code	UPLOADED_FILES_MIN_TIME
Configuration Levels	

• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	3.600 (1 hour)

3.10.3.2.4. Logs

Configures the automatic generation and debugging of log files.

Configurable Properties

Maximum execution time for SQL queries

Defines the maximum time in milliseconds that is considered allowable for an SQL query.
If the execution of a query exceeds this time, use writes the sentence executed in a log file. If the defined value is 0, the query time is not controlled.

Name	SQLMaximumQueryTime
Code	LOG_SQL_MAX_TIME
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	100

Types of logs enabled

It establishes the types of logs that are reported in the log file.
it is recommended to use the default configuration.

Name	LogsTypesEnabled

Code	ENABLED_LOG_TYPES
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• ERROR (Predetermined) • SERVLET (Predetermined) • SERVLET_TIME (Predetermined) • RULE_TIME (Predetermined) • SQL • SQL_TIME (Predetermined) • CORRECT_PROCESS(Predetermined)

Los valores se ingresan separados por ";".
Por ejemplo, el valor predeterminado es el siguiente: "ERROR;SERVLET;SERVLET_TIME;RULE_TIME;SQL_TIME;;CORRECT_PROCESS"

- ERROR

Reporta errores de ejecución.

- SERVLET

Reporta los parámetros recibidos por todas las servlet.
Debería estar activado solamente cuando se esta analizando una situación de error, para visualizar los datos transferidos entre las servlets.

- SERVLET_TIME

Reporta los tiempos de ejecución de las servlet que superan el umbral definido.

- RULE_TIME

Reporta todas las reglas cuyo tiempo de ejecución supera el umbral establecido en la propiedad LOG_LOGIC_MAX_TIME.

- SQL

Reporta las sentencias SQL junto al tiempo que transcurre al ejecutarse.

- SQL_TIME

Reporta todas las sentencias SQL cuyo tiempo de ejecución supera el umbral establecido en la propiedad LOG_SQL_MAX_TIME

- CORRECT_PROCESS

Reporta los resultados de la ejecución del proceso corrector del pool de sesiones.

Log file persistence

The generated log files are automatically deleted by the system's log purging process.
This property sets the number of days that should persist, in order to delete them.
If the value is zero, files will never be deleted.

Name	LogsPersistenceFiles
Code	LOG_FILES_DAYS_OLD
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	15

Maximum access time

Defines a time, expressed in milliseconds. When the execution of a business rule exceeds this threshold, are saved the input and output parameters in a log file.
If the value defined is 0, the execution time of the rules is not controlled.

Name	RulesTimeMaximumExecution
Code	LOG_LOGIC_MAX_TIME
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	400

Debugging the log console

Sets the number of days, during which the information is kept in the logs console. (LOG_DATA Table) The purging of old system logs will delete those records that were previous to the number of days indicated.

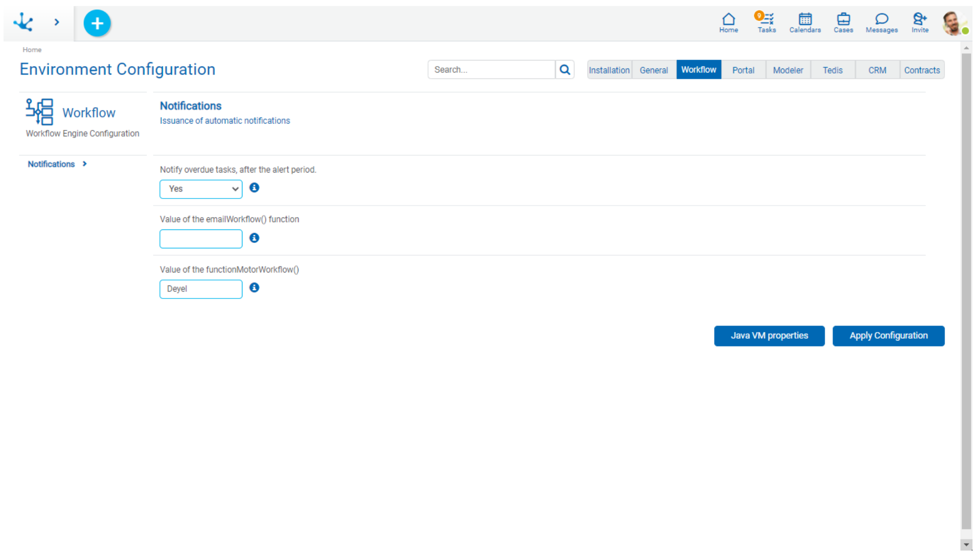
Name	LogsDebuggingConsole
Code	LOG_DATA_DAYS_OLD
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	15

3.10.3.3. Workflow

It allows configuring the properties related to the workflow engine.

Options

- Notifications



3.10.3.3.1. Notifications

Configuring automatic notifications sent by the workflow engine.

Configurable Properties

Notify overdue tasks, after the alert period.

Indicates if an email should be sent for overdue or expired alerts. When the scheduled task for sending alerts runs because it detects an overdue task whose warning period has expired and which has not been previously processed, it sends an email only if this property is activated.

Name	NotificationAutomaticActionsCancelled
Code	ADDRESSES_FOR_CANCELED_ACTIVITY
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

Value of the emailWorkflow() function

When defining automated email actions or alerts, the emailWorkflow() function can be used to model the notification sender. When the mail is received, the modeled value is displayed as sender, instead of displaying the actual sender, which is the one configured in the UserSendEMail property.It may happen that some mail servers, such as Google for example, do not allow displaying a different value from the actual sender.

Name	EmailWorkflow
Code	WORKFLOW_MAIL
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—

Dynamic	✓
Encrypted	—
Default Value	deyel@deyel.com

Value of the functionMotorWorkflow()

The functionWorkflowMotorName() returns an alphanumeric value indicating the name of the Workflow engine. It is commonly used in notification modeling. The default value is Deyel Workflow Engine, but a different value can be set if necessary.

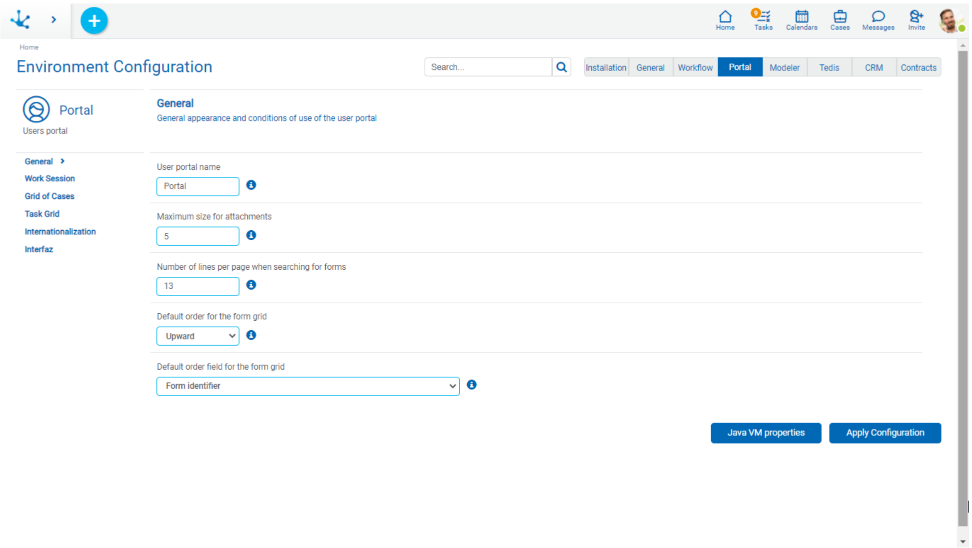
Name	workflowEngineName
Code	WORKFLOW_NAME
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Default Value	Deyel Workflow Engine

3.10.3.4. Portal

It allows configuring properties that define the general appearance and behavior of the user portal.

Options

- General
- Work Session
- Cases Grid
- Tasks Grid
- Internationalization



3.10.3.4.1. General

General appearance and use conditions of the user portal.

Configurable Properties

User portal name

Text displayed in the browser tabs, preceding the user data. For example, **Deyel** or Deyel Portal. It allows to quickly identify the browser tabs that are accessing the portal.

Name	PortalName
Code	SYSTEM_NAME
Configuration Levels	
• Installation	✔
• Application	▬
• Organizational Unit	▬
• User	▬
Dynamic	✔
Encrypted	▬
Default Value	Portal

Maximum size for attachments

When the user attaches files to the system, either as form fields or as documents attached to a case, their size is controlled not to exceed the limit established in this property.
A number is indicated, expressed in MB, which must be between 0 and 20.

Name	UploadDocumentsMaximumSize
Code	MAX_UPLOAD_SIZE
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	5

Number of lines per page when searching for forms

Sets the number of lines per page when querying instances of a form.

Name	SearchFormsQuantityLinesPerPage
Code	DEFAULT_PAGE_SIZE
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	13

Default order for the form grid

Sets the default order for the form grid.

Name	OrderForms
Code	BROWSE_FORM_ORDER

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• Ascending • Descending (Default)

Default order field for the form grid

Sets the field used for the default order of the form grid.

Name	FieldOrderForms
Code	BROWSE_FORMS_ORDER_FIELD
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• Creation Date (Default). • Last modification. • Form identifier.

3.10.3.4.2. Work Session

Work session characteristics.

Configurable Properties

Authentication Type

Defines the user authentication method.

Name	AuthenticationType
Code	TP_AUTHENTICATION_LOGIN
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Possible Value	• Native (Predetermined) • LDAP • Google • Personalizada • Mixta

Allow multiple user sessions with the same browser

When this property is enabled, it is possible to maintain multiple work sessions, with different users, within the same browser.

Name	AllowMultipleSessions
Code	ALLOW_MULTISESSION
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✓
Encrypted	—
Possible Value	• Yes • No (Predetermined)

First Mixed Authentication Method

When configuring the Mixed Authentication Type, this property sets the first method used to authenticate the user.

Name	AuthenticacionMixta1
Code	AUTHENTICACION_MIXTA_1
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• Native

Second Mixed Authentication Method

When configuring the Mixed Authentication Type, this property sets the second method used to authenticate the user.

Name	AuthenticacionMixta2
Code	AUTHENTICACION_MIXTA_2
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• Google

Third Method of Mixed Authentication

When configuring the Mixed Authentication Type, this property sets the third method used to authenticate the user.

Name	AuthenticacionMixta3
Code	AUTHENTICACION_MIXTA_3

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	• LDAP

Personalized Authentication

Name of the rule defined to run Custom Authentication.

Name	CustomAuthentication
Code	CUSTOM_AUTHENTICATION
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Default Value	

If the custom authentication method is used, **Deyel** verifies that this property is reported and that the indicated rule exists.

Authorized domains to send user invitations

The email addresses to which invitations are sent must belong to one of the domains reported in this property. Several domains can be indicated, separated by semicolons. For example: 'mycompany.com ; optis.com'. If no value is reported, then invitations can be sent to any email address.

Name	AuthorizedDomails
Code	AUTHORIZED_DOMAINS

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Value	They must be valid domain names. They can be separated by semicolons.

3.10.3.4.3. Cases Grid

Set of properties that allow defining the columns that are initially displayed in the cases grid.

All of them have the following general characteristics.

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Value	• Yes (Predetermined) • No

Configurable Properties

Process name

Name	GridCaseProcess
Code	SHOW_PROCESS_CASES

Case description

Name	GridCaseDescription
Code	SHOW_DESCRIPTION_CASES

Chat

Visualizar acceso a la conversación asociada al caso.

Name	GridCaseChat
Code	SHOW_CHAT_CASES

Name of the current activity

Name	GridCaseActivity
Code	SHOW_ACTIVITY_CASES

Case start date

Name	GridCaseHome
Code	SHOW_BEGIN_CASES

Responsible for current activity

Name	GridCaseResponsible
Code	SHOW_RESPONSIBLE_CASES

Expiration of the current activity

Name	GridCaseExpiration
Code	SHOW_EXPIRED_CASES

Case priority

Name	GridCasePriority
Code	SHOW_PRIORITY_CASES

Case completion

Fecha de finalización del caso.

Name	GridCaseEnd
Code	SHOW_ENDED_CASES

Start of current activity

Name	GridCaseHomeActivity
Code	SHOW_BEGINACT_CASES

Case status

Name	GridCaseState
Code	SHOW_STATE_CASES

Case identification

Name	GridCaseCase
Code	SHOW_CASE_CASES

3.10.3.4.4. Tasks Grid

Set of properties that allow defining the columns that are initially displayed in the tasks grid.

All of them have the following general characteristics.

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Value	• Yes (Predetermined)

	• No

Configurable Properties

Case identification

Name	GridTasksCase
Code	SHOW_CASE_TODOLIST

Process name

Name	GridTasksProcess
Code	SHOW_PROCESS_TODOLIST

Case description

Name	GridTasksDescriptionCase
Code	SHOW_DESCRIPTION_TODOLIST

Chat

Visualizar acceso a la conversación asociada al caso.

Name	GridTasksChat
Code	SHOW_CHAT_TODOLIST

Name of the homework

Name	GridTasksName
Code	SHOW_ACTIVITY_TODOLIST

Task start

Name	GridTasksHome
Code	SHOW_BEGIN_TODOLIST

Responsible for the task

Name	GridTasksResponsible
Code	SHOW_RESPONSIBLE_TODOLIST

Task due

Name	GridTasksExpiration
Code	SHOW_EXPIRED_TODOLIST

Task priority

Name	GridTasksPriority
Code	SHOW_PRIORITY_TODOLIST

3.10.3.4.5. Internationalization

Properties that allow configuring the language and numeric fields or date formats that are most appropriate for you.

Configurable Properties

Deyel Language

Sets the language used by the Deyel platform tools. For example, user portal, modelers, etc.

Name	Language
Code	BTRB.Locale.language
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• Spanish (Default) • English

	• Portuguese

Decimal Symbol - Editing Numeric Values

Indicates the symbol that separates the integer part from the decimal part for output format. For example: 10.99.
This property must be informed so that the numerical values can be displayed correctly.

Name	Decimal Symbol - Editing Numeric Values
Code	DECIMAL_CHARACTER_SEPARATOR_IN
Configuration Levels	
• Installation	✔
• Application	✔
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	, (Predetermined) .

Thousands Symbol - Editing Numeric Values

Indicates the symbol that separates groups of thousands (1,000, 1,000,000, etc.) for input format. For example: 999,999.
The field value can be entered without typing a thousands separator, but if a separator is typed, must be the one specified in this property.

Name	Thousands Symbol - Editing Numeric Values
Code	THOUSANDS_CHARACTER_SEPARATOR_IN
Configuration Levels	
• Installation	✔
• Application	✔
• Organizational Unit	—

• User	✓
Dynamic	✓
Encrypted	—
Possible Values	, . (Predetermined)

Decimal Symbol - Display of numerical values

Indicates the symbol that separates the integer part from the decimal part for output format. For example: 10.99.
This property must be reported so that the numeric values can be displayed correctly.

Name	Decimal Symbol - Display of numerical values
Code	DECIMAL_CHARACTER_SEPARATOR_OUT
Configuration Levels	
• Installation	✓
• Application	✓
• Organizational Unit	—
• User	✓
Dynamic	✓
Encrypted	—
Possible Values	, (Predetermined) .

Thousands symbol - Display of numerical values

Indicates the symbol that separates groups of thousands (1,000, 1,000,000, etc.) for output format. For example: 999,999.
This property must be informed so that the numerical values can be displayed correctly.

Name	Thousands symbol - Display of numerical values
Code	THOUSANDS_CHARACTER_SEPARATOR_OUT
Configuration Levels	
• Installation	✓

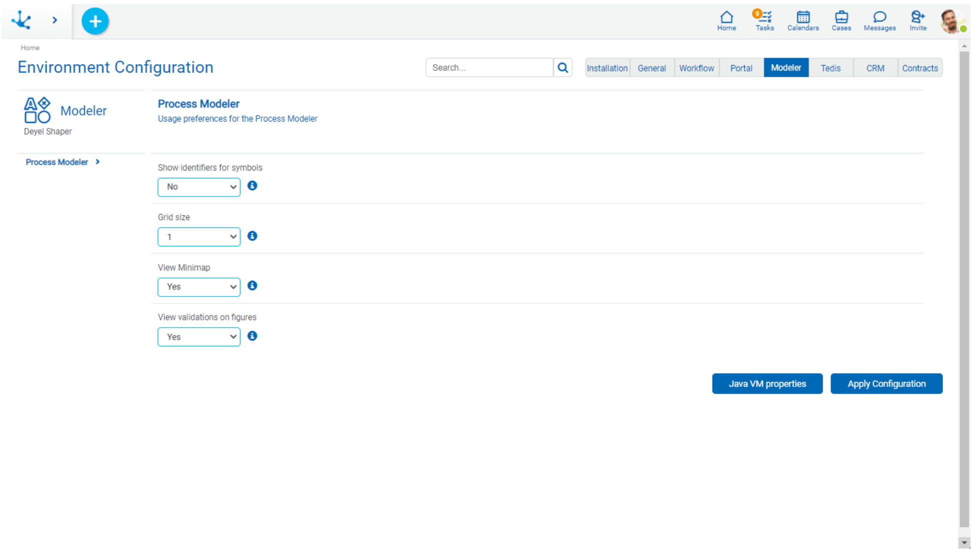
• Application	✔
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	, . (Predetermined)

3.10.3.5. Modeler

It allows configuring properties related to the modelers of **Deyel**.

Options

- Processes Modeler



3.10.3.5.1. Processes Modeler

Process modeler use of preferences.

Configurable Properties

Show identifiers for symbols

Activating this property, its unique identifier is displayed along with the name of each symbol.

Name	ShowIdentifiers
Code	SHOW_IDS
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	• Yes • No (Predetermined)

Grid size

Number of pixels used to move symbols on the diagram.

Name	GridSize
Code	GRID_SIZE
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	• 1 (Predetermined) • 10 • 20

View Minimap

View the minimap in the lower right of the modeling area.

Name	ViewMinimap
Code	SHOW_MINIMAP

Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	• Yes (Predetermined) • No

View validations on figures

Displays the exclamation point on the figures that have validation errors.

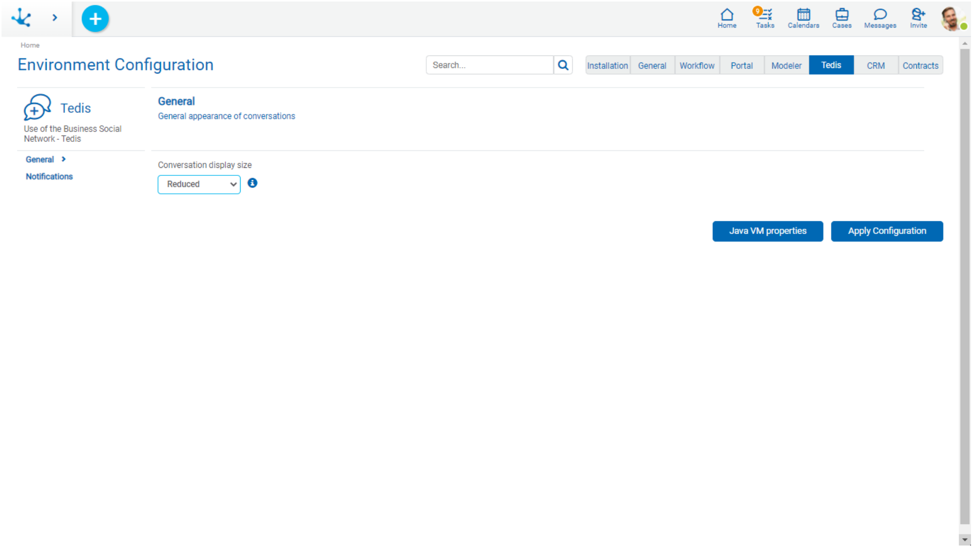
Name	ValidationsOnFigures
Code	INLINE_VALIDATIONS
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	✔
Dynamic	✔
Encrypted	—
Possible Values	• Yes (Predetermined) • No

3.10.3.6. Tedis

It allows configuring properties that define the appearance and behavior of Tedis Business Social Networking.

Options

- General
- Notifications



3.10.3.6.1. General

General appearance of conversations in Tedis.

Configurable Properties

Conversation display size

Initial size of conversations. Each of them can be initially displayed in a reduced or expanded window.

Name	SizeConversations
Code	INITIAL_CONV_SIZE
Configuration Levels	
• Installation	✔
• Application	—
• Organizational Unit	—
• User	—
Dynamic	✔
Encrypted	—
Possible Values	• Reduced (Default) • Expanded

3.10.3.6.2. Notifications

Sending automatic notifications from Tedis.

Configurable Properties

Notification of new messages

Receive a notification when a new message is received.

Name	NotificationNewMessages
Code	ALERT_ON_NEW_MESSAGE
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	✓
Dynamic	✓
Encrypted	—
Possible Values	• Yes (Predetermined) • No

Notification of connected users

Receive a notification when a user connects to the portal.

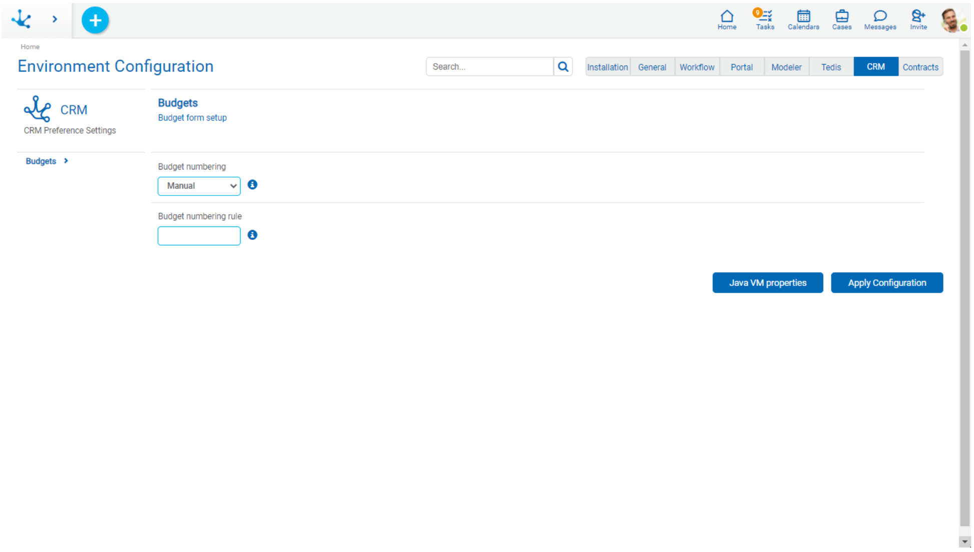
Name	NotificationUsersConnected
Code	ALERT_USER_ONLINE
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	✓
Dynamic	✓
Encrypted	—
Possible Values	• Yes (Predetermined) • No

3.10.3.7. CRM

It allows configuring properties that define specific behaviors and use preferences of the CRM solution.

Options

- Budgets



3.10.3.7.1. Budgets

Configuring the CRM Quote form.

Configurable Properties

Budget numbering

It allows to choose the way in which the budget numbering is generated.

Name	NumberingQuote
Code	QUOTE_NUMBER
Configuration Levels	
• Installation	✓
• Application	—
• Organizational Unit	—
• User	✓
Dynamic	—
Encrypted	—

Possible Values	• Manual (Default) • Automatic • Rule

Possible Values

- Manual

Must be informed by the user.

- Automatic

Numbering is auto-increment

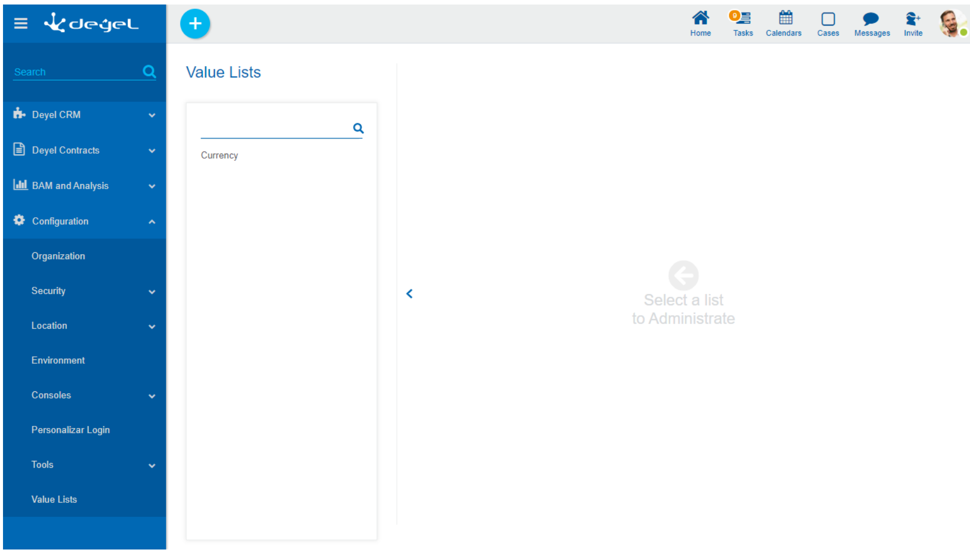
- Rule

Numbering is obtained from the rule entered in the Budget numbering rule property.

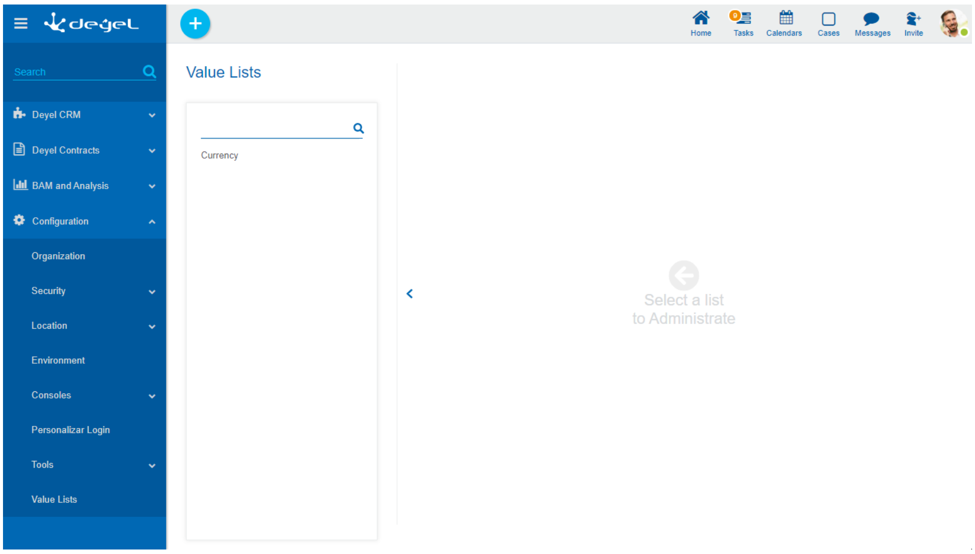
3.10.4. Value Lists

The "Value List" option of the menu allows application users to manage the lists values, if they have the corresponding permissions assigned.

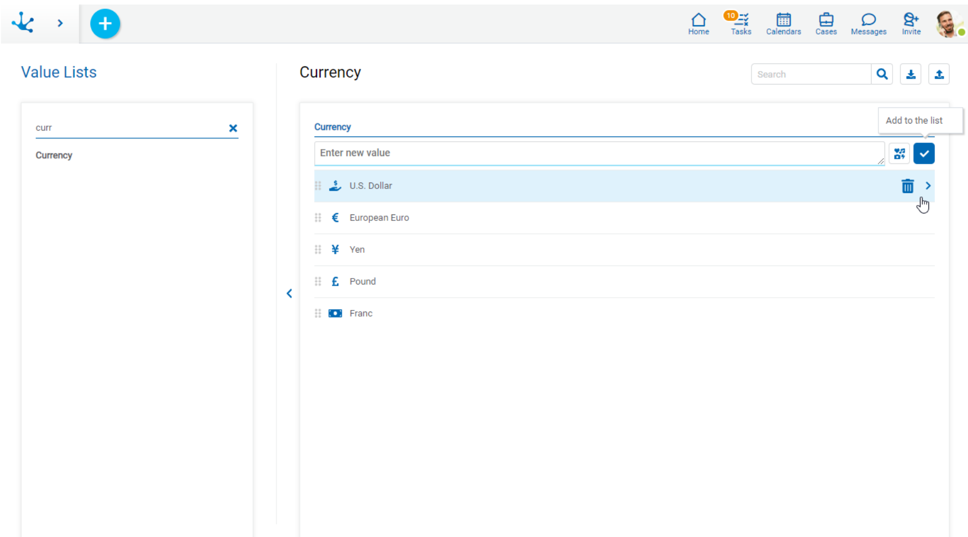
The names of the value lists in the different applications are displayed.



Allows to filter values from the list based on the characters entered. If a list is very long it helps users to easily visualize the desired values.



When selecting a value list, the values of the selected list are displayed in the right panel, thus making it possible to search, enter, delete and restore their values.



It allows to export the value list in an Excel file. This file contains the following columns:

- CODE
- VALUE
- ORDER
- DELETED
- FILTER_CODE
- ICON_COLOR
- ICON

DELETED indicates low logic, FILTER_CODE contains the code to establish the correspondence between the value of the list being downloaded and the list that [filters]() it. ICON_COLOR contains the hexadecimal code of the color of the icon associated with the value, ICON contains the name of the icon associated with the value. These last two columns contain values only if the list has the Icons property modeled.

It allows to import a value list from an Excel file. A panel opens where the location and name of the same is selected.

Conditions for Export and Import

- The download file format must be respected.
- New values must have a blank Code column.
- Blank rows must be ignored.
- Partial downloading and uploading of values is not allowed.

Operations on Values

- Allows adding each entered value to the list of values.
- It is displayed if the list has the Icons property modeled. It allows to associate icons to the list values.

- Double click: Allows to modify a value in the list.
- Move: Allows to change the position of a value within the list by dragging the value with the mouse.

Hovering the cursor over each of the values entered, a set of icons is displayed and this allows to perform different operations.

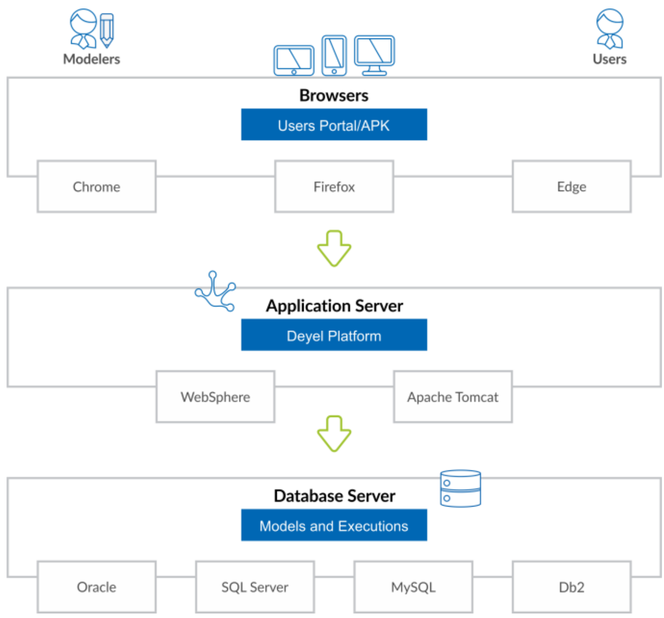
- Allows to delete a value from the list of values. Once deleted, it is displayed in gray and crossed out.
- Allows to restore a previously deleted value.

Display the Selected Line

- Hides the icons that are displayed.
- Shows hidden icons.

3.11. Requirements

The following are the software requirements for the use and installation of **Deyel**.



Workstations (Cloud and On-Premise Modality)

HARDWARE	RAM	a minimum of 4 GB
	Screen resolution	• End user: a minimum of 1024x768 • Modeler: a minimum of 1920x1080
SOFTWARE	Browser	• Chrome, a minimum of 79.0 • Edge Chromium, a minimum of 79.0 • Firefox, a minimum of 74.0 • Safari 13.1.3 and 14.1.2 (Only for User Portal)

> *It is advisable to keep browser versions up-to-date, since security vulnerabilities are regularly corrected.*

Application Server (On-Premise Modality)

HARDWARE	RAM	a minimum of 6 GB
	HD	a minimum of 5 GB free space.
	Processor	64-bit / 2 cores / at least 2.4GHz
SOFTWARE	Web Service	• WebSphere 8 / WebSphere 9 • Apache Tomcat 8 / Apache Tomcat 9

	Java	JRE 1.8

Database Server (On-Premise Modality)

HARDWARE	RAM	a minimum of 4 GB
	HD	a minimum of 10 GB free space
	Processor	64-bit / 2 cores / a minimum of 2.4GHz
SOFTWARE	Database	• Mysql 5.7 • DB2 9.5 or DB2 10.5 • Sql Server 2012 • Oracle 12c release 12.2

3.12. On-Premise Installation

The following describes the steps to perform a new installation of **Deyel** or a version update in On-Premise modality.

Distribution

Deyel and its solutions are distributed through the following files:

Description	File
Web application	deyel-**Version**.war
Initial database	• Oracle: deyeldb-**Version**.dmp • Mysql: deyeldb-**Version**.sql • Sql Server: deyeldb-**Version**.bak • DB2: deyeldb-**Version**.zip
License	license.xml

> ***Version***
> *Each version of **Deyel** has the following VRFB structure where*
> *V - Version*
> *R - Release*

F - Fix
B - Buil
Example: deyel-7.8.1.3.war

Step 1: Create the Initial Database for Deyel

a. Install the database engine on which you want to install **Deyel**.

b. Create a user with permissions that can create tables, views, functions, store procedures, and triggers. The following variables must be known:

- **host**: engine ip address.
- **port**: engine port.
- **user**: user with the necessary permissions
- **password**: key of the user with the necessary permissions

c. Restore the initial base of **Deyel** with the following commands:

- Oracle
```
impdp user/password@host:port/deyel dumpfile=deyeldb-Version.dmp
```

- Mysql
```
mysql -u user -p password -h host --port port --default-character-set=utf8 deyel deyeldb-Versión.sql
```

- Sql Server
```
SqlCmd -S host -U user -P password -Q "RESTORE DATABASE deyel FROM DISK ='deyeldb-Version.bak' WITH REPLACE"
```

- DB2
  Unzip deyeldb file-***Version***.zip
  Execute command from the folder where export files are located.
```
db2move deyeldb import -io replace_create > restore_deyel.log
```

Step 2: Install Deyel on the Application Server

- Installation in Apache Tomcat

- Installation in WAS

Step 3: Configure Database

To configure the database, it is recommended to use the environment variable DEYEL_DB_PROPERTIES_PATH. This variable is used to define the directory where the file with the connection data is located. If the environment variable is not defined, the file is used within the WEB-INF/classes/ConsistEnv_es_AR.properties context.

The environment variable should be created before performing the context implementation.

Instructions for Database Configuration

a. Enter https://**server:port**/deyel/Config.

> *Server: is the name of the server where the installation is performed or its IP address and access port.*
> *Example: http://**myteam**:8080/deyel*

> *It is accessed without username and password until one is defined. It is recommended to define a username and password when first accessing.*

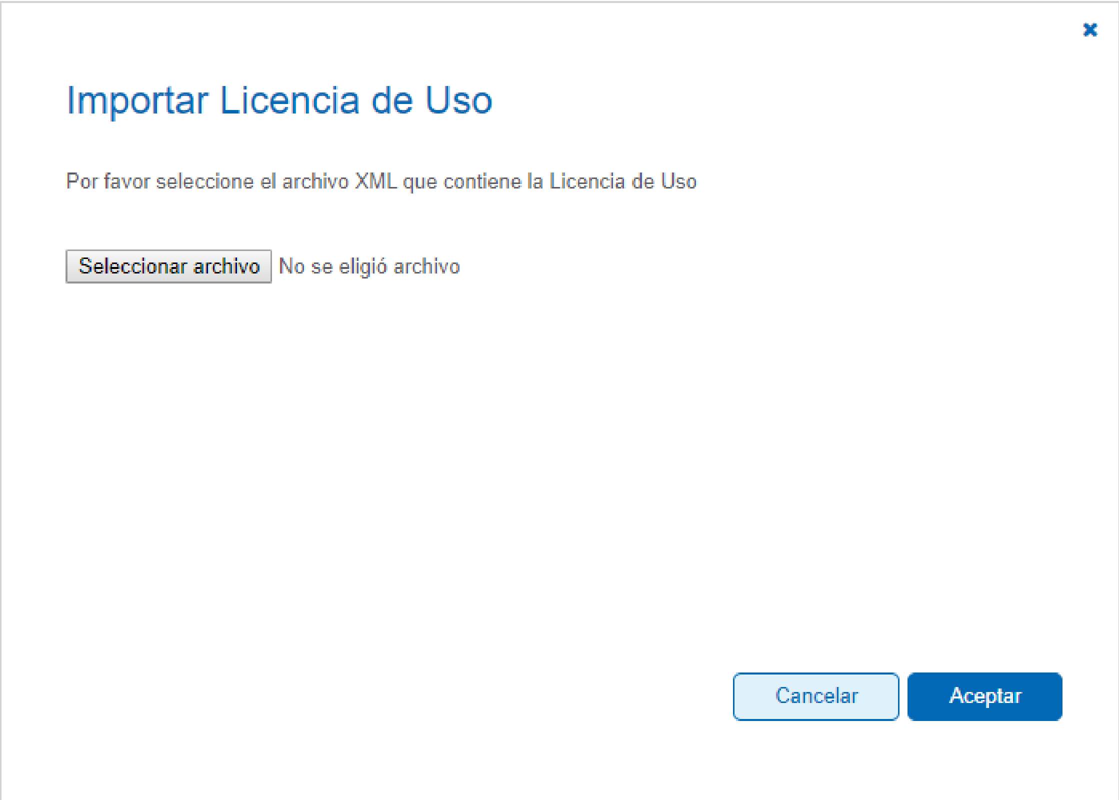
b. Complete the data of Database Properties section and apply configuration. If the DEYEL_DB_PROPERTIES_PATH environment variable was defined, in the Configuration File Path property, the directory where the file with the connection data is located is shown. If this property is not reported, this means that the file is in the context.

c. Restart the context.

Step 4: Import License

a. Enter https://**server:port**/deyel.

b. Import the use license.



c. Enter **Deyel** environment with https://**server:port**/deyel using the example user "afarias" with "deyel123" key.

3.12.1. Directories Structure

Once the implementation of the file with war extension has been done, the following directory structure is defined.

Directory	Description
batch • log	Directory with Java classes that allow the execution of batch processes. • log: Directory where the result of the execution of classes is saved.

Directory	Description
businessRuleDeployment	Directory where files generated by business rule implementations are temporarily stored.
businessRuleXML	Directory where business rules definitions are temporarily stored.
docGenerator • app • staticHTML • themes • themesDefault • themesResponsive • themesResponsiveMin	All files related to forms definition are stored. • app: Where the generated documents are located. Deprecated. • staticHTML: Basic files used to compose screens. • themes / themesDefault / themesResponsive / themesResponsiveMin: They correspond to the themes that are used when modeling forms.
eventFiles	Temporary directory of files linked to events that occur in processes (mails, File Reader files, etc.).
export	Temporary directory where the exported files are stored.
Import	Temporary directory where the imported files are stored.
integrationDeployment	Directory to temporarily store files generated by integration rules implementations (SQL and web services).
integrationXML	Directory to temporarily store integration rules definitions (SQL and web services).
jasperReportFiles	XML files containing Jasper Report framework templates used in report printing and printing in general.
logs	Storage directory of **Deyel** logs. When installing, log types and the number of days they are kept can be specified.
META-INF	Information of **Deyel** version.
modeler version	Files with images, JavaScript, and web modeler styles.
script	JavaScript files that are used in the web portal.
Temp	Temporary directory of **Deyel**.
themes	Theme storage directory of **Deyel**.
updaters	Directory containing the files necessary to update the version of **Deyel**.
upload	Directory to temporarily store files uploaded to **Deyel**.

Directory	Description
vendors	Directory of libraries used by **Deyel**.
WEB-INF	Storage directory of classes that define the operation of **Deyel**.
widget	Directory with templates of widgets used by the web portal.

Temporary directories (Temp, BusinessRuleDeployment, BusinessRuleXML, EventFiles, Export, Import, IntegrationDeployment, IntegrationXML, and Upload) are automatically removed every 24 hours. The 24 hours are calculated from the start time of the scheduled tasks.

3.12.2. Installation in Apache Tomcat

One of the options to install **Deyel** on an application server is under Apache Tomcat.

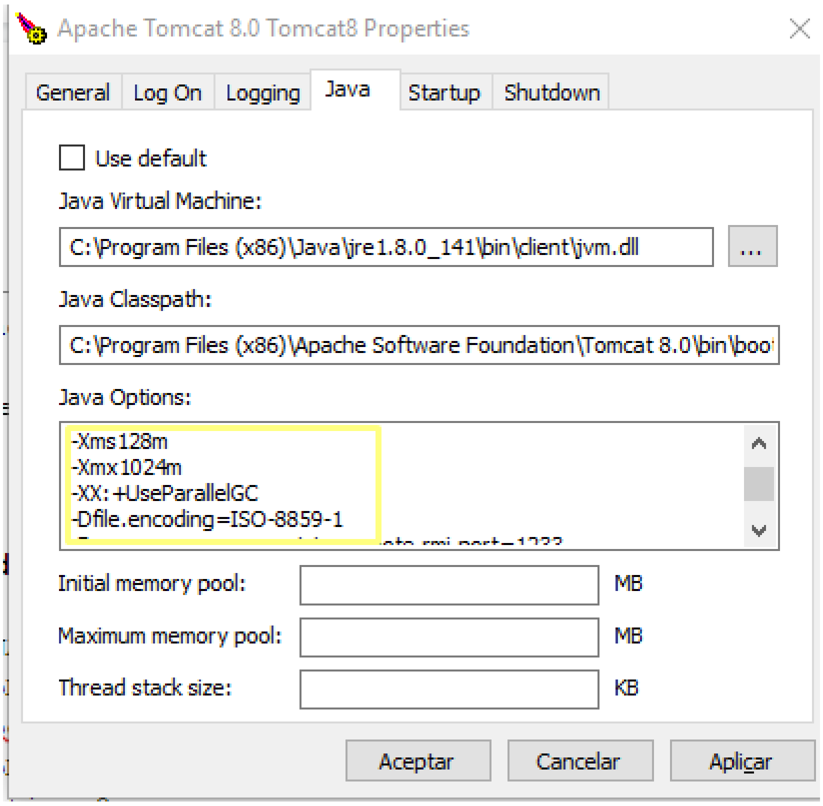
Apache Tomcat Configuration for Deyel

On Linux

The following minimum values can be defined in the setenv.sh file inside the Apache Tomcat bin folder:

- `Xms128m`
- `Xmx1024m`
- `XX:+UseParallelGC`
- `Dfile.encoding=ISO-8859-1`

On Windows



> *The Xms and Xmx values are minimum values that can be increased according to the use that is given to **Deyel**.*

Dockerized

- `XX:+UnlockExperimentalVMOptions`
- `XX:+UseCGroupMemoryLimitForHeap`
- `XX:+UnlockExperimentalVMOptions`
- `XX:+UseCGroupMemoryLimitForHeap`
- `XX:MaxRAMFraction=2`
- `XX:+UseParallelGC`
- `Dfile.encoding=ISO-8859-1`

Use of Special Characters, Encoding and Post Size

Configure the following files with the lines indicated for each case.

Apache Tomcat 8.0

- conf/catalina.properties
  Include the line:
```
tomcat.util.http.parser.HttpParser.requestTargetAllow=|
```

- conf/server.xml
```
<Connector port="8080" protocol="HTTP/1.1"
```

```
connectionTimeou="20000"
    maxHttpHeaderSize="32768"
    maxPostSize="-1"
    redirectPort="8443"
    URIEncoding="UTF-8" />
```

Apache Tomcat 8.5 and higher

- conf/server.xml

```
<Connector port="8080" protocol="HTTP/1.1"
 connectionTimeout="20000"
 maxHttpHeaderSize="32768"
 maxPostSize="-1"
 redirectPort="8443"
 URIEncoding="UTF-8"
 relaxedPathChars ="[ \ ] { | }"
 relaxedQueryChars ="[ \ ] { | }"  />
```

> *The maximum required post size is disabled with the maxPostSize=parameter"-1" to save or publish processes.*

Clickjacking protection, HSTS header force and browser content sniffing

Enable the HTTPHeader security filter from Apache Tomcat in the conf/web.xml file. For Tomcat 8 and higher installations it should be:

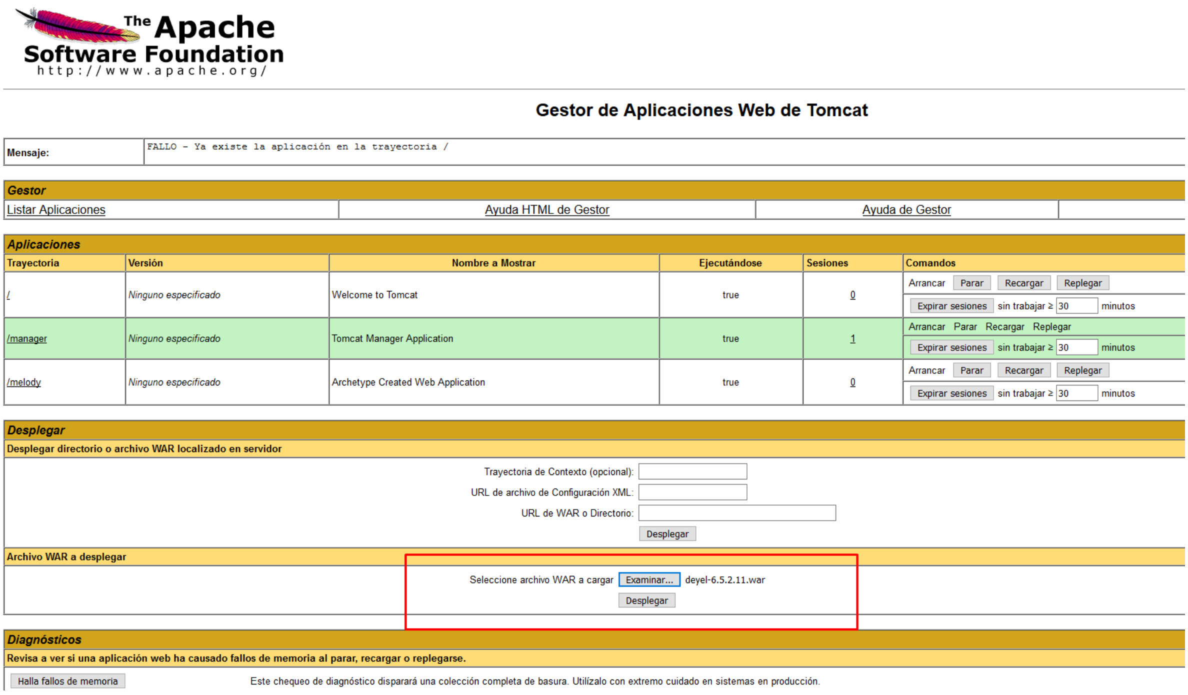
```
<filter>
        <filter-name>httpHeaderSecurity</filter-name>
      <filter-class>org.apache.catalina.filters.HttpHeaderSecuri-
tyFilter</filter-class>
        <async-supported>true</async-supported>
        <init-param>
            <param-name>antiClickJackingOption</param-name>
            <param-value>SAMEORIGIN</param-value>
        </init-param>
        <init-param>
            <param-name>hstsEnabled</param-name>
          <param-value>true</param-value>
        </init-param>
</filter>

 <filter-mapping>
        <filter-name>httpHeaderSecurity</filter-name>
        <url-pattern>/*</url-pattern>
        <dispatcher>REQUEST</dispatcher>
</filter-mapping>
```

War file implementation

In order to implement in a context with the name "deyel", the file should be renamed with the extension war, assigning it the name "deyel.war".

Apache Tomcat has a default maximum for uploading files with a war extension of 50Mb, it should be increased to 500Mb in the <TOMCAT>\webapps\manager\WEB-INF\web.xml file.

```
    </init-param>
    -->
    <multipart-config>
      <!-- 500MB max -->
      <max-file-size>524288000</max-file-size>
      <max-request-size>524288000</max-request-size>
      <file-size-threshold>0</file-size-threshold>
    </multipart-config>
  </servlet>
  <servlet>
    <servlet-name>Status</servlet-name>
```



Continue with installation step 3

3.12.3. Version Update

The following describes the steps to update the version of **Deyel** on On-Premise installations.

Distribution

The version update of **Deyel** and its solutions are distributed through the following files:

Description	File
Web application	deyel-**Version**.war

> ***Version***
> *Each version of **Deyel** has the following V.R.F.B. structure where*
> *V - Version*
> *R - Release*
> *F - Fix*
> *B - Build*
> *Example: deyel-7.8.1.3.war*

Step 1: Do Backup of Existing Database

- Oracle
```
expdp deyel/password@host:port/deyel dumpfile=deyeldb.dmp schemas=deyel
```

- Mysql
```
mysqldump -u root -p -h host --routines --skip-add-locks --single-transaction deyel > deyeldb.sql
```

- Sql Server
```
BACKUP DATABASE deyel TO DISK = 'deyeldb.bak'"
```

- DB2
```
db2move deyeldb export -aw -sn deyel > deyel_export.log
```
The export files remain in the folder where the command is executed.
A compressed file called deyeldb.zip should be generated with all the generated files.

Step 2: Do Backup of the Existing Context

- Compress all files in the existing context and move them out of the application server.
- Perform "undeploy" operation of the existing context on the application server.

Step 3: Install Deyel on the Application Server

- Installation on Apache Tomcat
- Installation in WAS

Step 4: Configure Database

If the DEYEL_DB_PROPERTIES_PATH environment variable was defined with the directory where the file with connection data is located, it is not necessary to perform this step.

If the DEYEL_DB_PROPERTIES_PATH environment variable was not defined, the database properties configuration file is within the context. In this case, the configuration of **Deyel** should be entered so as to complete the values for the connection properties again.

Instructive

a. Enter a https://**server:port**/deyel/Config.

> *Where server: server name where the installation is performed or its IP address and access port. Example: http://**myteam**:8080/deyel*

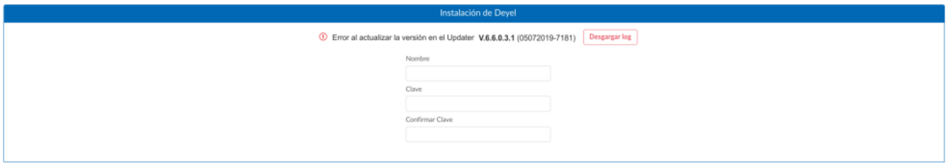
> *It is accessed without username and password until one is defined. It is recommended to define a username and password when first accessing.*

b. Complete the data of the Database Properties section and apply configuration.

c. Restart the context.

Step 5: Check if the Update is Successfully Performed

Enter a https://**server:port**/deyel/Config and check for any errors.



If an error occurred while updating, do the following:

- Download the log of the update that fails and the complete log of the day (SystemOut*.log) to send them to the **Deyel** team.
- Restore the backed up database in step 1.
- Stop the application server and copy all the context files backed up in step 2.

3.13. Phased Learning

[Training Phases]

Training in **Deyel** consists of a set of phases that allow the user to model their applications and use the product to its full potential, without the need for prior knowledge.

The phases are made up of a set of self-study videos and exercise proposals to reinforce knowledge. Videos with advanced tips are also included, for more experienced users.

Training Phases

[Introduction to Deyel]

[Forms Modeling]

[Portal]

[Processes Modeling]

[BAM]

[Configuration]

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