

Pega Sales Automation for Financial Services Implementation Guide 8.5



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Pega Sales Automation for Financial Services

8.5 Implementation Guide

Before implementing Pega Sales Automation for Financial Services, it's helpful to understand how to use this guide, the application business uses, and the application stack.

- [Purpose of this guide](#)
- [Pega Sales Automation for Financial Services](#)
- [Application stack](#)

Purpose of this guide

A project team that implements a Pega application can use this implementation guide to enable and extend application features to meet client business requirements. You must complete the product installation before starting the implementation procedures.

For information about installing your application, see the product installation guides on the [Pega Sales Automation for Financial Services product page](#).

This implementation guide presents tasks in the sequence in which they are commonly performed; however, the sequence varies based on business priorities. Follow the procedures in this guide to complete the tasks for the first minimum lovable product (MLP) release. Also, use this guide during iterative releases as you configure and extend more features on top of the MLP release.

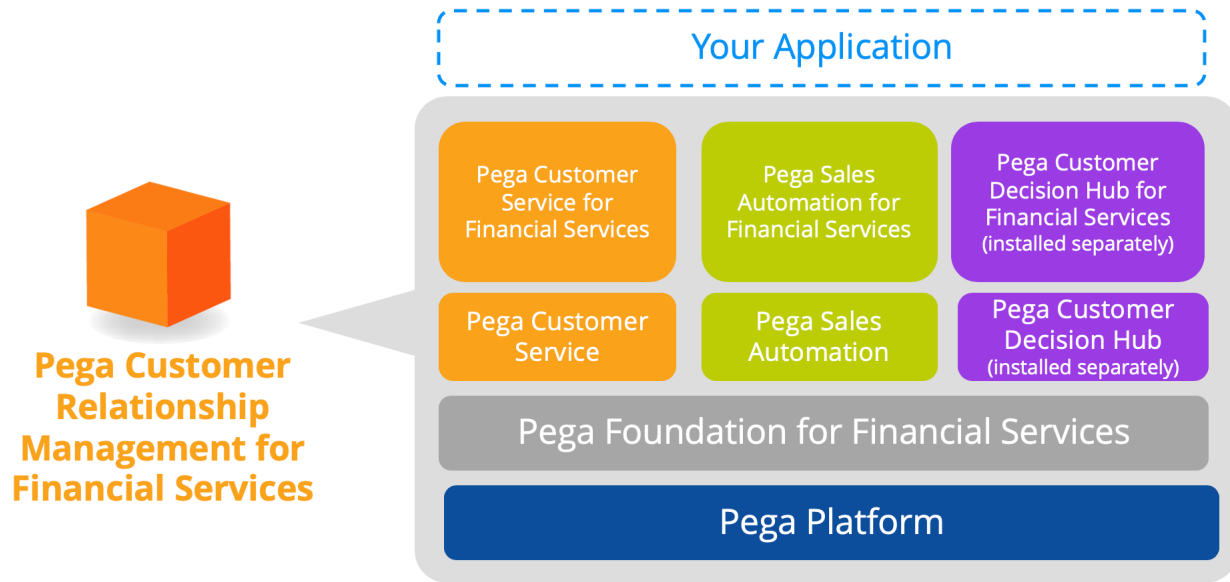
The Product Catalog for Communications application includes a case type backlog that supports the procedures in Product Catalog for Communications section in this document. The case type backlog is an inventory of the application-provided case types that establishes the project scope by defining the changes and additions that are required for the first MLP release and later releases. For more information, see [Capture microjourneys™ in the case type backlog](#) and [Journey Centric Delivery](#).

Pega Sales Automation for Financial Services

Pega Sales Automation for Financial Services uses analytics, business process management, and model-driven capabilities to provide intelligent, real-time guidance to relationship managers in the financial services industries. Pega Sales Automation for Financial Services integrates capabilities from the Pega Foundation for Financial Services and Pega Sales Force Automation applications. For more information, see the [Pega Sales Automation for Financial Services Product Overview](#) on the [Pega Sales Automation for Financial Services product page](#).

Application stack

The following figure shows the application stack. Your application inherits features from each layer.



Pega Sales Automation for Financial Services application stack

A new Pega Sales Automation for Financial Services installation includes Pega Customer Service, but Pega Customer Service is enabled only if licensed. If you are using Pega Customer Decision Hub, you must install that application separately.

Preparing for the implementation

To prepare the implementation environment and to create your application, complete the following preparation tasks:

- [Creating the application](#)
- [Optional: Configuring your Pega applications to support CRM](#)

Creating the application

Run the New Application wizard to create your application.

Before you begin: On the Organization landing page, create a customer organizational structure. The organization structure is required so that the new application has the appropriate class structure. For more information, see, [Organization landing page](#).

1. To create a new operator ID for running the New Application wizard, complete the following steps:
 - a. Log in to Dev Studio by using the operator ID `administrator@pega.com` and the password that you specified for that operator.
 - b. Save a copy of the existing `administrator@pega.com` operator, and give it a name that identifies it as an Application Setup operator.
 - c. Add the `PegaSAFSSilentApp:SysAdmin` access group to the new operator record, and then click the radio button to the left of the access group to select it as the default access group.
If you want to continue using the UI Kit-based application, add the access group. For more information, see the Pega Sales Automation 8.5 Release Notes on the [Pega Sales Automation product page](#).
 - d. Save the new Application Setup operator.
2. Log in as the Application Setup operator.
3. Follow the New Application wizard instructions until the **Name your application** page opens, and then follow the steps below.
4. On the **Name your application** page, enter the name of the application.
5. To select the framework application and provide the organization details, click **Advanced configuration**.
 - a. In the **Organization settings** section, enter the **Organization name**, **Division name**, and **Unit name** for this application.
The New Application wizard creates the application class structure for you based on the organization settings that you enter. For more information, see [Class layers](#) and [class hierarchy and inheritance](#).
If you have not already defined the organization entities (for example, if you have not already defined the division), type the name of the new entity in the appropriate field. The application saves the new values when you create the new application.
 - b. Click **Save**.
6. Click **Create application**.

The New Application wizard creates the implementation application. The signed-in operator is listed as an author persona. You can add more users as either administrator or author personas.

7. To open the new application, click **Go to app**.

- [Sample data](#)

Sample data

If you loaded sample data bundle during the Pega Sales Automation for Financial Services installation process, you have access to sample data supporting the Pega-provided demonstration application. Pega recommends that you load customer-supplied sample data in a sandbox environment to review and evaluate the Pega-provided features so that implementation efforts are more meaningful.



Note: Before you load customer-supplied sample data, you should first remove the Pega-provided sample data to avoid overlap between the customer data and the demo data.

Optional: Configuring your Pega applications to support CRM

These procedures are required only if you will use the [Pega Customer Relationship Management suite of applications](#) to share data and service cases across the Pega Customer Service for Financial Services, Pega Sales Automation for Financial Services, and Pega Customer Decision Hub for Financial Services applications.

These procedures involve configuration across multiple applications, and therefore include links to multiple application implementation guides.

Before you begin:

Your Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services applications must already be created as described in [Creating your Pega Sales Automation for Financial Services implementation application](#).



Important: The Pega Customer Decision Hub for Financial Services application must be created on a separate database cluster from the Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services applications. The Pega Customer Decision Hub for Financial Services application is a back-end analytical application with a typically smaller number of active users compared to the operational Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services applications. Keeping the operational and analytical clusters separate helps ensure easier maintenance and decreases upgrade complexity.

To configure your Pega applications to support shared features, complete the following steps:

1. For environments that include both Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services, complete the following steps:
 - a. Add the Pega Sales Automation for Financial Services implementation rulesets to your Pega Customer Service for Financial Services application, and add the Pega Customer Service for Financial Services implementation rulesets to your Pega Sales Automation for Financial Services application. See [Adding shared rulesets](#).

- b. Create an integration ruleset for your Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services applications, and then add the integration ruleset to the top of the ruleset stack for each application. See [Creating integration rulesets](#).
 - c. Enable the Pega Customer Relationship Management features.
See [Enabling shared features](#).
 - d. In your Pega Customer Service for Financial Services application, update the operator access groups to include the `CustomerService:CSRSalesAccess` role that is required to access the shared features.
See "Updating access groups to have shared access" in the *Pega Customer Service Implementation Guide* on the [Pega Customer Service for Financial Services product page](#).
2. For environments that also include Pega Customer Decision Hub for Financial Services, complete these additional steps.
- a. Create your Customer Relationship Management Pega Customer Decision Hub for Financial Services application as described in *Configuring your application to the Customer Relationship Management suite* on the [Pega Customer Decision Hub for Financial Services product page](#).
 - b. Configure your Pega Customer Service application to support Pega Customer Decision Hub.
 1. Enable Pega Customer Decision Hub. See "Configuring application settings" in the *Pega Customer Service for Financial Services Implementation Guide* on the [Pega Customer Service for Financial Services product page](#).
 2. Configure Customer Decision Hub settings. For each setting, copy the rule to the highest ruleset shared by Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services, and save your changes in that ruleset. See "Configuring Pega Customer Decision Hub" in the *Pega Customer Service Implementation Guide* on the [Pega Customer Service for Financial Services product page](#).
 - c. In Pega Customer Decision Hub for Financial Services, configure the application to support the Pega Customer Relationship Management features.
See "Configuring Pega Customer Decision Hub for Financial Services to support the Pega Customer Relationship Management features" on the *Pega Customer Decision Hub Implementation Guide* on the [Pega Customer Decision Hub for Financial Services product page](#).
 - d. In your Pega Sales Automation for Financial Services application, configure the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services.
See [Configuring the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services](#).
 - e. In your Pega Sales Automation for Financial Services application, test the integration with Pega Customer Decision Hub for Financial Services local campaigns.
See [Testing the integration with local campaigns](#).
 - f. In your Pega Sales Automation for Financial Services application, test the integration with Pega Customer Decision Hub for Financial Services next best offers. See [Testing the integration with next best offers](#).
- [Adding shared rulesets](#)
 - [Creating integration rulesets](#)
 - [Enabling shared features](#)
 - [Configuring the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services](#)

- [Testing the Pega Sales Automation for Financial Services integration with Pega Customer Decision Hub for Financial Services local campaigns](#)
- [Testing the Pega Sales Automation for Financial Services integration with Pega Customer Decision Hub for Financial Services next best offers](#)

Adding shared rulesets

To enable sharing of data between your Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services applications, add the implementation rulesets from one application to the other. The implementation rulesets are created by the New Application wizard for a new application.

This procedure is required only if you are sharing data and service requests between two or more applications in the Pega Customer Relationship Management for Financial Services suite.

Add only the rulesets that you want to expose in the other application. The lead system architect (LSA) or project architect can provide guidance on what functionality is included in each ruleset.

Add these rulesets at the bottom of the ruleset stack so that you do not override your application's implementation rulesets. When you want to overwrite your application's rulesets, use an integration ruleset as described in [Creating integration rulesets](#).

1. View the implementation rulesets created for each of your applications.
 - a. Log in to each of your applications in Dev Studio.
 - b. Click **Application menu** > **Definition**.
 - c. In the **Application rulesets** section, note the implementation rulesets created for each application.
2. Add the implementation rulesets from your Pega Sales Automation for Financial Services application to the bottom of the ruleset stack for your Pega Customer Service for Financial Services application.
 - a. Log in to your Pega Customer Service for Financial Services application in Dev Studio.
 - b. Click **Application menu** > **Definition**.
 - c. In the **Application rulesets** section, click **Add ruleset** to add Pega Sales Automation for Financial Services rulesets to the bottom of the ruleset stack, and then click **Save**.
3. Add the implementation rulesets from your Pega Customer Service for Financial Services application to the bottom of the ruleset stack for the Pega Sales Automation for Financial Services application.
 - a. Log in to the Pega Sales Automation for Financial Services implementation application in Dev Studio.
 - b. Click **Application menu** > **Definition**.
 - c. In the **Application rulesets** section, click **Add ruleset** to add Pega Customer Service for Financial Services rulesets to the bottom of the ruleset stack, and then click **Save**.

Creating integration rulesets

When using a Pega Customer Relationship Management for Financial Services configuration that includes both Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services, you must sometimes override the rules in one application to expose functionality from the other application. To support this, create an integration ruleset in both applications, and then save the override rules to the integration ruleset.

For example, if the Pega Customer Service for Financial Services application will show Pega Sales Automation for Financial Services *Lead case* service cases, you want the service case header and footer to look the same as the other Pega Customer Service for Financial Services services cases. In that case, save the perform harness rule for the service case into the integration ruleset for the Pega Customer Service

for Financial Services application. Doing so overrides the Pega Sales Automation for Financial Services header and footer for that service case.

This procedure is required only if you are sharing data and service requests between two or more applications in the Pega Customer Relationship Management for Financial Services suite.

The applications include a sample integration ruleset that you can copy or use as a model for a new integration ruleset. The sample integration ruleset for Pega Customer Service for Financial Services is SAFSforCSFS, and the sample integration ruleset for Pega Sales Automation for Financial Services is CSFSforSAFS.

Complete the following steps to configure the integration rulesets:

1. Log in to your Pega Customer Service for Financial Services application in Dev Studio.
2. Click **Application menu > Definition**.
3. In the **Application rulesets** section, click **Add ruleset**.
4. Type a name for the new integration ruleset that identifies its purpose. For example, *MyApp* CRMIntegration, where *MyApp* is your application prefix.
5. Click the **Open** icon to the right of the ruleset field.
6. Review the default **Ruleset Name**, **Version**, and **Description** values, and modify the values if needed.
7. Click **Create and Open**, and then click **Save**.
8. In the ruleset field, identify which version of the ruleset to use by appending the major and minor rule version to the end of the integration ruleset name in this format: *:NN-NN*. For example, to select the first version of the ruleset, append *:01-01* to the end of the ruleset name.
9. Move the new integration ruleset to the top of the ruleset stack by dragging the number to the left of the ruleset name to the top of the stack.
10. Click **Save**.
11. Repeat this procedure for your Pega Sales Automation for Financial Services application.

Enabling shared features

To share data and service cases across the Pega Customer Service for Financial Services and Pega Sales Automation for Financial Services, enable the shared features. For more information about the shared features, see [Pega Customer Relationship Management suite of applications](#).

1. Open your Pega Customer Service for Financial Services application.
2. In the navigation pane of App Studio, click **Settings > General**.
3. In the list of general settings, click **Sales Automation**.
4. To enable your application to use the pre-integrated Pega Sales Automation features, select the **Enable Sales Automation** check box.
5. Click **Save**.
6. Open your Pega Sales Automation for Financial Services application.
7. In the navigation pane of App Studio, click **Settings > Application settings**.
8. Select the **Enable CRM mode** check box.
9. Click **Save**.

Configuring the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services

The Pega Customer Relationship Management suite includes sample marketing artifacts that you can import to demonstrate the next-best-offer and local campaigns features in Pega Sales Automation for Financial Services.

To use these artifacts in Pega Sales Automation for Financial Services you must configure the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services.

For more information about the next-best-action and local campaigns features, see [Implementing Pega Customer Decision Hub features](#).

1. In the header of Dev Studio, click **Records > SysAdmin > Remote system**.
2. Open the **NBA** system record and configure it the following way:
 - a. On the **Environment** tab, select the **Connect using mashup** connection type.
 - b. In the **System URL** field, enter the URL of your Pega Customer Decision Hub for Financial Services.
 - c. In the **Application Name** field, enter the name of your Pega Customer Decision Hub for Financial Services application at the implementation layer.
3. Update the *SFAUserProfile* the following way:
 - a. In the **User name** field, enter the system admin user ID and password.
 - b. In the **Host name** enter the host name of the Pega Sales Automation for Financial Services application instance.
4. Open the *PEGANBAM:Agents* rule and ensure that it points to your Pega Customer Decision Hub for Financial Services application.
5. Add the *CRMFSSample:MarketAnalysts* access group to the sales representative operator.
6. In the header of Dev Studio, click **Configure > Integration > Services** and ensure that the NBA service package is updated to remove SSL and uses the Pega Sales Automation for Financial Services access group.
7. In App Studio, click **Settings > Application Settings** and select the **Local campaigns** check box on the **Pega Customer Decision Hub** tab.
8. Log out of the application and log back in.

Testing the Pega Sales Automation for Financial Services integration with Pega Customer Decision Hub for Financial Services local campaigns

After you complete the steps required to configure the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services, verify that you can access the sample marketing artifacts for local campaigns in Pega Sales Automation for Financial Services.

1. Log in to Pega Sales Automation for Financial Services by entering the credentials for the Sales Rep persona who has *CRMFSSample:MarketAnalysts* as their secondary access group.
2. In the header of Dev Studio, click **Launch portal > SA Portal**.
3. On the navigation menu, click **Campaigns > New Campaign**.

4. Verify that you can select the following template offers for the campaign:
 - B2CEmailOffer
 - B2BEmailOffer
 - B2BSMSOffer
 - B2CSMSOffer
5. Verify that you can add Pega Sales Automation for Financial Services contacts to the campaign.

Testing the Pega Sales Automation for Financial Services integration with Pega Customer Decision Hub for Financial Services next best offers

After you complete the steps required to configure the integration between Pega Sales Automation for Financial Services and Pega Customer Decision Hub for Financial Services, verify that you can access the sample marketing artifacts for next-best-offer opportunities in Pega Sales Automation for Financial Services.

1. Log in to Pega Sales Automation for Financial Services by entering the credentials for the Sales Rep persona who has `CRMFSample:MarketAnalysts` as their secondary access group.
2. In the header of Dev Studio, click **Launch portal > SA Portal**.
3. Verify that the Next-best-offer widget displays on the dashboard. With sample data uploaded, the widget shows realistic offers with different rankings for each contact.
4. Complete the following steps to test your integration:
 - a. Click a contact to qualify the contact for an opportunity.
 - b. Open a contact to display the top three offers for the contact, ranked highest to lowest.
 - c. Click an offer to qualify the contact for an opportunity to receive the offer.

Building features

The project team enables and extends features to meet your business requirements.

- [Implementing the application data model](#)
- [Connecting to your sales data](#)
- [Enabling application features](#)
- [Modifying the user interface](#)

Implementing the application data model

The application provides a set of data types, data pages, and sample data to begin implementing your application.

Data modeling involves relating a conceptual model of how data items relate to each other in an application. The data model in the Pega Platform refers to a set of rules that work together to populate the data in your application. This data is displayed on the user interface to help the user process information and can help automate decisions in your sales processes. The following rule types constitute your data model:

Data types

The data type is another name for a class in your application. It holds data that the application uses. A data type has one or more data pages and several property definitions associated with it.

Properties

Properties define the format and visual presentation of data in your application.

Data pages

Data pages define the content of a clipboard page and control the loading of the data.

When planning your data model, work with the data modeling resource at your site to understand the attributes of the data types that need to be supported by your application.



Note: For more information about the data model, see the *Pega Sales Automation for Financial Services Product Overview* on the [Pega Sales Automation for Financial Services product page](#).

The following topics describe how to plan and map the data model:

- [Mapping your application data](#)
- [Managing your application data with the Integration Designer](#)
- [Mapping case type or data type classes to a database table](#)

Mapping your application data

The application data types provide a default set of properties for your use. You can add or remove properties from these data types depending on your requirements. You can also add new data types.

1. Log in to App Studio as a manager.
2. In the navigation pane of App Studio, click **Data > Data model**.
3. Click a case type to view the fields for that case type.

4. Review the fields and determine which fields to modify, delete, or add.
5. To modify an existing field, point to the field, and then click **Edit**.
6. On the **Data model** tab, determine the properties to add, remove, or leave unchanged.
7. Repeat these steps for any other data types, as necessary.

Managing your application data with the Integration Designer

Use the Integration Designer to manage data at the application level. In the Integration Designer, you can access a comprehensive view of all business objects in your application and their associated data, such as references, data sources, and data views. You can easily create and modify data objects and connect to data sources.

1. In the navigation pane of App Studio, click **Data**.
2. Locate each data type that is marked **SIMULATED**, and click the **FIX NOW** link to configure that data type to connect to real data.

For more information, see [Managing data and integrations with the Integration Designer](#).

Mapping case type or data type classes to a database table

When you run the **New Application** wizard to create your initial case types and data types, the system creates a default class group mapping for each case type and data type. The wizard also creates associated database tables, and then maps the new implementation class to the appropriate database table.

Mapping a class to a physical database table affects data storage and security decisions. For example, if you expect the volume of the case types to be low, consider sharing the table with other case types.

1. Expand the **SysAdmin** category, and then click **Database Table**.
2. Open the class that you want to modify, and then map your database table to a class:
 - a. Review the default database name and the table name to which the class points.
 - b. Point the chosen database table to your specific class by editing the database name and table name.
 - c. Confirm your changes by clicking **Save**.
 - d. Check if your configuration is correct by clicking **Test connection**.
 - e. If the test results display errors, for example missing properties, review and correct the data.
3. Update the class to point to your database table:
 - a. In the navigation pane of Dev Studio, click **App**.
 - b. Right-click the class name that you referred to in the steps above, and then select **Definition**.
 - c. On the **General** tab, check if the configuration is correct by clicking **Test connection**.
4. **Optional:** To configure other case type or data type classes, repeat steps [2](#) through [3](#).

Connecting to your sales data

You start building your application by setting up the sales team, configuring organizational data, and importing prospect and customer data.



Note: Whether you import data or enter it manually, the order in which you enter data in the application is important. Setting up your sales team and configuring organizational data, such as product hierarchies and competitor information, before importing or creating leads and opportunities ensures that the appropriate data components are automatically associated with the work objects in your application.

For information and instructions on how to build your sales team and import prospect and customer data, see the following topics:

- [Configuring the sales team structure](#)
- [Implementing market segments](#)
- [Viewing the sample organization structure and creating an organization unit](#)
- [Mapping organization units to territories](#)
- [Configuring prospect and customer data](#)
- [Configuring data loaders extensions](#)
- [Configuring field-level auditing](#)
- [Opportunity splits between sales team members](#)

Configuring the sales team structure

Configure the organizational structure of your sales team by setting up the territories, operators, partners required for your business.

When you configure the sales team structure, you are also configuring your security authorization model because that model is based on the territory structure, operator IDs, and partners that you define for your sales team. For more information, see [Authorization model](#).

To set up the sales team, you can import existing entities as described in [Pega Sales Automation data import](#), and you can manually add entities.

For more information, see [Sales team structure and authorization model in Pega Sales Automation for Financial Services](#).

- [Sales team](#)
- [Importing existing sales team data](#)
- [Adding territories](#)
- [Adding and associating operators to territories](#)
- [Managing partners](#)

Sales team

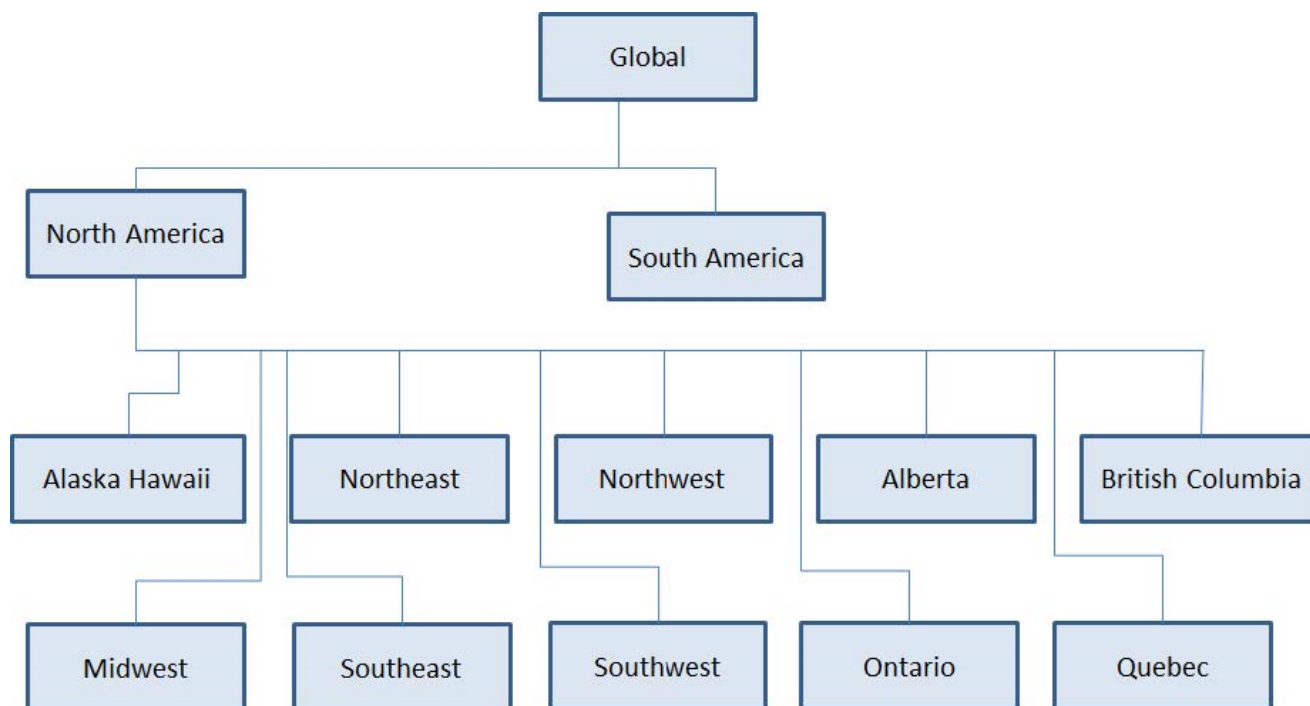
In Pega Sales Automation for Financial Services, the territories, operators, partners that are part of the sales team have the following functions.

Territories

A territory is a hierarchical unit that is used to organize your sales team into groups, for example, a geographic location, a department, or a product line.

Assign operators to territories, and configure each operator's read, update, and create permissions (at the territory level) for the work objects that are used in the Pega Sales Automation for Financial Services application, including: accounts, contacts, leads, opportunities, organizations, and households.

The following diagram shows a territory structure based on geographic locations:



When setting up territories for a new application, set up territories before you set up operators. After you set up operators, you can edit a territory to optionally select which operator is the forecast manager.

Operators

An operator is an individual user of the Pega Sales Automation for Financial Services application, either a member of your sales team or sales agents at partner organizations. You define the sales team operators in the SAFS for Sales Ops portal. (These operators have a different purpose than the operators that you define in Dev Studio.)

Partners

With Pega Sales Automation for Financial Services, you can work directly with by granting them access to your local implementation.

The partner management feature is optional and you must activate it for your implementation if you plan to use it. For more information, see [Activating application features](#).

Importing existing sales team data

If you have existing sales team data set up in a different system, you can import the sales team data to Pega Sales Automation for Financial Services instead of adding that information manually.

1. Identify the types sales team data to import.
2. Import the sales team data using one of the methods described in [Pega Sales Automation data import](#).

Adding territories

Configure territories to establish the structure for managing your sales team, for example assign people to the territories they are working in.

A Global Sales Ops operator can view and edit the entire territory tree structure. A Local Sales Ops operator can view and edit their primary territory and any children under that territory.

1. In the header of App Studio, launch the **User portal**.
2. In the navigation pane, click **Territories**.
3. To add territories, choose one of the following actions:
 - a. To import multiple territories at once, use the data import wizard, and then return to the **Territories** screen to perform the optional steps.
For more information, see [Importing the data](#).
 - b. To add one territory at a time, on the **Territories** screen, click **Create territory**, and then for each territory perform the optional steps.
4. Next to the organizational unit that you want to change, click **Update**.
5. Navigate to the organizational unit to which you want to map this territory, click **Update**, and then click **Submit**.
Map the new territory to a specific organizational unit within the organization's taxonomy to associate that territory with a specific product line.
6. If you set up a territory for one of your partners, select the **Reserved for partner** check box.

Adding and associating operators to territories

Create operator records for all users so that you can define the permissions for each user.

1. In the header of App Studio, launch the **User portal**.
2. In the navigation pane, click **Operators**.
3. To add operators, choose one of the following actions:
 - a. To import multiple operators at once, use the data import wizard, and then return to the **Operators** screen to perform the steps below.
For more information, see [Importing the data](#).
 - b. To add one operator at a time, on the **Operators** screen, click **Create operator**, and then for each operator perform the steps below.
4. On the **Operator Details** form, complete the required fields, and then enter optional information for your implementation:
 - a. For partner operators, enter a partner name in the **Partner** field.
 - b. Click **Password**, enter a password for the operator, and then click **Submit**.
 - c. Click **Continue**.
5. On the **Operator Access** form, assign the new operator to a territory:
 - a. Select an operator type - persona.
 - b. Map your operator to the territory or create a new territory.
 - c. Click **Finish**.

Managing partners

An operator with the Global Sales Ops persona can set up and administer partners, and delegate user (operator) administration to a Local Sales Ops persona at the partner organization. Partners are external agencies that you work with.

1. Log in to Pega Sales Automation for Financial Services as a Sales Ops.
2. In the User portal navigation pane, click **Partners**.
3. Choose either of the following actions:
 - a. To add a partner, click **Create Partner**.
 - b. To add multiple partners at a time, you can import partner information.
For more information, see [Pega Sales Automation entities](#).
 - c. To edit a partner, select the partner and then click **Edit**.
4. **Optional:** To give the partner access to your application and assign the partner to a territory, select the **Operator Access Required** check box.

Implementing market segments

Pega Sales Automation for Financial Services provides a sample application that you can use to review the features for each product segment. The sample application includes financial data and a set of personas for each market segment. Pega Sales Automation for Financial Services supports Retail banking, Small and medium businesses, Commercial banking, and Wealth management market segments.



Note: All market segments in the Pega Sales Automation for Financial Services application use the B2B_B2C selling mode.

Complete the following steps to choose the market segment for your implementation:

1. Log into the portals for each market segment by using the sample personas.
2. Review the processes and work cases provided with each market segment.
3. Choose the best market segment for your implementation.

Viewing the sample organization structure and creating an organization unit

In Pega Sales Automation for Financial Services you can view the provided sample organization structure to decide whether to modify it or not. For each territory in Pega Sales Automation for Financial Services you must associate a parent territory and an organization unit.

To view the sample organization structure, in the header of Dev Studio, click **Configure > Org & Security > Organization > Organizational Chart**.

To create an organization unit, perform the following steps:

1. In the header of Dev Studio, click **Create > Organization > Organization Unit**.
2. Enter a short description, division name, and unit name, and then click **Create and open**.

Mapping organization units to territories

For each territory in Pega Sales Automation for Financial Services you must associate a Parent Territory and an Organization unit.

To associate an organization unit to a territory, perform the following steps:

1. Log in to Pega Sales Automation for Financial Services as a Sales Ops operator.
2. In the navigation pane of App Studio, click **Territories**.
3. Open a territory.
4. In the **Parent Territory** field, enter a parent territory.
5. In the **Organizational unit** field, enter an organization unit.
6. Click **OK**.

Configuring prospect and customer data

The Pega Sales Automation for Financial Services application is the system of record for the prospects and potentially the customer data that is used by the sales team, including the organization, accounts, households, and contacts.

Pega Sales Automation for Financial Services has the following types of contacts:

- Pure prospects, who have no business relationship with the client organization. Pega Sales Automation for Financial Services is the system of record (SOR) for prospect data.
- Customers, who have an existing business relationship with the client organization and who are targets for new products and services. Pega Foundation for Financial Services is the SOR for customer data.
- [Prospect and customer data types](#)
- [Importing prospect and customer data](#)
- [Mapping external customer and organization data](#)

Prospect and customer data types

The types of prospect and customer data that are required for your implementation depend on the selling model that you select. Prospect and customer data can include information about the following entities:

Organization

An organization is a specific business, holding company, corporation, or association. The organization represents the top level of a business hierarchy that contains one or more child entities in the form of accounts. Organizations are used only in the business-to-business (B2B) selling mode.

Accounts

An account is an economic decision making unit that represents the logical or physical group to which products or services are sold. Accounts are used in both the business-to-business (B2B) and business-to-consumer (B2C) selling modes.

Contacts

A contact (person) is a prospect or a customer.

- In the business-to-business (B2B) selling mode, a contact is usually an employee of or somehow affiliated with the organization to which you are selling.
- In the business-to-consumer (B2C) selling mode, a contact is the person interested in making a purchase.

You can associate a contact with an account, organization, or another contact to facilitate cross selling and communication. The following relationship type codes are available for defining contact relationships in the application:

- C2A - Indicates a contact-to-account relationship.
- C2O - Indicates a contact-to- organization relationship.
- C2C - Indicates a contact-to-contact relationship.

You can further define the nature of these relationship types. For example, a C2C relationship can be a relationship between colleagues in an organization or between family members in a household.

Households

A household is a grouping of contacts in which one of the contacts is designated the head of household. A household usually represents members of a family, or contacts living at the same address. A household can also be used to group any set of contacts that share a commonality and have a primary contact person. Households are used only in the business-to-consumer (B2C) selling mode.



Note: The household data type is optional. If you plan to use household data, you must activate the data type for your implementation. For more information, see [Activating application features](#).

Importing prospect and customer data

Use the data import tools to import your existing prospect and customer data into Pega Sales Automation for Financial Services.

1. Identify the types of prospect and customer data to import, based on your selling model.

Selling model	Import these data types
Business-to-business (B2B)	• Organizations • Accounts • Contacts
Business-to-consumer (B2C)	• Accounts • Contacts • Households
Business-to-business and business-to-consumer (B2B_B2C)	• Organizations • Accounts • Contacts • Households

2. Import the data using one of the methods described in [Pega Sales Automation data import](#).

Mapping external customer and organization data

In Pega Sales Automation for Financial Services, you can import your data by using the Data import wizard, but you can also connect to the secondary customer data, such as, financial account holdings by mapping the Pega Foundation for Financial Services tables with the Pega Sales Automation for Financial Services tables. A cross reference table is required to match the keys of a contact or an organization entity from multiple system of records to a master contact or organization entity key.

The Pega Foundation for Financial Services serves as the template for the system of record of customer data, and Pega Sales Automation for Financial Services is the system of record for prospect data.

Use your database management software to populate cross-reference tables that match the keys of contacts in Pega Sales Automation for Financial Services with the contact keys from Pega Foundation for Financial Services.

The Contact relationship table has **CRMEntityID** column as the master record key, because Pega Sales Automation for Financial Services is the master system of record and the **ExternalSystem** column. The following table shows the Contact relationship table structure and sample record pattern:

CRMEntityID	ExternalID	ExternalSystem
PEGASAFS-WORK-CONTACT CON-20781	7777777777	Pega Foundation for Financial Services
PEGASAFS-WORK-ORG ORG-123	9912348966	Pega Foundation for Financial Services

To populate Pega Sales Automation for Financial Services with customer and organization data, complete the following steps:

1. Import the core customer and organization data to your application by using the Data import wizard. For more information, see [Pega Sales Automation for Financial Services data import](#).
2. Connect to the secondary customer data, by mapping the following tables:
 - a. PegaSAFS-Data-EntityxRef-Contact to `safs_data_contact_xref` table
 - b. PegaSAFS-Data-EntityxRef-Org to `safs_data_org_xref` table
 - c. PegaSAFS-Data-EntityxRef-Household to `safs_data_household_xref` table
 - d. PegaSAFS-Data-EntityxRef-Relationship to `safs_data_relationship_xref` table

All the above rules, classes, properties, and data pages are available in the PegaCRMBase application.

Configuring data loaders extensions

Pega Sales Automation for Financial Services includes multiple case types. Lead and opportunity case types are preconfigured and include stages and steps to speed up the implementation process. Other case types, for example organizations, accounts, and contacts do not include stages and steps. When you import cases, you can either disable the quick import feature and keep your custom changes to your cases, or enable quick import to make the import faster but lose any changes.

By default, the `isQuickImportEnabled` dynamic system setting for organizations, accounts, and contacts is set to `true`. For leads and opportunities the default setting is `false`. To configure data loaders extensions, perform one of the following actions:

- If you want to run fast imports, set the `isQuickImportEnabled` dynamic system setting to `true`.

- If you want to run a slower import but keep any changes that you have made to your cases, set the `isQuickImportEnabled` dynamic system setting to `false`.

What to do next: [Pega Sales Automation data import](#)

Configuring field-level auditing

Maintain case compliance and follow progress in your case types by enabling field-level auditing.

To configure field-level auditing, first enable it in App Studio, and then perform the configuration steps on the case type level. For more information, see [Track changes in cases with improved field-level auditing](#).

1. Enable field-level auditing in App Studio.
For more information, see [Enabling application features](#).
2. In the navigation pane of App Studio, click **Case types**, and then open any case type, for example, the **Business Opportunity** case type.
3. On the **Settings** tab, click **Auditing**.
4. On the **Auditing** tab, perform the following steps:
 - a. To enable auditing on the case type level, turn on the **Enable field audit** switch.
 - b. Select either **System** or **Reusable fields** by selecting the corresponding check boxes.
System fields are the already available fields that you create, and reusable fields are the fields that are in the application by default.
 - c. Select the check boxes next to the properties for which you want to enable field-level auditing.
5. Click **Save**.
As a result, any user who has access to the opportunities can track field updates by clicking **Actions > History > Field history** on the open opportunity screen.

Opportunity splits between sales team members

As a relationship manager or a managing director, you can now split opportunities with team members to improve collaboration and share the revenue.

Opportunity owners and sales managers can customize the default split values, as well as add or remove team members. To enable opportunity splits, in the navigation panel of App Studio, click **Settings > Application Settings**, and then select the **Opportunity Splits** check box. After you enable opportunity splits, on the opportunity page, the system shows the default split values.

After you enable opportunity splits:

- On the opportunity page, the system shows the default split values, which you can customize.
- Opportunity splits are listed as additional columns to some dashboard widgets, for example, pipeline by territory, and quota attainment. For example: Terry has 50% allocation on the 'Xyz' opportunity with \$10,000 revenue. Terry's pipeline includes this allocation: \$5000 and if the opportunity is closed as won, \$5000 is added to his sales quota.
- On the Forecast page, sales managers can filter data by territory and sales representative to view and analyse their performance with split values for each category. Use forecasting with revenue splits to predict revenue splits, based on unweighted, predictive, and weighted opportunity amounts. To enable the split view for forecasting, click **Advanced** and turn on the **Show revenue splits** switch.

- [Configuring opportunity splits](#)

Configuring opportunity splits

Enable the opportunity splits feature so that multiple team members can collaborate on an opportunity, and share the opportunity revenue.

1. In the navigation pane of App Studio, click **Settings > Application Settings**.
2. On the **Features** tab, select the **Opportunity Splits** check box.
3. In the navigation panel of **App Studio**, click **Reports**.
 - a. On the **Reports** screen, search for and open an opportunity report.
 - b. Click **Actions > Export** and export your opportunity data as a CSV file.
4. In the file that you export, update the data to include the team members and their split allocations. To avoid mapping errors, ensure that the total percentage values for a team equal exactly 100%. For more information about how to enter data correctly, see [Pega Sales Automation entities](#).
5. In the navigation pane of Dev Studio, click **Records > SysAdmin > Dynamic System Setting**. For the initial split data allocation, import only Opportunity ID's in the CSV file by using the **Add or Update** option. By doing this the opportunity owner gets 100% and the rest 0%. For the optional process performance, set the batch size value to 1.
 - a. Search for and open the *import/BatchSize* dynamic system setting.
 - b. Set the value to 1.
 - c. Click **Save**.
6. Import the updated data by using the **Add or update** option in the data import wizard. For more information, see [Pega Sales Automation data import](#).

The opportunity splits values are updated for each sales team.

Enabling application features

Pega Sales Automation for Financial Services includes a set of core and optional features that you can implement to support your sales team.

For information and instructions on how to implement the features required for your implementation, see the following topics:

- [Enabling application features](#)
- [Implementing the Sales methodology](#)
- [Implementing case types](#)
- [Implementing products and competitors](#)
- [Implementing forecast management requirements](#)
- [Implementing activity and task management requirements](#)
- [Optional: Sales goals](#)
- [Implementing reporting](#)
- [Implementing a mobile app](#)

- Implementing Pega Customer Decision Hub for Financial Services features
- Implementing engagement maps
- Implementing organization trend data
- Configuring tagging for work objects and Pulse posts
- Collaborate in Pulse
- Connecting to Pega Call
- Connecting to Pega Knowledge
- Implementing artificial intelligence
- Implementing third-party integrations
- Creating email templates
- Managing distribution lists
- Configuring bulk email
- Synchronizing Pega Sales Automation for Financial Services email with Microsoft Exchange
- Sending emails by using the Microsoft Exchange web service
- Replying to emails directly from Pega Sales Automation
- Configuring relationship intelligence
- Configuring Prepare for meeting
- Configuring signatures
- Implementing the security model

Enabling application features

Use App Studio to enable features in Pega Sales Automation for Financial Services. Some features do not require additional configuration steps and are considered within the MLP product implementation, for example, Health bot, forecast, lead routing, opportunity splits, and relationship intelligence. Some features require additional steps and that is why are considered for the advanced product implementation, for example, artificial intelligence, Partner Relationship Management, or CRM mode.

To implement the product by using the Application Guides, in the top-right corner of App Studio, click **Resources > Application Guides**.

1. In the navigation pane of App Studio, click **Settings > Application settings**.
2. On the **Features** tab, verify the **Selling mode** that you specified when you created your application. You can change the selling mode by clicking one of the available selling mode options.
3. Review the following list of available features and enable the features that match your business requirements:
 - To enable artificial intelligence insights, select the **Artificial intelligence insights- opportunity insights, lead ranking, and sales coach** check box.
When you select this check box, you can see all AI capabilities and enable each one separately by selecting their individual check boxes.
For more information about artificial intelligence capabilities in Pega Sales Automation for Financial Services, see [Artificial intelligence features in Pega Sales Automation](#).
 - To expose organization health and opportunity engagement snapshot analytics, enable the Health bot by selecting the **Health bot** check box.

- To predict the sales cycle using unweighted, weighted and AI-powered predictive forecasts by category, quarter, and territory, enable forecasts by selecting the **Forecast** check box, and then enter the threshold value percentage for variance between weighted and predictive forecast.
- To use the account and territory planning tools and visualize product penetration levels, enable engagement maps by selecting the **Engagement maps** check box.
- To see the suggested content based on context and article sharing with prospects and customers, enable Knowledge Management by selecting the **Knowledge management** check box.

For more information, see [Connecting to Pega Knowledge](#).

- If your organization works with external agencies, resellers, and sales partners to sell your products, enable partner relationship management by selecting the **Partner relationship management (PRM)** check box.

For more information, see [Pega Sales Automation entities](#).

- To enable channel managers to allocate and track market development funds to partners, enable Market development funds by selecting the **Market development fund (MDF)** check box. This check box is displayed only after you select the **Partner relationship management (PRM)** check box.
- To enable partners to define and track their own secure, private fields and field values, enable private data for partner relationship management by selecting the **Private data for partner relationship management** check box. This check box is displayed only after you select the **Partner relationship management (PRM)** check box.
- To enable the household object for tracking all members of a household, enable the household data type by selecting the **Households** check box.
- To integrate with Pega Call, select the **Computer telephony integration** check box.

For more information, see [Connecting to Pega Call](#).

- If you are using the forecast management feature, enable qualitative forecasting by selecting the **Close plans** check box to activate qualitative forecasting.
- To activate geolocation services using Google Maps, select the **Google Maps & address geo-coding - separate license required from Google** check box and then enter your Google Maps API key in the **Google key** field.

For more information, see [Using the Address Map control](#).

- To enable the pre-integrated Pega Customer Relationship Management features, select the **Enable CRM mode** check box.
- To enable the Dun and Bradstreet Direct 2.0 Data connector so that you can stream and integrate D&B Data using the D&B Direct API, select the **Enable D&B** check box.

For more information, see [Hoover's Dun & Bradstreet Direct 2.0 Data](#) and [Integrating Pega Sales Automation with Hoover's Dun & Bradstreet Direct 2.0 Data connector](#).

- To enable the automatic lead routing to assign incoming leads, manually created leads, and existing leads (that have automatic routing selected), select the **Lead Routing** check box.
- To enable sales representatives to share revenue from an opportunity with other team members, select the **Opportunity Splits** check box.

For more information, see [Configuring opportunity splits](#).

- To enable sales representatives to share their calendar with others, select the **Enable Calendar Share** check box.
- To track the progress of your work and maintain the compliance of your cases, select the **Field-level audit** check box.

For more information, see [Configuring field-level auditing](#).

- To view suggested contacts, select the **Enable Suggested Contacts** check box.
- To see the selling strengths of sales representatives, select the **Enable Relationship Intelligence** check box.

For more information, see [Configuring relationship intelligence](#).

- To enable moving opportunities from one stage to another in the stage view of the Opportunity case type, select the **Enable drag and drop for opportunity chevron view** check box. This check box is enabled by default.
- To capture signatures on the screen by using the Signature Capture control, select the **Electronic signature** check box.

For more information, see [Using the Signature Capture control](#).

- To request signatures by using DocuSign, select the **Digital signature** check box.

For more information, see [Configuring DocuSign](#).

- To use File Listener to import large volumes of data, configure the **File Listener Configurations** section.

For more information, see [Importing large amounts of data by using the data import File Listener](#).

- To use Gmail Chrome extension, configure the **Google Integration** section.

For more information, see [Connect to Gmail by using the Chrome extension](#).

- To send emails in bulk, configure the **Bulk Email Configuration** section, and then, if needed, enter the maximum number of recipients per email and enable daily limits for bulk email by selecting the **Enable limits per day for sending bulk email** check box. This feature is enabled by default.

For more information, see [Configuring bulk email](#).

Implementing the Sales methodology

In Pega Sales Automation for Financial Services, you use Pega's case life cycle management tools to model your sales methodology and guide relationship managers through each stage of the sales process.

The following topics provide information about how to implement the sales methodology:

- [Defining the sales methodology](#)
- [Configuring the sales methodology](#)

Defining the sales methodology

Pega Sales Automation for Financial Services includes several predefined case types that represent the processes and work objects that drive your organization's sales life cycle. Select the case types to include in your application when you build your implementation layer. If you need additional case types not provided in the application, create them during your implementation.

For information about case life cycle management, see [Defining the case life cycle](#).

1. Review the sales processes for your organization.
 - a. Define requirements for managing leads.
 - b. Define requirements for managing opportunities.
2. Map the lead and opportunity requirements to stages and steps in the lead and opportunity case types.

3. Determine if you need to import existing lead and opportunity data.
4. Determine the type and source of the existing lead and opportunity data that you need to import.

- [Lead and Opportunity case types](#)

Lead and Opportunity case types

Pega Sales Automation for Financial Services includes two main case types that you use to configure the sales process.

Lead

A lead is a prospect (customer or non-customer) that your sales team evaluates to determine if they are qualified to advance to the probability of a sale. When you qualify a lead, the lead is then converted to an opportunity.

When you create the implementation layer, the Lead case type contains a set of preconfigured stages and steps.

You can customize the Lead case type by adding stages to reflect the processes your sales team follows to qualify a lead. You can further divide your Lead case type stages into steps that define the tasks or activities that your relationship managers perform within each stage, such as managing campaign responses, creating lead profiles, or scheduling appointments.

For more information about managing leads, see [Managing leads](#).

Opportunity

An opportunity is a qualified deal, or a potential sale that you track, nurture, and manage. Opportunities are the foundation of your sales pipeline, goal attainment, and sales forecast.

When you create the implementation layer, the Opportunity case type contains a set of preconfigured stages and steps.

You can customize the Opportunity case types by modifying the default stages or adding your own stages and steps to reflect the processes that your sales team follows to move an opportunity through the sales pipeline. You can also modify the out-of-the-box steps or add your own steps to define the tasks or activities that your relationship managers perform within each stage, such as identifying competitors, developing proposals, and scheduling appointments.

For more information about managing opportunities, see [Modifying the opportunity case type](#).

Configuring the sales methodology

Use the lead and opportunity case types in Pega Sales Automation for Financial Services to implement your organization's sales methodology.

The **Lead** stage comes with following pre-configured set of stages: Assigned, Marketing Qualified, Sales Qualified, and Closed.

What to do next:

You can modify the opportunity case type stages provided and add new stages, as needed. You can then add the steps required for each stage to implement your sales methodology in the application. For more information, see [Modifying an opportunity case type](#).

After you configure the opportunity case type, it is used to guide your relationship managers through every step of the sales process for each opportunity you create in the application.

Implementing case types

Modify the application-provided case types to meet your business needs.

- [Modifying an opportunity case type](#)
- [Configuring lead routing](#)

Modifying an opportunity case type

Modify an Opportunity case type to reflect the stages and steps in your sales methodology. To add a stage to an Opportunity case type for a particular market segment, perform the following:

- For Small/Medium Business, modify the `PegaSAFS-Work-Opportunity-Biz-SMB` case type rule.
- For Commercial Banking, modify the `PegaSAFS-Work-SAFS-Opportunity-Biz-Com` case type rule.
- For Retail Banking, modify the `PegaSAFS-Work-Opportunity-Ind` case type rule.
- For Wealth Management, modify the `PegaSAFS-Work-SAFS-Opportunity-Ind-Wealth` case type rule.

When you create stages and steps for an Opportunity or an Individual Opportunity case type, ensure that all stages are primary stages and all steps are optional processes.

- [Adding stages to an Opportunity case type](#)
- [Specifying a field value for a new Opportunity stage](#)
- [Adding steps to an Opportunity stage](#)
- [Configuring automatically launched processes](#)

Adding stages to an Opportunity case type

Modify the Opportunity case type by adjusting its stages to suit your business needs and complete the sales process. A stage represents a unique phase in your sales process, for example, the qualification or proposal phase.

1. In the navigation pane of App Studio, click **Case types**.
2. Open the Opportunity case.
3. On the **Workflow** tab, choose where you want to add a stage in the process:
 - To insert a stage after the last stage in the list, click **STAGE**.
 - To insert an alternate stage, click **ALTERNATE**.

The order of the stages determines the order in which the application displays the stages. You can drag stages to change their order.

4. Click **Save**.

Specifying a field value for a new Opportunity stage

Specify the field value for a new Opportunity stage to support the localization of the stage name in portal displays, reports, and user forms.

1. In the navigation pane of Dev Studio, click **Records**.
2. Expand the **Data Model** category, right-click **Field Value**, and then click **Create**.
3. On the **Create Field Value** form, enter basic information about the field:
 - a. In the **Label** field, enter the stage name.

- b. In the **Field Name**, enter `OpportunityStage`.
- c. In the **Apply to (class)** field, enter your implementation class.
4. Click **Create and Open**.
5. On the **Localized label** tab, verify that the **to** field displays the name of the stage that is displayed in the user interface.
6. Click **Save**.

Adding steps to an Opportunity stage

Modify the Opportunity case type by adjusting the steps of stages to suit your business needs and complete the sales process. A step is a unit of work in a stage, for example, the development or delivery of a proposal in the proposal stage.

1. In the navigation pane of App Studio, click **Case types**.
2. Open the Opportunity case.
3. On the **Workflow** tab, choose where you want to add a step:
 - a. Hover over **PROCESS** for any stage or alternate stage to which you want to add a step, and then click **STEP**.
 - b. Enter the name of the step.
4. Click **Save as**.

Configuring automatically launched processes

To automatically advance the opportunity case type from one stage to another or to launch processes automatically, use the Pega Platform configuration settings on the **Stages** tab of the opportunity case type rule form to add **Automatically launched processes**. You must replace the `crmDisplayStages` section with the Pega-provided `pxDisplayStages` section in the `pyWorkSummary` sections.

1. In the Dev Studio **Explorer** panel, click **Cases**.
2. Right-click the Opportunity or Opportunity Individual case and click **Open**:
3. On the **Stages** tab, configure automatically launched processes.
4. Click **Save as**.

Configuring lead routing

Sales operations use lead routing in both business-to-business (B2B) and business-to-consumer (B2C) scenarios to manage your leads more intelligently. After you enable lead routing in App Studio, the lead routing option is visible in your Pega Sales Automation for Financial Services application. Configure lead routing by applying conditions, for example, route leads to a person with particular skills, or based on their current workload.

For more information, see [Improve case resolution with enhanced routing business logic \(8.3\)](#).

Before you begin: Enable lead routing in App Studio.

1. Log in to the application as a Sales Ops.
2. In the Sales Ops navigation pane, click **Tools > Lead routing**, and then specify the following conditions:

- a. Depending on your business needs, select either the B2B or B2C selling mode.
- b. Select a Route to action:
 - If you want to route a lead to a particular person when a particular condition is met, select **Operator**, press the Down arrow key to choose the routing value, and then specify the condition.
 - If you want to route a lead to a work queue when a particular condition is met, select **Work queue**, press the Down arrow key to choose the routing value, and then specify the condition.
 - If you want to route a lead to an available person with particular skills, select **Route based on availability and skillset**, click **Edit parameters**, and then add a workgroup value and skills.
 For example, route a lead to an operator who speaks English and French. Make sure to select the **Required** check box next to a skill. If there are no matches, the system assigns the lead to the manager of this workgroup. If many operators have the same set of skills, the system assigns the operators randomly.
 - If you want to route a lead to an available person with particular skills and low workload, select **Route based on availability, skillset, and work load**, click **Edit parameters**, and then add a workgroup value and skills.
3. **Optional:** Specify one or more when rules to adjust the routing logic to your business needs.
 For example, route particular emails to a defined sales representative.
4. **Optional:** Use the drag handle to reorder the rules to fit your business needs.
5. Click **Save**.

Implementing products and competitors

Product and competitor information helps your sales team to align opportunities with product offerings and to differentiate your products when they make a sales pitch.

Your products are the plans that you sell to your customers. Your competitors are other organizations that sell similar products to the same base of customers.

- [Defining product information](#)
- [Setting up products](#)
- [Setting up competitors](#)

Defining product information

Within Pega Sales Automation for Financial Services, you can use either a Product Designer for Financial Services product catalog or an external product catalog to store the products. During the definition phase, determine whether you plan to use a Pega Foundation for Financial Services product catalog or an external product catalog.

The Pega Sales Automation for Financial Services product model needs to be mapped to the product model in the Product Designer for Financial Services product catalog. For more information, see [Product information in Pega Sales Automation for Financial Services](#).

Setting up products

Products are the goods and services that you sell to your customers. A Sales Ops operator sets up and manages your products in the Pega Sales Automation for Financial Services application. You can set up your products by importing existing product data, or by entering the product data manually.

For more information, see [Configuring an external product data source](#) and [Product Designer for Financial Services workflow](#).

To set up products manually, complete the following steps:

1. Log into the application as an operator with the Sales Ops persona.
2. In the navigation pane, click **Tools**.
3. Click **Products** > **Create product**.
4. Complete the necessary fields and click **Submit**.
5. Repeat steps 3 and 4 for each level of your product hierarchy.

- [Configuring an external product data source](#)
- [Populating contact and organization data](#)
- [Product Designer for Financial Services workflow](#)

Configuring an external product data source

If your products are maintained in an external system of record, you must update the `crmAppExtModel` data transform and the `D_InterfaceProductListFromExternal` data page for your implementation.

1. In the header of Dev Studio, search for and select the `crmAppExtModel` data transform.
2. Locate the `.IsProductSORExternal` **Target** and enter `true` in the **Source** field for the target.
3. Click **Save**.
4. In the Dev Studio header search text field, search for and select the `D_InterfaceProductListFromExternal` data page.
5. In the **Data sources** section, configure the external system of record for your products.
Review the `crmBuildSampleInterfaceData` and `ConstructSampleProductInstance` data transforms to see a sample interface data model. For more information, see [Data page rules - Using the Definition tab](#).
6. Click **Save**.

Populating contact and organization data

Use the data models and pre-built connectors to connect your system of record (SOR) for customer and organization data to Pega Sales Automation for Financial Services. Load a core set of customer data from your SOR to Pega Sales Automation for Financial Services through Pega Foundation for Financial Services, and then establish a connection from Pega Sales Automation for Financial Services to the secondary customer data (for example, account information) through the data pages of the Pega Foundation for Financial Services.

Complete the following steps to populate a Pega Sales Automation for Financial Services implementation with contact and organization data:

- [Mapping external customer and organization data](#)
- [Synchronizing customer and organization data](#)

Mapping external customer and organization data

In Pega Sales Automation for Financial Services, you can import your data by using the Data import wizard, but you can also connect to the secondary customer data, such as, financial account holdings by mapping the Pega Foundation for Financial Services tables with the Pega Sales Automation for Financial Services tables. A cross reference table is required to match the keys of a contact or an organization entity from multiple system of records to a master contact or organization entity key.

The Pega Foundation for Financial Services serves as the template for the system of record of customer data, and Pega Sales Automation for Financial Services is the system of record for prospect data.

Use your database management software to populate cross-reference tables that match the keys of contacts in Pega Sales Automation for Financial Services with the contact keys from Pega Foundation for Financial Services.

The Contact relationship table has **CRMEntityID** column as the master record key, because Pega Sales Automation for Financial Services is the master system of record and the **ExternalSystem** column. The following table shows the Contact relationship table structure and sample record pattern:

CRMEntityID	ExternalID	ExternalSystem
PEGASAFS-WORK-CONTACT CON-20781	7777777777	Pega Foundation for Financial Services
PEGASAFS-WORK-ORG ORG-123	9912348966	Pega Foundation for Financial Services

To populate Pega Sales Automation for Financial Services with customer and organization data, complete the following steps:

1. Import the core customer and organization data to your application by using the Data import wizard. For more information, see [Pega Sales Automation for Financial Services data import](#).
2. Connect to the secondary customer data, by mapping the following tables:
 - a. PegaSAFS-Data-EntityxRef-Contact to safs_data_contact_xref table
 - b. PegaSAFS-Data-EntityxRef-Org to safs_data_org_xref table
 - c. PegaSAFS-Data-EntityxRef-Household to safs_data_household_xref table
 - d. PegaSAFS-Data-EntityxRef-Relationship to safs_data_relationship_xref table

All the above rules, classes, properties, and data pages are available in the PegaCRMBase application.

Synchronizing customer and organization data

After establishing the connection from your SOR (through Financial Services Industry Foundation) to Pega Sales Automation for Financial Services, implement a methodology for synchronizing customer and organization data between the two systems. Choose one of the following options:

- Implement a batch process that synchronizes the customer data on a periodic basis, as described in [Populating customer and organization data](#).
- Use the Pega Pega Sales Automation for Financial Services API to synchronize customer data in real time.

Product Designer for Financial Services workflow

Before starting the procedure, make sure that you have defined the operational structure for your organization.

For more information, see [Configuring the sales team structure](#).

To build your product information using the Product Designer for Financial Services workflow, perform the following steps:

1. Create products and bundles in the product catalog with the Product Studio tool. For more information, see the *Product Designer for Financial Services Implementation Guide* on the [Pega Foundation for Financial Services product page](#).
2. Indicate which products are available for sale in which territories by editing the inclusion and exclusion tables in the Pega Foundation for Financial Services application. For more information, see the *Product Designer for Financial Services Implementation Guide* on the [Pega Foundation for Financial Services product page](#).
3. Map the Product Designer for Financial Services product structure to the Pega Sales Automation for Financial Services product structure using the `OpenMapForSAFSPProductStructure` data transform. This mapping populates the product data in the `D_ProductsForSAFS` and `D_InterfaceProductListFromExternal` data pages.
4. **Optional:** Create additional product information in the Product Designer for Financial Services application.

Setting up competitors

Competitors are other organizations that are selling products similar to yours. A Sales Ops operator sets up and manages your competitors in the Pega Sales Automation for Financial Services application.

You can set up your competitors by importing existing competitor data, or by entering the competitor data manually.

To set up competitors manually, complete the following steps:

1. Log into the application as an operator with the Sales Ops persona.
2. In the navigation pane, click **Tools**.
3. Click **Competitors > Create competitors**.
4. Complete the fields on the Create competitor form.
5. Click **Submit**.

Implementing forecast management requirements

Forecast management provides a summary of your sales pipeline for the year, broken down by fiscal quarter and forecast category. You can use forecast management to review pipeline status for an entire territory or for an individual operator.

The basic features of forecast management are ready for use with Pega Sales Automation for Financial Services and do not require additional configuration during implementation. However, if you want to use the close plan feature with forecast management, you must activate it for your implementation. For more information, see [Activating application features](#).

Implementing activity and task management requirements

An activity is any meaningful communication between a relationship manager and a contact that is designed to drive a sale or develop a professional relationship. Activities have a purpose, an outcome, and an interaction date, and can have follow-up tasks. Activities are used in both the business-to-business (B2B) and business-to-consumer (B2C) selling models.

To manage activities and tasks in Pega Sales Automation for Financial Services, you must define your activity data model and import requirements.

1. Determine if you need to import existing activity and task data.
2. Determine the type and source of the activity and task data that you need to import.

Optional: Sales goals

Sales goals give the ability to plan quarterly or monthly goals for relationship managers based on a variety of metrics. By default, goals are based on revenue but you can define them by using other metrics, such as activities, the number of closed opportunities, or the number of created leads.

Operators with the Sales Ops persona define sales goals to be achieved by the relationship managers.

- [Defining requirements for sales goals management](#)
- [Setting up time periods for sales goals](#)

Defining requirements for sales goals management

Sales Ops operators can enter sales goals for relationship managers when setting up operator IDs or when updating the Sales Goals tab in existing operator records.

1. Determine the start and end date of the fiscal year for your sales organization.
2. Determine the sales goals reporting periods for your sales organization.
3. Determine if you need to import existing sales goals data.
4. Determine the type and source of the existing sales goals data that you need to import.

Setting up time periods for sales goals

Configure time periods if you plan to create and monitor sales goals. Pega Sales Automation for Financial Services uses the time periods that you set up to track progress toward meeting sales goals. Sales Ops operators enter sales goals for relationship managers when setting up operator IDs or when updating the **Sales Goals** tab in existing operator records.

Define, what a year means for your organization, for example for the financial industry, you can define a year starting from April 1st until March 31st. You can also define quarters, if necessary.

Use the task below to manually add sales goals. Use data loaders to upload multiple sales goals at the same time. For more information, see [Configuring data loaders extensions](#).

1. Log in as a Sales Ops.
2. In the User portal navigation pane, click **Tools**.
3. On the **Tools** screen, click **Time periods > Create time period**.
For example, define the time period for the sales representative to close x number of opportunities, or to win x millions of USD within the set time frame.
4. On the **Time period** form, define the new time period settings.



Note: Create the fiscal year time period first, and then create the quarters as children to the fiscal year. If you measure progress by month, you can add months as children to each quarter.

5. Click **Submit**.

As a Sales Ops while editing any operator record, you can add and edit the sales goals. As a sales representative, you can track the set sales goals assigned to you by using the **Quota Attainment** widget on the dashboard.

Implementing reporting

Based on your login and portal, Pega Sales Automation for Financial Services provides numerous pre-configured reports to monitor sales activity and to monitor workforce productivity. These standard reports are driven by the case lifecycle and work object infrastructure, as well as rules for goals and deadlines used in managing leads and opportunities.

- [Defining reporting requirements](#)

Defining reporting requirements

Consider your reporting requirements early in the planning process.

For more information about the reporting capabilities in Pega Sales Automation for Financial Services, see [Reporting](#).

1. Review the description of each application-provided report, identify the expected volume of data, and determine how often you expect to run each report.
2. Identify any required metrics that are not already provided by the application.

Reviewing existing reports

The application includes numerous reports. Identify the application-provided reports that meet your business needs.



Note: Pega Sales Automation for Financial Services includes the standard Pega Sales Automation reports to help you monitor and analyze your sales activity. For descriptions of each report, see [Pega Sales Automation reports](#).

Implementing a mobile app

The Pega Infinity Mobile Client is a service that enables the quick building of mobile apps from the Pega Platform application. You need a license for the Pega Infinity Mobile Client. For information about Hybrid Client mobile app, see [Pega Sales Automation Hybrid Client mobile app deployment](#).

- [Completing prerequisite tasks before building the Pega Sales Automation for Financial Services mobile app](#)
- [Building the Pega Sales Automation for Financial Services mobile app](#)

Completing prerequisite tasks before building the Pega Sales Automation for Financial Services mobile app

Before you build the Pega Sales Automation for Financial Services mobile app, review the following items: These steps apply to both Pega Infinity Mobile Client and Hybrid Client mobile apps.

1. [Verify that Pega Platform settings are complete](#).

These settings are configured during the system configuration phase by the Pega Platform administrator in your organization. If they are not configured, contact the administrator to verify that your organization has been licensed to use the Pega Mobile Client app building feature. If you do not have a license, contact your account executive.

2. Determine if the organization needs to customize the mobile app.

For more information about the Pega Mobile Client API, see [Pega Mobile Client API reference](#) and [Searching device contacts with Pega Mobile Client API](#).

If you are planning to build a mobile app, consider configuring your mobile app's functionality with support of device-specific features, such as a bar code scanner.

3. Ensure that you have a certificate set for the Android or iOS mobile platform. A certificate set defines various settings which identify the Android or iOS application that you are creating.

For more information about the certificate set for the Android platform, see [Creating an Android certification set](#).

You need to generate the iOS certificate set in the Apple Developer portal ahead of time. For more information, see [Generating mobile certificates for the iOS platform](#).

4. Determine if the organization wants to brand the mobile app.

You can customize the branding of your mobile app to serve the organization's specific requirements and needs. You can upload your own images for the splash screen and menu icon to the Pega Platform during the app customization process. If you do not provide custom assets, a default Pega Platform branding is applied. For more information, see [Mobile app branding and layout. Uploading branding assets and custom modules](#).

Building the Pega Sales Automation for Financial Services mobile app

After you determine the organization's needs in the [Completing prerequisite tasks before building the Pega Sales Automation for Financial Services mobile app](#) section, you can build your Pega Infinity Mobile Client mobile app.

1. Review app features.

For more information, see [Working with sample data](#).

2. Review the rules and patterns for reuse in the mobile app.

For more information, see [Reviewing rules and patterns for reuse in the mobile app](#).

3. [Review Pega Sales Automation for Financial Services rules and patterns for reuse in the mobile app](#).

4. Choose from the following options:

- Use the Pega Sales Automation for Financial Services Hybrid Client mobile app with the built-in offline support.

For information about the Hybrid Client mobile app deployment, see [Pega Sales Automation Hybrid Client mobile app deployment](#).

- Use the Pega Infinity Mobile Client app with no offline support.
- Build a mobile app based on mobile platform.

For more information, see [Configuring offline support for a mobile app](#).

5. [Build and brand your mobile app](#).

6. [Deploy your mobile app](#).



Note: For more information, see [Pega Mobile](#).

7. **Optional:** [Set up optical character recognition \(OCR\) scanning.](#)

- [Reviewing app features in the sample application](#)
- [Reviewing rules and patterns for reuse in the mobile app](#)
- [Deploying your mobile app](#)
- [Setting up optical character recognition \(OCR\) scanning](#)

Reviewing app features in the sample application

Before you deploy the Pega Sales Automation for Financial Services mobile app, install the Pega Sales Automation for Financial Services sample application to explore the mobile app features. For more information, see [Working with Pega Sales Automation sample data](#).

Reviewing rules and patterns for reuse in the mobile app

You can reuse or extend various Pega Sales Automation for Financial Services rules and patterns to control the appearance of your Pega Infinity Mobile Client mobile app based on your business requirements.

- To add or remove navigation items, in Dev Studio, search for and override the *SAPortalMenuItems_Mobile* rule.
- To customize the appearance of the app with cascading style sheets, override the *sa-style-helper-pimc-ext* file in your implementation layer by adding your custom code.
- To use the Late for meeting notification, override and enable the *GenerateAppointmentNotifications* job scheduler.



Note: To override and enable the *GenerateAppointmentNotifications* job scheduler, in Admin Studio, click **Resources** > **Jobs**, search for *GenerateAppointmentNotifications*, and then click **Override**.

- To use the Today's meeting and Appointments notifications, configure Microsoft Exchange services.



Note: For basic authentication, update the *EWS_Integration_AuthProfile* authentication profile, or *EWSOAuthAuthenticationProfile* for OAuth2 authentication. In addition, users must have email accounts of the same domain as added in the used authentication profile. Credentials added in the authentication profile must have the impersonation permissions added. For more information, see [Microsoft Exchange and Microsoft Outlook integration in Pega Sales Automation](#).

Deploying your mobile app

To create a Pega Infinity Mobile Client mobile app channel or an SDK app for the Android or iOS platforms, perform the following steps:

1. In the navigation pane of App Studio, click **Channels**, and open the out-of-the-box Pega Sales Automation for Financial Services Mobile Client.
2. In the top-right corner of the screen, click **Build app**.
The system automatically creates a portal with the same name as the mobile app name.
3. Switch to Dev Studio.
4. In the header of Dev Studio, open your current access group to associate this access group with a portal, and configure which workspaces or web channels are available to the users working in your application:
 - a. In the bottom-left corner, click the **Profile menu** button > **Access group**.

- b. On the **Definition** tab, in the **Available portals** section, click **+ Add portal**.
 - c. In the **Name** field, press the Down Arrow key and select the portal name.
 - d. To make this portal the default for all operators in the access group, click the radio button next to it.
5. Click **Save**.
- For information about the Hybrid Client mobile app deployment, see [Pega Sales Automation Hybrid Client mobile app deployment](#).

Setting up optical character recognition (OCR) scanning

Use optical character recognition (OCR) to scan a business card and create a contact in Pega Sales Automation for Financial Services. Take a picture of a business card with your mobile device's camera, and then send it to the third-party OCR software vendor, for example, Abbyy FineReader or Google Vision, where it is parsed into a standard output, such as XML or JSON. The system then maps the result back to Pega Sales Automation for Financial Services to create a new contact record.

Before you begin: Set up the Pega Sales Automation for Financial Services mobile app so that you can scan a business card to create a contact directly in the application. Also, you must create the user name and password of the OCR vendor.

You can review the created framework setup for Abbyy FineReader as a configuration example by using the Pega Sales Automation for Financial Services SAPIus sample application.

1. In Dev Studio, depending on the vendor you choose, either add the *PegaCRM-Abbyy* ruleset to the application stack, or add the ruleset of your chosen vendor.
 - a. In the header of Dev Studio, click *Your application name* > **Definition**.
 - b. In the **Built on applications** section, add either the *PegaCRM-Abbyy* ruleset or any custom ruleset for OCR.

For more information about creating and saving rulesets, see [Creating a ruleset and ruleset version](#).

2. In the *PegaCRM-Int-BusinessCard*- class, create a data model in your ruleset that matches the data model, class structure, and properties either from the Abbyy setup in the sample application or your custom vendor.

If you use the Abbyy FineReader, use the *PegaCRM-Int-BusinessCard-Abbyy* class. For other vendors, use the *PegaCRM-Int-BusinessCard-vendorname* format. If the third-party software uses an XML object, create a data structure to hold the XML structure. If the third-party software uses a JSON object, create a data structure to hold the JSON object.

For more information about creating data models, see [Adding a field group to your data model](#).

3. Configure and save the *GetCardData* and *MapBusinessCardDetails* extension point rules to collect data.
 - a. Search for and open the *GetCardData* activity, which parses the business card data for the OCR vendor.

 **Tip:** In the sample application, the *GetCardData* activity calls the *GetCardData* Java API, which collects the file content, the vendor's user name and password. The sample application includes the sample application RAP with the *PegaCRM Abbyy.zip* file, which is a Java wrapper application that calls the Abbyy software.

- b. In the **Step page** fields, enter the necessary data, for example, the user name and password for your chosen vendor, and the class name for parsing data to the *BusinessCardData* page.
- c. Search for and open the *MapBusinessCardDetails* data transform to map the data from the OCR vendor to the contact in Pega Sales Automation for Financial Services



Tip: The system receives the XML structure after processing the file image. The *MapBusinessCardDetails* data transform then maps the data from the XML data model to the contact data structure and makes it available in Pega Sales Automation for Financial Services.

- d. Configure the **Target** fields for *BusinessCardMatchTo*. rows to match the data model of your structure under the *PegaCRM-Int-BusinessCard*- class.

After you set up the OCR integration, click **Scan card** on a contact form in the app to use your mobile device's camera to take a picture of a business card. The app receives the business card image and sends it to a third-party OCR software vendor that parses the image into a standard output, such as XML or JSON. The result is then mapped back to Pega Sales Automation for Financial Services to create a new contact record.

Implementing Pega Customer Decision Hub for Financial Services features

Pega Sales Automation for Financial Services includes numerous Pega Customer Decision Hub features to support the sales process, including: local campaigns, next-best-offer strategies, and next-best-action strategies.

- [Local campaigns](#)
- [Next-best-offer recommendations](#)
- [Enabling local campaigns and next-best-offer recommendations](#)
- [Next-best-action strategies](#)

Local campaigns

As a relationship manager, you can use the local campaigns feature to create and send personalized email and SMS campaigns to contacts in the Pega Sales Automation for Financial Services application. When a contact accepts a campaign offer, a lead is automatically generated in the application.

Local campaigns are supported for both business-to-business (B2B) and business-to-consumer (B2C) selling models.

To implement local campaigns in Pega Sales Automation, you must first integrate Pega Sales Automation for Financial Services with Pega Customer Decision Hub for Financial Services. You can then activate the feature in Pega Sales Automation for Financial Services.

- For information about integrating Pega Sales Automation for Financial Services with Pega Customer Decision Hub for Financial Services, see [Configuring your applications for Pega Customer Relationship Management](#).
- For information about activating local campaigns in Pega Sales Automation for Financial Services, see [Enabling local campaigns and next-best-offer recommendations](#).

Next-best-offer recommendations

Pega Sales Automation for Financial Services uses Pega Customer Decision Hub to identify the top sales offer across a relationship manager's book of business. Adaptive models guide relationship managers to the offers that have the highest propensity to close. When a prospect accepts an offer, an opportunity is automatically generated.

To implement next-best-offer recommendations in Pega Sales Automation for Financial Services, you must first integrate Pega Sales Automation for Financial Services with Pega Customer Decision Hub. You can then activate the feature in Pega Sales Automation for Financial Services.

- For information about integrating Pega Sales Automation for Financial Services with Pega Customer Decision Hub, see [Configuring your applications for Pega Customer Relationship Management](#).
- For information about activating next-best-offer recommendations in Pega Sales Automation for Financial Services, see [Enabling local campaigns and next-best-offer recommendations](#).

Enabling local campaigns and next-best-offer recommendations

To implement local campaigns and next-best-offer recommendations in Pega Sales Automation for Financial Services, you must first integrate Pega Sales Automation for Financial Services with Pega Customer Decision Hub. You can then activate the features in Pega Sales Automation for Financial Services.

1. In the navigation pane of App Studio, click **Settings**.
2. Click the **Pega Customer Decision Hub** tab.
3. To activate local campaigns, click the **Local campaigns** check box.
4. To activate next best offers, click the **Next best offers** check box.
5. In the **Pega Customer Decision Hub URL** field, enter the URL for your Pega Customer Decision Hub implementation, for example, `http://NN.NN.N.NNN:8080/prweb/PRSOAPServlet`.
6. In the **Customer lifetime value (CLV)** fields, enter the maximum, average, and minimum CLV values for your organization.
Customer lifetime value (CLV) is a prediction of the net profit that is generated as a result of an organization's entire future relationship with a customer. Pega Customer Decision Hub uses CLV values to identify customers with the potential to grow, which allows you to more effectively target your marketing efforts. Customer lifetime value is applicable to both business-to-business (B2B) and business-to-consumer (B2C) customers.
7. Click **Save**.

Next-best-action strategies

Pega Sales Automation for Financial Services uses Pega Customer Decision Hub and Decision Management capabilities to identify the next best action for every opportunity in the application, rank the top actions, and display the results in the Next best actions widget on the relationship manager's dashboard.

Next-best-action strategies use predictors such as digital activity, service activity, products sold, and relationship manager activity to determine the next best action for every opportunity.

- For more information, see [Next best action in Pega Sales Automation](#).

Implementing engagement maps

Engagement maps are account and territory planning tools that provide a visual map of your product penetration levels. Engagement maps can help you to identify territories and accounts where your product penetration level is low.

Before you begin:

Before you can view engagement maps, you must set up a product hierarchy in Pega Sales Automation for Financial Services. For more information, see [Pega Sales Automation for Financial Services data import](#).



Note: The optional engagement maps feature is disabled by default and therefore not visible in the user portals. To use this feature, you must activate it in your application. For more information, see [Activating application features](#).

Implementing organization trend data

Organization trends provide visibility into your interactions with customers across multiple channels, including web activity, email traffic, interactions with contacts, and contact growth. You can source data for your trend reports from Pega Sales Automation for Financial Services tables or from external databases or data warehouses. Organization trend data is displayed in the corresponding organization record in Pega Sales Automation for Financial Services.

- [Defining organization trend requirements](#)
- [Mapping data for organization trends](#)

Defining organization trend requirements

If you plan to track organization trends, you must map the application to the source of the trend data.

1. Determine the source of trend data.
2. Map the customer engagement data class to the table containing the desired data.
For more information, see [Mapping data for organization trends](#).

Mapping data for organization trends

Organization trends provide visibility into your interactions with customers across multiple channels, including web activity, email traffic, and interactions with contacts.

Before you begin:

You can source data for your trend reports from Pega Sales Automation for Financial Services tables or from external databases or data warehouses.

You must map the customer engagement data class in the application to the table containing the desired data.

1. In the header of Dev Studio, search for and select the `PegaCRM-Int-CED-Aggregated` data class.
2. Map to the desired database table:
 - For an external table, map to the external database or data warehouse table.
 - For an internal table, map to the `Pega Sales Automation CED_SAMPLE_DATA` sample table.
3. Click **Save**.

For more information about completing the fields on the `PegaCRM-Int-CED-Aggregated` data class form, see [Database Class Mappings tab](#).

Configuring tagging for work objects and Pulse posts

Every Pega Sales Automation for Financial Services user can tag work objects and use these tags as sorting phrases to organize data in a personalized way.

You can add a tag to work objects (organizations, accounts, contacts, leads, households, appointments, and opportunities), or to Pulse posts.

To add a tag, open either a work object or a Pulse post and click **Actions** > **Add tag**. To view all objects that have an associated tag, in the Pega Sales Automation for Financial Services navigation pane, click **Tags**.

To tag objects other than those mentioned above, configure tags in the following way:

1. In the header of Dev Studio, search for `crmWorkMenu` and select the rule for the object that you want to configure.
2. On the **Editor** tab, double-click the **Tags** line to open the tags configuration section.
3. On the **Actions** tab, in the **Local Action** field, enter `pzAssociateTags`.
4. Click **OK** and **Save**.

What to do next: For more information, see [Tagging a new message in Pulse](#).

Collaborate in Pulse

Pulse adds social activity stream capabilities to your user interface. With Pulse, application users can collaborate in real time, share comments, files, and URLs with other users, and take action directly from an activity stream.

Pulse provides contextual behavior, so that its scope depends upon where you use it in a Pega Sales Automation for Financial Services application. You can broadcast to an entire sales team or share information only with users who have access to a specific lead or opportunity. For more information about the Pulse feature, see [Collaborating with users by using Pulse](#).

Connecting to Pega Call

Pega Call provides robust computer telephony integration (CTI) support for Pega Sales Automation for Financial Services users, including click-to-dial functionality for outgoing calls and adaptive screen pops for incoming calls.

- [Defining computer telephony integration \(CTI\) requirements](#)
- [Configuring computer telephony integration](#)

Defining computer telephony integration (CTI) requirements

Plan the connectivity to your telephony infrastructure by defining the computer telephony integration (CTI) requirements.

Before you begin:

After you install and configure Pega Call, you must activate CTI functionality for the application and then add the `PegaCTI:CSR` access role to all the access groups for which you are providing CTI access. For more information, see [Activating application features](#).

1. Understand which telephony vendor that your site uses.
2. Review the [Pega Call CTI Implementation materials](#) to understand the configuration for your vendor.
3. Meet with the technical resources responsible for configuration and maintenance of the Contact Center Telephony and CTI infrastructure at your site to get an understanding of the current configuration and desired call flows and customer experience. Ensure that a resource from the telephony team is available to work with the implementation team.
4. Share the information related to the way Pega Call gets connected to the CTI environment with the telephony expert. The telephony expert is required to configure the CTI environment to allow Pega Call to connect and share the configuration details with the Pega Call implementation team.

Configuring computer telephony integration

To configure computer telephony integration (CTI) for Pega Sales Automation for Financial Services, you must enable the CTI functionality in the application and then add the `PegaCTI:CSR` access role to all the access groups for which you are providing CTI access.



Note: You must install and configure Pega Call to use CTI functionality in Pega Sales Automation for Financial Services. For more information, see the [Pega Call product page](#).

To configure your Pega Sales Automation for Financial Services implementation for CTI, complete the following steps:

1. In the header of Dev Studio, click **Configure > Org & Security > Groups & Roles > Access Roles**.
2. Select an access group.
3. On the **Definition** tab, in the **Available roles** section, click **Add role** and enter `PegaCTI:CSR`.
4. Click **Save**.
5. Repeat steps 2 through 4 for each access group for which you are providing CTI access.

After the configuration is complete, you can log in into CTI by clicking the **Phone** icon in the lower-left corner of the User portal.

Connecting to Pega Knowledge

Pega Knowledge is a standalone application that integrate with Pega Sales Automation for Financial Services. Pega Knowledge supports the creation and organization of rich content that it can then suggest relationship managers in the context of their selling activities.

Before you begin: Integration with Pega Knowledge is optional. If you plan to use this feature, you must activate it for your implementation. For more information, see [Enabling application features](#).

1. Identify the case types that benefit from added content. You can add knowledge content to the following case types:
 - Organization
 - Account
 - Contact
 - Opportunity
 - Lead

- Household
2. Develop relevant content to support the specific case types that you choose.

When planning knowledge content for case types, focus on content that is necessary to support your sales processes. Write the content concisely and limit the number of articles so that Pega Knowledge does not overwhelm the relationship managers with search results.

For additional information, see the *Pega Knowledge User Guide* on the [Pega Knowledge product page](#).

- [Pega Knowledge integration](#)
- [Adding Pega Knowledge records](#)

Pega Knowledge integration

Planning your application to support Pega Knowledge involves the following tasks.

Before you begin: Integration with Pega Knowledge is optional. If you plan to use this feature, you must activate it for your implementation. For more information, see [Activating application features](#).

1. Identifying the case types that need content. You can add knowledge content to the following case types:
 - Organization
 - Account
 - Contact
 - Opportunity
 - Lead
 - Household
2. Developing relevant content to support specific case types.

When planning, focus on the content that is necessary to support your sales processes. Write the content concisely and limit the number of Pega Knowledge articles so that your relationship managers do not have a large number of search results.

For additional information, see the *Pega Knowledge User Guide* on the [Pega Knowledge product page](#).

Adding Pega Knowledge records

You can add knowledge records to support the display of Pega Knowledge content to assist your relationship managers at any stage of the sales process. Pega Sales Automation for Financial Services includes a set of relevant knowledge records that the application automatically recognizes when you associate knowledge articles with existing case types.

1. In the header of Dev Studio, click **Configure > Sales Automation > Inventory > Knowledge Relevant Records**.
2. In the **Class type** field, select a case type to which you want to add a knowledge record.
3. Click **Add records**.
4. In the **Add KM Relevant Records** dialog box, in the **Property name** field, enter the property name for the relevant record.
5. In the **Source class** field, enter the source class for the relevant record.

Pega Sales Automation for Financial Services supports the following property types:

- *STRING*
- *PAGE*
- *PAGE-LIST*
- *PAGE-GROUP*

6. Click **Submit**.

Implementing artificial intelligence

Pega Sales Automation for Financial Services artificial intelligence capabilities use predictive analytics, automated decisioning, and configurable business rules to provide insights and recommendations to relationship managers throughout the sales cycle.

Implementing third-party integrations

You can enable several third-party application integrations if your business requires these tools.

- [Defining integration requirements](#)
- [Pega Sales Automation for Financial Services integration with Microsoft Exchange](#)
- [Configuring Pega for Outlook VSTO and Pega for Outlook Office](#)
- [Configuring listener accounts for emails and appointments](#)
- [Connect to LinkedIn Sales Navigator](#)
- [Configuring Partner Relationship Management](#)

Defining integration requirements

You can integrate Pega Sales Automation for Financial Services with third party applications to extend the functionality of the application. Inventory the external applications that exist at your site and plan how to connect to them.

Some common integration points for Pega Sales Automation for Financial Services include interfaces to the following systems:

- Microsoft Exchange
- Microsoft Outlook (Pega for Outlook VSTO and Pega for Outlook Office)
- LinkedIn
- Customer applications

For information on integrating with customer applications, see [Integrating your application with external resources](#).

- Claims system
- Provider system
- Call center
- Product data
- Member data

1. Identify all integration points for your application.

2. Determine whether an interface already exists and how to connect to it.

Pega Sales Automation for Financial Services integration with Microsoft Exchange

Pega Sales Automation for Financial Services provides bi-directional calendar synchronization with Microsoft Exchange.

For more information, see [Email integration in Pega Sales Automation](#).

Configuring Pega for Outlook VSTO and Pega for Outlook Office

Pega Sales Automation for Financial Services provides two add-ins that you can use to integrate the application with Microsoft Outlook. The Pega for Outlook VSTO and Pega for Office Outlook add-ins support email integration between Microsoft Outlook and Pega Sales Automation for Financial Services and selective appointment integration between Microsoft Outlook and Pega Sales Automation for Financial Services.



Note: The Pega Sales Automation for Financial Services application installation includes the PegaFW-Outlook ruleset and SFAOutlookPortal.

Both add-ins provide real-time, context-specific insight into your Pega Sales Automation for Financial Services contacts, leads, opportunities, accounts, and organizations directly from Microsoft Outlook.

You can configure either Pega for Outlook VSTO or Pega for Outlook Office, but to leverage latest add-in technology, it is recommended to use Office add-in. For more information, see [Synchronizing Microsoft Exchange email with Pega Sales Automation email](#).

Configuring listener accounts for emails and appointments

With Pega Sales Automation for Financial Services, you can push emails and appointments from Microsoft Outlook (or another default mail client) to the Pega Platform. When an email or appointment is received, an email listener account identifies the recipients and maps the email or appointment to the appropriate operator.

You can associate incoming emails and appointments with contacts, organizations, and accounts in the application, and you can use Microsoft Outlook's vCard functionality to create a Pega Sales Automation for Financial Services contact from an Outlook contact.

Follow these steps to configure listener accounts for emails and appointments:

- [Creating the access group, operator, and email accounts](#)
- [Creating new email and appointment classes in the implementation layer](#)
- [Configuring associations with other application objects](#)
- [Updating the user interface](#)

Creating the access group, operator, and email accounts

To set up your listener account, you must create an access group and an operator ID, and configure email accounts to accept incoming emails and send bounce-back notifications.

1. In Dev Studio, create an access group. The default access group is `PegaSAFS:Services` with the following attributes:
 - PegaRULES:User4 role
 - Open, modify, search, and execute activity access to `PegaSAFS-Document-Email`

If you do not use the default access group, you must change the **Service access group** on the `FWEmailCollector` service class. For more information, see [Access groups](#).

2. Create an operator role with the newly created access group. Enter this operator in the **Requestor Login** section for the email listener. For information, see [Operators](#).

3. Configure the `SyncEmailCalendar` email account.

This is the account that the email listener uses to import emails and appointments. You can link this account to any email address. For more information, see [About Email Account data instances](#).



Note: For Exchange integration, enter your Exchange server information when you configure the `SyncEmailCalendar` email account.

4. Configure the `SyncEmailCalendar` email listener.
5. Create or modify the default email account with the type **Notify**. Pega Sales Automation for Financial Services uses this account to send a bounce-back email if the incoming message cannot be associated with any object in the application. Configure the Notify email account to look like it is an official communication coming from the application.

Creating new email and appointment classes in the implementation layer

You must create new email and appointment classes in your implementation layer for the integration to work properly.

1. In Dev Studio, create new classes for emails and appointments:
 - a. Set the direct inheritance for the email class to `PegaSAFS-Document-Email`.
 - b. Set the direct inheritance for the appointment class to `PegaCRM-Work-Appointment`. For more information, see [Class layers](#).
2. Update the `PegaCRM-Document-Email.getAppointmentClass` decision table to default to your new appointment class.
3. Create a new service package using the `FWEmailCollector` service as a guide.
4. Update the service email rule to set the page class to your new email class.

Configuring associations with other application objects

You can associate emails and appointments with other objects in the application, such as organizations, accounts, and contacts. Because your implementation uses classes inheriting from Pega Sales Automation for Financial Services classes, you need to be sure that the email integration is associating emails and appointments with implementation layer objects.

For Emails, this association is configured through activities called from `PegaCRM-Embed-Recipient.lookupRecipient`. For appointments, this association is configured through activities called from `PegaCRM-Embed-Recipient.DoRecipientAssociations`.

1. To update contact associations, in Dev Studio, perform the following steps:
 - a. Override `@baseclass.crmFindContactByEmail`.
 - b. Replace references to the `PegaCRM-Entity-Contact` class in the `obj-browse` calls, pages, and classes to refer to your contact implementation class.
2. To update organization associations, perform the following steps:
 - a. Create an implementation class for `PegaCRM-Index-OrgDomains`.
 - b. Update the class references in `@baseclass.crmFindOrgByDomain`.

Updating the user interface

Emails and appointments appear in several places in the Pega Sales Automation for Financial Services user interface. You must update application rules to change class references to your implementation classes.

1. In Dev Studio, update the following rules for appointments:
 - a. `Data-Portal.SFAPortal_MyCalendar` - Modify the configuration of the `pxCalendar` control to update the class reference on the **Appointments** tab.
 - b. `@baseclass.crmPopulateAppointmentEvents` - Modify step 1 to update the report class.
 - c. `crmRelatedAppointments` - Override this rule in your implementation class to update the class reference to the report definition. Update both the repeating grid and the **Open Report** icon. There are versions in `PegaCRM-Entity-Contact` and `PegaCRM-Entity-Org`.
2. Copy the following report definitions from `PegaCRM-Work-Appointment` to your implementation class:
 - `crmAppointmentsByContact`
 - `crmAppointmentsByOperator`
 - `crmAppointmentsByOrg`
3. Update the following rules for emails:
 - `crmRelatedEmails` - Override this rule in your implementation classes to update the class reference to the report definition. Update both the repeating grid and the **Open Report** icon. There are versions in `PegaCRM-`, `PegaCRM-Entity-Contact`, and `PegaCRM-Entity-Org`.
4. Copy the following report definitions from `PegaCRM-Document-Email` to your implementation class:
 - `crmEmailsByLinkedID`
 - `crmEmailsByOperatorID`
 - `crmEmailsByContact`

Connect to LinkedIn Sales Navigator

Connect Pega Sales Automation to the LinkedIn Sales Navigator to help sales representatives find new contacts with recommended leads and icebreakers, as well as connections among sales representatives and their prospects. The LinkedIn Sales Navigator widget is displayed in contacts, leads, opportunities, and organization pages in Pega Sales Automation.

Before you begin: Register your application with LinkedIn.



Note:

Connecting Pega Sales Automation to LinkedIn requires an active LinkedIn account and an application. For detailed information about how to complete each step, see the LinkedIn developer documentation.

1. Create a LinkedIn account.
You can use your existing account.
2. Create a LinkedIn application.
You can create more than one application.

To connect Pega Sales Automation with LinkedIn Sales Navigator, perform the following steps:

1. In the newly created LinkedIn application navigation pane, click **Authentication**, and then save the Client ID and Client Secret for use in further configuration.
2. In the LinkedIn application navigation pane, click **JavaScript**, and then add `https://www.linkedin.com` as a valid SDK domain.

This is necessary in order to render the widget and the sign-in button.

3. Configure the JavaScript SDK domains.

To secure the connection between the LinkedIn account and your Pega Sales Automation application, configure valid SDK domains. By doing this, you ensure that other applications cannot fraudulently represent themselves as your own application by using the JavaScript SDK.

- a. In the LinkedIn application, click **JavaScript**.
 - b. In the **Valid SDK Domains** section, add your JavaScript API domains and protocol.
4. Enable LinkedIn Sales Navigator in Pega Sales Automation.

You must first enable LinkedIn Sales Navigator in Pega Sales Automation before sales representatives can begin to use the LinkedIn Sales Navigator widget.

 - a. In the App Studio navigation pane, click **Settings > Application Settings**, and then click the **Social media** tab.
 - b. On the **Social media** tab, in the **LinkedIn integration** section, select the **LinkedIn** check box.
 - c. Enter the Organization ID that you used to create your LinkedIn application.
 - d. Enter the Client ID and the Client Secret that you generate as part of the *Registering your application with LinkedIn* task above.
 - e. Click **Save**.

Configuring Partner Relationship Management

To configure Partner Relationship Management, perform the steps below in your implementation layer.

1. In the navigation pane of App Studio, click **Settings > Application Settings**.
2. On the **Features** tab, in the **Features** section, enable PRM by selecting the **Partner Relationship Management (PRM)** check box.
3. Click **Save**.
4. Set up collateral, by performing the following steps:
 - a. On the **Features** tab, in the **Features** section, select the **Knowledge management** check box.
 - b. Click **Save**.
5. Update the *OnboardingCategories* dynamic system setting with your onboarding categories to allow channel managers to add articles from these categories to the onboarding content.

- [Optional: Configuring deal registration](#)
- [Configuring Market Development Fund \(MDF\)](#)

Optional: Configuring deal registration

By using deal registration, channel managers avoid channel conflicts with duplicated deals. Partner sellers register deals and can only start working on it after the deal is approved by channel managers. Deal registration is supported only for the B2B selling mode.



Note: The following steps are required only after upgrading from versions earlier than 8.1.

To configure deal registration, perform the following steps:

1. **Optional:** To view and work on deals, add the *crmCanViewDeals* privilege to the channel manager and partner operator access roles in your implementation layer.
If your implementation role already has this product role configured as dependent, then this change is not required because it is covered through inheritance.
2. In the implementation lead class inheriting from the *PegaCRM-Work-SFA-Lead* class, expose *PartnerID* and *IsPartnerSourced* properties.
3. In the implementation opportunity class inheriting from the *PegaCRM-Work-SFA-Opportunity* class, expose *PartnerID* and *IsPartnerSourced* properties.
4. In your implementation layer, in the Lead case type, on the **Processes** tab, add the *DealSubmitForApproval* flow to the **Case wide supporting processes** list.

Configuring Market Development Fund (MDF)

Market Development Fund (MDF) provides channel managers with the ability to support the marketing efforts of their partners. As a channel manager, to approve and manage marketing activities initiated by partners you must configure Marketing Development Fund.

You must enable MDF in App Studio, and then configure the *MDFTIMEPERIODTYPE* dynamic system setting.

1. In the navigation pane of App Studio, click **Settings > Application Settings**.
2. On the **Features** tab, in the **Features** section, enable MDF by selecting the **Market development fund (MDF)** check box.
3. Click **Save**.
4. In the header of Dev Studio, search for and open the *MDFTIMEPERIODTYPE* dynamic system setting.
5. In the **Value** field, enter the time period for budgets, for example, *Quarter*.
6. Click **Save**.

What to do next: See, [Managing the Market Development Fund \(MDF\) budgets](#).

Creating email templates

As an operator with the Sales Rep persona, you can create and configure custom and reusable email templates for sales representatives to use to work more effectively and spend less time on the manual daily work emailing clients and prospects.

1. Log in to Pega Sales Automation for Financial Services as a Sales Ops.
2. In the User portal navigation pane, click **Tools**, and then click **Email templates**.
3. Click **Create email template**.
4. On the **New email template** screen, perform the following steps:
 - a. Enter the name of the template.
 - b. Add the email title, logo, and email body by editing the displayed email sections.
 - c. **Optional:** If needed, include inline images.
 - d. Click **Pick email template** to see the available email template designs.

- e. If needed, change the edit mode to either `rich text editor` or `source only` to view the HTML version.
- f. Click **Create**.

To view the created template, refresh the email templates list and open the newly created email template.

What to do next: See, [Sending emails in bulk](#).

Managing distribution lists

As a sales representative or sales manager, save time and increase efficiency by creating custom distribution lists of either contacts or operators, and then send emails in bulk to those recipients. You can also use distribution lists to communicate with fellow sales representatives.

1. Log in to the application as either a sales representative or sales manager persona.
2. In the **User portal** navigation pane, click **Bulk emails**.
3. On the **Bulk emails** screen, click **Distribution lists** and perform any of the following steps:

Choices

Action

Add a distribution list

- a. Click **Create new list**.
- b. In the **List name** field, enter the list name.
- c. Select either `contact` or `operator` from the **List type** list.
Based on what you choose, contacts or operators are listed in the table below.
- d. Select the check boxes next to contacts or operators to add them to the distribution list.
- e. Click **Submit**.

Edit a distribution list

- a. Select and open the list that you want to edit.
You can view any lists but you can only edit the lists that you create.
- b. Click **Edit**.
- c. Add or remove contacts or operators depending on the list type.
- d. Click **Submit**.

What to do next: You can send emails to any distribution list directly from the **Bulk emails** screen by clicking **Send bulk email**. See, [Sending emails in bulk](#).

Configuring bulk email

Configure bulk email to send to multiple recipients, which reduces manual work for relationship managers and increases their daily effectiveness. The bulk email feature is enabled by default. The configuration steps in this task differ depending on whether you introduce custom fields for emails when implementing the product.



Note: If you did create custom elements during the implementation process that you want to display in your emails, see [Configuring bulk email with custom fields](#).

If you did not introduce any custom changes, perform the following steps to configure bulk email:

1. To configure whether there is a limit on the maximum number of recipients that your bulk email can reach, as well as a limit on the number of emails that the system can send every day, perform the following steps:
 - a. In the navigation pane of App Studio, click **Settings > Application Settings**.
 - b. In the **Bulk Email Configuration** section, depending on your requirements, select the **Maximum number of recipients per email** field and enter a new value, and select or clear the **Enable limits per day for sending bulk email** check box.

Tip: The default value for the **Maximum number of recipients per email** field is 200. If your email SMTP server has a daily limit on sending emails from a single account, enable the **Enabled limits per day for sending bulk emails** check box. If you select this check box, remember to set a **Maximum number of recipients per email** value as well.
 - c. Click **Save**.
2. In Dev Studio, check whether your public URL is compatible with email tracking:

Email tracking works by hiding a pixel image in the email body. When you configure email tracking, the system creates a tracking URL by adding `/PRHTTPService/TrackSendEmail/PegaFW-Documents-Email/OpenSendEmail` to your public URL.

 - a. In the header of Dev Studio, click **Configure > System > Settings > URLs**.
 - b. In the **Public Link URL** field, check whether your URL is in the following format:


```
https://domain.domaintail.com/prweb.
```
 - If your public URL matches the correct format for bulk email, no further action is required.
 - If your public URL does not match the correct format, enter the correct URL in the **Value** field of the *TrackingPixelDomainURL* dynamic system setting.

The *TrackingPixelDomainURL* dynamic system setting overrides the URL in the **Public Link URL** field.



Note: If you leave both values blank, the system disables tracking for emails. If you then send an email to Google or Amazon work email servers, the email open count might not be accurate because Google and Amazon servers use an image caching mechanism in which the server loads images internally. The open count can then increase, even if the email is unopened. If email is sent to recipients whose email server is hosted by Google or Amazon.

3. Enable the *SendEmailProcessor* job scheduler.

The *SendEmailProcessor* job scheduler invokes the sending of bulk email, which invokes the Pega Platform *Call-Automation* API. This API uses the SMTP protocol to send emails to recipients.

 - a. In the navigation pane of Dev Studio, click **Records > SysAdmin > Job Scheduler**, and then search for and open the *SendEmailProcessor* job scheduler.
 - b. Turn on the **Enable Job Scheduler** switch.

This job scheduler must run on a single node only.
4. Configure email accounts or multiple accounts for bulk email in App Studio.

- a. In the navigation pane of App Studio, click **Settings > Email accounts**.



Important: Depending on whether your email SMTP server has a daily limit on sending emails from a single account, or one account is not enough for your whole organization's needs, configure either one or multiple accounts. If you do not configure any email account, the *SendEmailProcessor* job scheduler will not process any emails.



Note: If your SMTP server has daily limits and you change the default bulk email settings in App Studio, configure email accounts only for the bulk email feature's use.

- b. Search for and open the *Pega-BulkEmail-Sender-First* email account.
- c. Configure the **Sender** section by entering your SMTP server values.
- d. Click **Submit**.
- e. **Optional:** If needed, search for, open, and configure the *Pega-BulkEmail-Sender-Second* and *Pega-BulkEmail-Sender-Third* email accounts.

What to do next: See, [Sending emails in bulk](#).

- [Configuring bulk email with custom fields](#)
- [Sending emails in bulk](#)

Configuring bulk email with custom fields

Send bulk email to multiple recipients, which reduces manual work for relationship managers and increases their daily effectiveness. The configuration steps in this task differ depending on whether you introduce custom fields for emails when implementing the product.



Note: If you did not create any custom elements during the implementation process for display in your emails, see [Configuring bulk email](#).

If you did create custom fields for your bulk email, perform the following steps:

1. To configure whether there is a limit on the maximum number of recipients that your bulk email can reach, as well as a limit on the number of emails that the system can send every day, perform the following steps:
 - a. In the navigation pane of App Studio, click **Settings > Application Settings**.
 - b. In the **Bulk Email Configuration** section, depending on your requirements, select the **Maximum number of recipients per email** field and enter a new value, and select or clear the **Enable limits per day for sending bulk email** check box.

Tip: The default value for **Maximum number of recipients per email** is 200. If your email SMTP server has a daily limit on sending emails from a single account, select the **Enabled limits per day for sending bulk emails** check box. If you select this check box, remember to set a **Maximum number of recipients per email** value as well.
 - c. Click **Save**.
2. Configure merging of custom dynamic fields:

Pega Sales Automation for Financial Services supports merging of contacts, leads, operators, and classes out of the box. You can merge all the fields that are marked as relevant records into the email body.

 - a. In the header of Dev Studio, search for and open the *D_LoadContextEntries* requestor level data page to see the merge field context pages.

- b. In the header of Dev Studio, search for and open the *Code-Pega-List.LoadContextEntries* data transform to configure and add the fields to merge.
 - c. Click **Expand All** to see the full actions list.
 - d. Click **View Data Transform Parameters** next to the *LoadContextEntriesExtension* data transform and configure the following fields:
 - Configure the **Label** field to display the merge fields window when composing an email.
 - In the **Class name** field, enter the class name from which to source the relevant records.
 - In the **Page name** field, enter the page title to display in an email body after merging fields.
 - In the **Enttype** field, enter the entity name, for example, contact, lead, or operator.
 - Select the **IsSelectedAsRecipient** check box to identify the recipient types in the chosen entity type. This setting is not only for use with bulk email, but also to support dynamic templates.
3. **Optional:** To configure custom merge context pages, implement the code for resolving the merge fields when sending emails:
- a. In the header of Dev Studio,, in the search box, search for and open the *ManagePagesBasedOnConditions* activity.
 - b. Locate and open the *ManagePagesBasedOnConditionsExt* activity.
 - c. Configure the *ManagePagesBasedOnConditionsExt* extension activity using the *ManagePagesBasedOnConditions* activity as an example.
 - d. Save the *ManagePagesBasedOnConditionsExt* activity into your implementation layer.
4. In Dev Studio, check whether your public URL is compatible with email tracking:
- Email tracking works by hiding a pixel image in the email body. When you configure email tracking, the system creates the tracking URL by adding `/PRHTTPService/TrackSendEmail/PegaFW-Documen-Email/OpenSendEmail` to your public URL.
- a. In the header of Dev Studio, click **Configure > System > Settings > URLs**.
 - b. In the **Public Link URL** field, check whether your URL is in the following format:
`https://domain.domaintail.com/prweb.`
 - If your public URL matches the correct format for bulk email, no further action is required.
 - If your public URL does not match the correct format, enter the correct URL in the **Value** field of the *TrackingPixelDomainURL* dynamic system setting.
- The *TrackingPixelDomainURL* dynamic system setting overrides the URL in the **Public Link URL** field.
-  **Note:** If you leave both values blank, the system disables tracking for emails. If you then send an email to Google or Amazon work email servers, the email open count might not be accurate because Google and Amazon servers use an image caching mechanism in which the server loads images internally. The open count can then increase, even if the email is unopened. Your system should be available to the internet to make email tracking work if email is sent to recipients whose email server is hosted by Google or Amazon.
5. Enable the *SendEmailProcessor* job scheduler:
- The *SendEmailProcessor* job scheduler invokes the sending of bulk email, which invokes the Pega Platform *Call-Automation* API. This API uses the SMTP protocol to send emails to recipients.
- a. In the navigation pane of Dev Studio, click **Records > SysAdmin > Job Scheduler**, and then search for and open the *SendEmailProcessor* job scheduler.
 - b. Turn on the **Enable Job Scheduler** switch.
 This job scheduler must run on a single node only.

6. Configure email account or multiple accounts for bulk email in App Studio:
 - a. In the navigation pane of App Studio, click **Settings > Email accounts**.

 **Important:** Depending on whether your email SMTP server has a daily limit on sending emails from a single account, or one account is not enough for your whole organization's needs, configure either one or multiple accounts. If you do not configure any email account, the *SendEmailProcessor* job scheduler will not process any emails.

 **Note:** If you SMTP server has daily limits and you change the default bulk email settings in App Studio, configure email accounts only for the bulk email feature's use.
 - b. Search for and open the *Pega-BulkEmail-Sender-First* email account.
 - c. Configure the **Sender** section by entering your SMTP server values.
 - d. Click **Submit**.
 - e. **Optional:** If needed, search for, open, and configure the *Pega-BulkEmail-Sender-Second* and *Pega-BulkEmail-Sender-Third* email accounts.
7. **Optional:** To edit the daily email limits for Google, Microsoft Outlook, and other types of email server, customize the source values in the *SetMaxEmailsCountPerDayOnConfigExt* data transform, and then save the transform into your implementation layer.

The default for Google is 2000, for Microsoft Outlook the default is 10000, and for other types of email server the default is 5000. If you select the **Enabled limits per day for sending bulk email** check box in App Studio, editing the *SetMaxEmailsCountPerDayOnConfigExt* data transform will not override this setting until a maximum of 24 hours later, which is the system reset time.
8. **Optional:** To change the conditions under which the system sends emails using all email accounts, configure the *GetEmailAccountBasedOnTimeOfDay* decision table based on your business requirements, and then save the table into your implementation layer.

You can also use the *GetEmailAccountBasedOnTimeOfDay* decision table to send emails from multiple accounts equally. By default the decision table is configured for 3 email accounts.
9. **Optional:** To always populate the email sender from the email address, in the *PopulateFromEmailStringHeaderExt* data transform, set the when rule to *Always*, and then save the transform into your implementation layer.

After you send a bulk email, recipients see the bulk email creator and the bulk email address in the **From** field. If your email account has permission to send as all the operators in your organization, you can override the *PopulateFromEmailStringHeaderExt* data transform.

What to do next: See, [Sending emails in bulk](#).

Sending emails in bulk

As an operator with the Sales Rep persona, you can effectively send emails to multiple recipients by using email templates, custom distribution lists, and adding custom fields to email body, to then send these emails in bulk with less manual work.

For more information about email templates, see [Creating email templates](#). For more information about distribution lists, see [Managing distribution lists](#).

To send emails in bulk, perform the following steps:

1. Enable and configure bulk email.
2. Log in to Pega Sales Automation for Financial Services as a sales representative.
3. In the **User portal** navigation pane, click **Bulk emails**.

4. Click **Send bulk email** and perform the following steps:
 - a. To add recipients, click **+ Add recipients from** and select either: contacts from distribution lists, business or individual contacts, organization-related or account-related contacts, or any lead.
 - b. Select any contact from the list by selecting the check box next to the contact's name.
 - c. Click **Submit**.
 - d. If needed, select another list and select more recipients.
 - e. Click **Continue**.
 - f. Enter the email details manually or select the **Select email template** list to choose the preconfigured email template.
 - g. Click **Continue**.
 - h. Review the desktop and mobile email preview, and click **Send**.
5. After sending the email, track contacts who opened and replied to the email by performing the following steps:
 - a. Open the sent email.
 - b. In the left navigation pane, click **Recipients**.
 - c. In the **Recipients** table, review the **Opens** and **Replied** columns for every recipient.
You can also view the email correspondence analyzing the contact. Open any contact and under the **Emails** tab, view every email exchanged with this contact.

Synchronizing Pega Sales Automation for Financial Services email with Microsoft Exchange

Integrate Pega Sales Automation for Financial Services email with Microsoft Exchange to create a background process that synchronizes your Microsoft Exchange email with your Pega Sales Automation for Financial Services email, so that you can send and reply to emails from within your application to increase productivity and reduce context switching.

Before you begin: To create and synchronize appointments with Microsoft Exchange, you must perform authentication. You can choose either Basic authentication, or the recommended OAuth 2.0 authentication.

Basic authentication

Create one impersonation account on Microsoft Exchange with impersonation privileges for all of the users managing appointments in the Pega Sales Automation for Financial Services application.

With Microsoft Exchange impersonation, one account acts as another account. For an impersonated account, the system logs access as if the impersonated account is acting on the system. The calling account must have the appropriate permissions and email ID to perform the impersonation. This allows the user who has impersonation permissions to make calls using the other user's account.

The *EWS_Integration_AuthProfile* authentication profile maintains the impersonated account. Your Microsoft Exchange administrator must configure the Microsoft Exchange impersonation account for your Pega Sales Automation for Financial Services implementation and provide you with the user name and password so that you can update the security profile in the application

OAuth 2.0 authentication

Third-party providers manage OAuth authentication, so your application does not have to collect and store Microsoft Exchange credentials. Your application receives an opaque token from the authentication provider, therefore, a security breach in your application can only expose the token, not the user's Exchange credentials.

For the OAuth 2.0 authentication, you must create an application in Microsoft Azure Portal, generate the client secret number, and configure API permissions. For more information, see the Microsoft Azure documentation.

OAuth authentication for Exchange Web Services (EWS) is available only in Microsoft Exchange as part of Microsoft Office365.

To synchronize Pega Sales Automation for Financial Services email with Microsoft Exchange, complete the following steps:

- [Generating a keystore file with the SSL certificate](#)
- [Updating the security profile in Pega Sales Automation for Financial Services](#)
- [Configuring the basic authentication](#)
- [Configuring the OAuth 2.0 authentication](#)
- [Updating the App Studio settings in Pega Sales Automation for Financial Services](#)

Sending emails by using the Microsoft Exchange web service

Send and reply to emails directly from Pega Sales Automation for Financial Services to reduce context switching and increase daily productivity by using the Microsoft Exchange web service integration with Pega Sales Automation for Financial Services. Pega Sales Automation for Financial Services synchronizes your emails and you can then send emails from the operator you are logged in as, as well as reply to emails received through Microsoft Outlook.

Before you begin: Ensure that you configure the synchronization between Microsoft Exchange email and Pega Sales Automation for Financial Services. For more information, see [Synchronizing Pega Sales Automation email with Microsoft Exchange](#).

To send emails as a relationship manager, perform the following steps:

1. In the **User portal** navigation pane, perform any of the following steps:

Choices

Action

Send emails from any contact screen

- a. In the **User portal** navigation pane, click **Contact**.
- b. In the **Communication** section of the table with **Contacts**, **Leads**, and **Opportunities**, click the **Email** icon.

Send emails from any open contact, lead, or opportunity

- a. In the **User portal** navigation pane, click **Contact**, **Lead**, or **Opportunity**.

Choices**Action**

- b. On the open contact, lead, or opportunity screen, click **Actions** > **Send email**.

UI-Kit only: Sending emails from the Emails screen

- a. In the **User portal** navigation pane, click **Emails**.
- b. On the Emails screen, click the + icon.

2. Enter the necessary email details, select an email template if necessary, and then click **Send**. For more information about email templates, see [Creating email templates](#).

What to do next: See, [Replying to emails directly from Pega Sales Automation](#).

Replying to emails directly from Pega Sales Automation

Reply to emails directly from Pega Sales Automation to reduce context switching between Pega Sales Automation and Microsoft Outlook, and increase relationship managers productivity while performing daily tasks.

Before you begin: Ensure that you configure the synchronization between Microsoft Exchange email and Pega Sales Automation for Financial Services. For more information, see [Synchronizing Pega Sales Automation email with Microsoft Exchange](#).

To reply to emails as a relationship manager, perform the following steps:

1. In the **User portal** navigation pane, perform any of the following steps:

Choices**Action****Reply to emails from Pulse**

- a. Click **Contact**, **Lead**, or **Opportunity**
- b. Click the **Pulse** section to see any email exchanges.

UI-Kit only: Replying to emails from the Emails screen

- a. Click **Emails**.

2. Open any email, and then click either **Reply** or **Reply all**.



Note: You cannot see emails that the sender has not shared publicly because, by default, only email recipients can see their content. To set emails as public, in the Cosmos design system, on any open contact, click **Actions** > **Mark as public**. In UI-Kit, on any open contact, click **Mark as public**.

3. Enter the necessary email details, select an email template if necessary, and then click **Send**. For more information about email templates, see [Creating email templates](#).

Configuring relationship intelligence

Relationship intelligence helps to identify sales reps within the organization who have a better relationship strength with a particular contact. Engagement strength is defined based on relationship activities performed by the sales reps. Relationship activities are defined as emails, meetings, and phone calls. By default, the system dynamically calculates the relationship score for a given contact record based on their relationship activities over a period of time, which by default is 90 days.

Before you begin:

1. Enable relationship intelligence in App Studio.
For more information, see [Enabling application features](#).
2. To set a different time frame for retrieving relationship intelligence data, in the **Latest interaction in days** field, change the default 90 days to a different number of days.
3. Enable the Microsoft Exchange integration to synchronize emails and appointments because relationship intelligence uses emails and appointments as data sources.
For more information, see [Enabling application features](#).

1. In the header of App Studio, launch the User portal.
2. In the User portal navigation pane, click **Tools**, and then click **Relationship weights**.
 **Note:** Each activity category has weight by default, but you can adjust the importance of engagement activities by adjusting their relationship strength. Select a weight from 0 to 10 for each engagement type, with 10 being the highest (most important) weight. For example, assign 10 to email if it is the most important form of contact for an organization. You cannot add new categories.
3. To edit the weight for a category, click the **Edit** icon next to the activity category and enter a number between 1 and 10.
4. To further customize relationship intelligence by editing relationship scoring, you can add and edit relationship health by adding the when rule from Dev Studio:
 - a. Switch from App Studio to Dev Studio.
 - b. In the navigation pane of Dev Studio, click **Records > Decision > When**.
 - c. Search for and open the *isRIHealthConfigRequired* when rule.
 - d. Set the when rule to `true`.
 - e. Click **Save**.
 - f. In the navigation pane of Dev Studio, click **Records > Data Model > Data Transform**.
 - g. Search for and open the *SetDataFlowAccessGroup* data transform.
 - h. Change the **Source** field to point to your particular access group.
 - i. Click **Save as** and save the data transform into your implementation layer.
5. To configure relationship scoring, switch from Dev Studio to App Studio and perform the following steps:
 - a. In the header of App Studio, launch the User portal, and then in the navigation pane, click **Tools**.
 - b. Click **Relationship Health**.
 - c. Edit the lower or upper scoring limits for each relationship category by clicking the **Edit** icon next to any category.

6. Switch from App Studio to Admin Studio and perform the following steps:
 - a. In the navigation pane of Admin Studio, click **Resources**, and then click **Jobs**.
 - b. Search for and open the *RelationshipIntelligence* job scheduler.
 - c. Toggle the **Enable job scheduler** switch On to start the job scheduler.
By default, the job scheduler runs once a day. To change this behavior, override the *RelationshipIntelligence* job scheduler in your implementation ruleset.
 - d. Click **Save**.

What to do next: See, [Using relationship intelligence](#).

- [Using relationship intelligence](#)

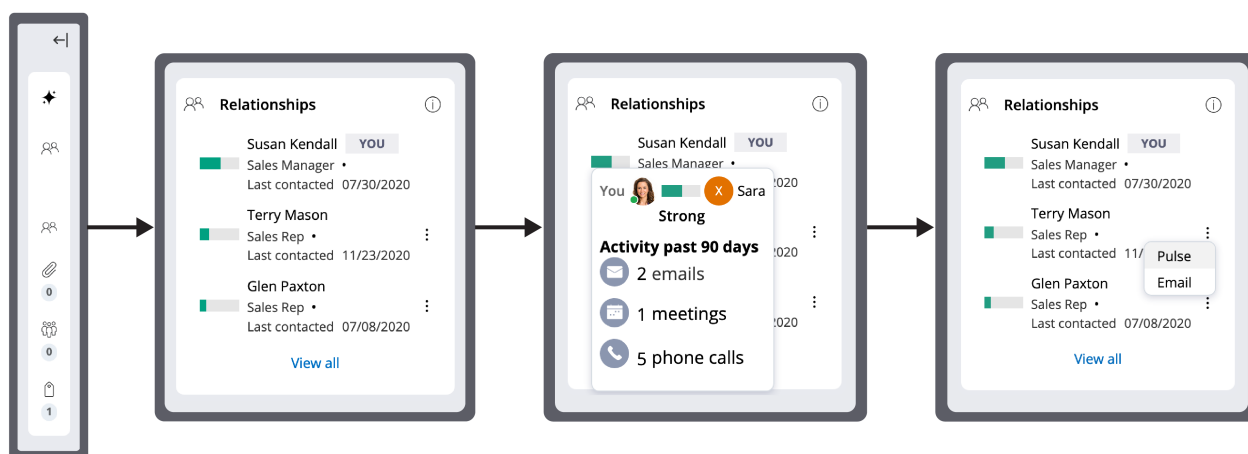
Using relationship intelligence

Relationship intelligence helps sales representatives to find a person in their internal organization that can help them make a warm introduction with a new external prospect or customer. Sales representatives can use the **Relationships** widget on the **Insights** screen to view a list of their contacts who have good relations with the contact with whom the sales representative wishes to establish a new relationship.

1. Log into the application as either a Sales Ops, Sales Representative, or Sales Manager persona.
2. In the **User portal** navigation pane, click **Contact**, and open any contact for which you want to view the relationship status.
3. Expand the right navigation pane to see the details of the **Relationship** tile and review the following lists of relationships between the contact that you select and their contacts:
 - The first relationship list is with currently logged in users.
 - The remaining relationships lists are presented in an order calculated by the system.



Note: To see recent activity, for example, how many emails or phone calls you exchanged with that person, hover over the relationship status bar next to each person. To send a prepopulated Pulse post or launch the **New email** screen, click the **More** icon, and then click either **Pulse** or **Email**.



Relationship intelligence user actions

Configuring Prepare for meeting

As a relationship manager or a managing director, use the meeting briefing and review elements to benefit from proactive business insights, as well as to more quickly access key account intelligence. By using actionable data about a meeting located in the **Meeting Insights** section on the right side of the meeting screen, you can be well prepared for every meeting and make decisions faster. The insights help relationship managers to prepare for meetings, or can consist of a collection of insights for executives meeting on a regular basis.

As a relationship manager, create an appointment, and then 24 hours before the meeting the system sends emails to internal attendees with a briefing document as an attachment. The document includes, for example, a summary of the purpose of the meeting, a list of attendees, talking points, insights, and relevant organizational news. To view the briefing document, open an appointment and in the left navigation pane, click **View briefing**.

After the meeting, use the tailored next best actions either on the dashboard, mobile app home screen, or on the appointment screen to, for example, add meeting attendees that are not yet contacts to your contacts list, or send a Pulse post summarizing the meeting. You can either dismiss a recommendation or click **Go** to use the next best action recommendation. Meeting insights have 3 categories to better organize the experience: Conversation starter, For your reference, and Potential challenges.

You can also receive push notifications to receive meeting briefings while using the mobile app in the field.

Configuring signatures

Pega Sales Automation for Financial Services supports both DocuSign integration and the Signature Capture control for signing documents directly in the application.

- Enable and use the Signature Capture control.
For more information, see [Using the Signature Capture control](#).
- Enable and use DocuSign.
For more information, see [Configuring DocuSign](#).
- [Saving user signatures by using the Signature Capture control](#)
- [Configuring DocuSign](#)

Saving user signatures by using the Signature Capture control

Use the Signature Capture control to capture a user's signature in both desktop applications and mobile apps. The signature that the user provides is added to the work item as an image attachment.

Enable the Signature Capture control in App Studio. For more information, see [Enabling application features](#).

1. In the **User portal** navigation pane, click **Opportunities**.
2. Select and open any opportunity in the **Proposal** stage that you want to modify.
3. In the opportunity status ribbon, click **Proposal > Review proposal**, and then click **Go**.
Product details from the **Analysis** stage are attached.
4. In the **Proposal signing** dialog box, sign the document, click **Accept**, and then click **Submit** to confirm.

Configuring DocuSign

Configure DocuSign to send documents that require a signature directly from Pega Sales Automation for Financial Services at any step of the Opportunity case life cycle. By default, the DocuSign smart shape is located in the step of the stage. You can use DocuSign as a desktop, iPad, or mobile user.

Before you begin: Create a DocuSign account and a DocuSign integrator key. For more information, see [Integrating DocuSign with Pega Platform](#).

1. Enable DocuSign in App Studio.
2. Enter the required information based on the DocuSign account and integrator key.
3. Click **Save**.
4. **Optional:** To change the default DocuSign smart shape location, in Dev Studio, open the Opportunity case type and edit the location of the DocuSign smart shape.

What to do next: [Using DocuSign](#).

- [Using DocuSign](#)

Using DocuSign

As a sales representative you can request signatures from your prospects and customers by using DocuSign.

Before you begin: Ensure that the sales ops complete the required configuration steps in [Configuring DocuSign](#).

1. In the User portal navigation pane, click **Opportunities** and open an opportunity which is in the Proposal stage.
2. Select the **Proposal** stage label and click **Review proposal**.
3. Click **Go**.
Product details from the **Analysis** stage are attached.
4. Click **Send for eSignature**.
The system sends your document to the recipients that you select. The recipients get an email notification about the new document, sign the document using DocuSign, and then the document is automatically sent back to Pega Sales Automation for Financial Services.
5. In the right widgets pane, under **Files & documents**, review the number and status of your documents.
You can see at what stage your documents are by looking at the labels next to the documents, for example, *Signed*, *Declined*, *Voided*, and *Sent*. For more information about the statuses, search the DocuSign documentation for REST API: *Envelopes*.
After signing, you receive the following documents:

<i><document name></i> _CertificateOfCompletion	A document with the DocuSign audit trail.
---	---

<i><document name></i> _Signed	A signed document.
--------------------------------------	--------------------

<document name>

The originally sent document.

6. After the documents are either signed or declined, you can close the opportunity by clicking **Actions > Close**.

Implementing the security model

Security planning involves defining authentication and authorization strategies for your application:

Authentication

Validates your identity.

Authorization

Determines the work objects you can access and the application functions you can perform.

For information about defining authentication and authorization strategies for your application, see the following topics:

- [Authentication schemes](#)
- [Authorization model](#)

Authentication schemes

The Pega Platform offers the following authentication types:

PRBasic

Based on passwords in the Operator ID data instances and the login form. This is defined by the HTML `@baseclass.Web-Login` rule, which your application can override.

PRSecuredBasic

Similar to PRBasic, but passes credentials by using Secure Sockets Layer (SSL) with Basic HTTP authentication. The login form is defined by the HTML `@baseclass.Web-Login-SecuredBasic` rule, which your application can override.

PRCustom

Supports access to an external LDAP directory or a custom authentication scheme.

PRExtAssign

Supports external assignments (Directed Web Access).

J2EEContext

Specifies that the application server in which the Pega Platform is deployed uses JAAS to authenticate users.

Implementing your authentication scheme

Your site can use a centralized, automated means of maintaining operator data instead of maintaining it manually in your application.

1. Discuss [Authentication schemes](#) with your site's security and application server teams.
2. Determine the appropriate authentication type.

For more information on authentication scheme planning, see [Authentication in Pega Platform](#).

Authorization model

The security authorization model determines user access privileges and work object permissions for the Pega Sales Automation for Financial Services application. Your security authorization model is based on the operator ID privileges and territory permissions structure that you define for your sales team. Access to portals and work objects in the application is determined by operator ID privileges. The ability to read, update, and create specific work objects is determined by the territory to which the work objects belong.

For more information about configuring territories and operators, see [Set up your sales team structure](#).

- [Defining your authorization scheme](#)
- [Attribute Based Control \(ABAC\)](#)
- [Client-based access control \(CBAC\)](#)

Defining your authorization scheme

Establish your authorization scheme by defining operator privileges, territory and work object permissions, and partner access for your users.

1. Determine who the Pega Sales Automation for Financial Services operators are and what roles to assign them.
2. Determine the territory structure and which territory (or territories) to assign to each operator.
3. Determine each operator's access to the work objects in each assigned territory. For more information, see [Work object permissions in Pega Sales Automation for Financial Services](#).
4. Determine the level of access to provide to each partner.

For more information, see [Sales team structure and authorization model in Pega Sales Automation for Financial Services](#).

Attribute Based Control (ABAC)

Attribute Based Access Control (ABAC) controls row-level or column-level security through security policy rules available as part of the Pega Platform's ABAC feature.

For more information, see [Attribute-based access control](#) and [Upgrading Pega Sales Automation to use attribute-based access control \(ABAC\)](#).

Client-based access control (CBAC)

Implementing client-based access control (CBAC) helps you satisfy the data privacy requirements of the European Union (EU) General Data Protection Regulation (GDPR) and similar regulations.

For more information about GDPR and CBAC, see [Supporting EU GDPR data privacy rights in Pega Infinity with client-based access control](#).

For more information about configuring CBAC in Pega Sales Automation, see CBAC section in the Pega Sales Automation Release Notes on the [Pega Sales Automation product page](#).

Modifying the user interface

You can change portions of the user interface to meet the needs of your business and users.

- [Designing for screen performance](#)
- [Implementing dashboards](#)
- [Reviewing the content of the portals](#)

Designing for screen performance

You want your application to respond immediately as your end users interact with customers. As you design your user interface, complete the following steps:

1. Review transactional service level agreements.
For example: The customer details must be available in one second or less while a representative is on the phone with the customer.
2. Review service performance, such as how long it takes back end systems to gather the data needed to display customer details.
3. Review data requirements to determine which fields contain the information that the representatives absolutely need for the task that they need to perform.
4. Determine if any network configuration could cause latency.
For example: Representatives who are logged in through a corporate VPN or in a remote location might cause an issue.

Implementing dashboards

When you first access your application portal, you see the dashboard, which typically contains a navigation panel on the left.

- [Determining which part of the user interface to modify](#)
- [Portal dashboards](#)
- [Customizing dashboards](#)
- [Configuring the attrition risk widget](#)

Determining which part of the user interface to modify

You can customize the content of the dashboard so that it displays any data that you integrate into your application.

Portal dashboards

Pega Sales Automation for Financial Services provides custom portals and configurable dashboards for supported operators.

Portals provide a comprehensive workspace while dashboards centralize key information managed in the portal. Access to portals and their corresponding dashboards is determined by the user's access group and operator ID.

Determine the appropriate dashboard information to display for each of the following Pega Sales Automation for Financial Services portals:

- SAFS for Sales Ops
- SAFS for Sales Rep
- SAFS Sales Manager (Managing Director's portal)

Configuring the dashboard layout for the User portal

Configure the dashboard layout that users see when they log in to the User portal. Pega Sales Automation for Financial Services includes a configurable, role-based dashboard for the User portal. An operator with the Sales Ops persona can publish default dashboard layouts for sales operations, sales manager, and sales representative operators. Individual operators can also modify the default dashboard layouts, as needed.

1. In the header of App Studio, launch the **User portal**.
2. In the navigation pane, click **Tools**, and in the **Personalize** section, select the dashboard that you want to modify.
3. In the upper right corner of the dashboard, click the **Personalize the dashboard** icon.
 - a. Review the available templates for the dashboard.
 - b. In any slot, click **Add widget(s)** and review the available widgets for the dashboard.
4. Determine which template and widgets to use for the dashboard display.

Customizing dashboards

A Sales Ops operator can publish default dashboard layouts for Sales Operations, Sales Manager, and Sales Representative operators. Individual operators can modify the default dashboard layouts, as needed.

1. In the header of Dev Studio, click **Launch web interface > SAFS for Sales Ops**.
2. In the navigation pane, click **Tools** and select the dashboard that you want to modify.
3. In the upper right corner of the dashboard, click the **Gear** icon.
4. Click **Switch template** and select a template for the dashboard.
5. Click **Add widget(s)** in any slot in the template.
 - a. Select the widgets that you want to display on the dashboard.
 - b. Click **Add selected**.
6. Drag and drop widgets from one slot to another to change their position on the dashboard.
7. Click **Publish**.
8. Repeat steps 3 through 7 for other dashboards, if necessary.

For more information about customizing dashboards, see [Pega Sales Automation dashboard customization](#).

Configuring the attrition risk widget

Configure the attrition risk widget to view and analyze the attrition risk for your portfolio, so that you know which areas of your organization require attention and how likely it is that customers may leave for another company.

For more information about the attrition risk widget, see the *Pega Sales Automation for Financial Services 8.5 Release Notes* on the Pega Sales Automation for Financial Services product page.

1. Log in to Pega Sales Automation for Financial Services as a system administrator.
2. In the navigation pane of App Studio, click **Records > Decision > Decision Table**.
3. Search for and open the *AttritionRiskWidgetConfigs* table.
4. Edit any of the actions, and then click **Save as** to save a copy of the table into your implementation layer.

For example: Change the default small corporate category range from \$5 to \$15 million to \$3 to \$5 million. The maximum value for any range must not exceed \$1 billion.

Reviewing the content of the portals

Review the content of your application's portals to ensure that only relevant data is presented.

1. In the header of Dev Studio, click **Launch web interface > SAFS for Sales Ops**.
 2. Review each of the portal sections.
 3. Repeat this process for the **SAFS for Sales Rep** and **SAFS Sales Manager** portals.
- [Locating the user interface element to change](#)
 - [Adding properties to sections](#)
 - [Adding sections](#)
 - [Changing section visibility](#)
 - [Designing an application skin and styles](#)
 - [Updating the skin](#)

Locating the user interface element to change

You can customize the content of the dashboard so that it displays any data that you integrate into your application. To determine which user interface element to modify to implement your change, use the Live UI feature of the Pega Platform.

1. In Dev Studio, launch the portal that you want to modify.
2. Click the **Open runtime toolbar** in the bottom right corner.
3. Click the **Live UI** icon.
4. Select an element to observe and click the **Display info panel for this item** icon.
5. To update the rule, click the **Open rule in Dev Studio** icon and make your changes.

Adding properties to sections

Pega Sales Automation for Financial Services uses standard Pega Platform user interface components, so the update process is the same as any Pega Platform application.

1. In Dev Studio, launch the portal that you want to modify.
2. Click the **Open runtime toolbar** in the bottom right corner.
3. Click the **Live UI** icon.
4. Select the section that you want to modify.
5. To open the rule in Dev Studio, click the **Open rule in Dev Studio** icon.

6. In the navigation panel of Dev Studio, click **App**.
7. Locate the property that you want to add to the section and drag it into that section.
8. Click **Save as** and then save the ruleset to your application.

Adding sections

Pega Sales Automation for Financial Services uses standard Pega Platform user interface components, so whether you are updating the dashboard, portals, or the composite, you do so in the same way as any Pega Platform application.

Pega Sales Automation for Financial Services uses standard Pega Platform user interface components. Whether you are updating the dashboard, Patient 360 view, or the portals, you follow the same procedure as you do for any Pega Platform application

1. In Dev Studio, launch the portal that you want to modify.
2. Click the **Open runtime toolbar** in the bottom right corner.
3. Click the **Live UI** icon.
4. Locate the area where you want to add the section.
5. In the navigation panel of Dev Studio, click **App**.
6. Locate the section that you want to add and drag it into your specified section.
7. Click **Save as** to save the rule to the ruleset for your application.

Changing section visibility

Use When rules to determine which layouts and sections are visible. For example, if you are a manager, modify the visibility of a section to ensure that only a manager can see the content of the section.

1. In Dev Studio, access the section for which you want to change visibility.
2. Click anywhere inside the section and then click the **View properties** icon.
3. From the **Visibility** drop-down list, select **Condition**.
4. Enter a When rule or a conditional expression.
5. Click **OK** and then click **Save**.

Designing an application skin and styles

Your site very likely has user experience (UX) standards for the appearance of your applications. Your task is to determine which styles have to change to adhere to those standards.

1. In the header of Dev Studio, click **Configure > User Interface > Skins, interfaces, & templates**.
2. Click the **Component styles** tab.
3. Review each component.



Note: As you plan your application styles, consider using mixins to provide incremental style changes. For more information, see [Using mixins in the skin to drive consistency and efficiency](#).

Updating the skin

You can update the look and feel of Pega Sales Automation for Financial Services to reflect the color scheme of your organization. The application uses the standard Pega Platform skinning features in your application.

To access Pega-provided formats from Pega Platform releases, the `SAEndUser` skin rule for Pega Sales Automation for Financial Services inherits from the `pyEndUser` skin rule from the Pega UI Kit.

For more information about skins, see [Creating a skin](#) and [Skin inheritance](#).

1. In Dev Studio, click *Application Name* > **Skin**.
2. Update the options as needed, and then click **Save as**.
3. If you give your skin a different name, update the application to reflect it by performing the following steps:
 - a. In Dev Studio, click *Application Name* > **Definition**.
 - b. Change the value in the **Skin** field to the name of the skin that you created.
4. Click **Save**.

Testing a new application

Testing a new application involves testing in different environments.

- [Testing and deploying application changes](#)
- [Testing in the test or production environments](#)
- [Testing in the UAT environment](#)

Testing and deploying application changes

Test a new application in the Build environment before migrating the application to a test or production environment. Testing in the Build environment enables you to verify that basic functionality and interfaces work correctly, and that performance is acceptable.

1. Run functional tests, to test specific features from the end-user perspective.
2. Verify that the out-of-the-box reports and your custom reports run successfully, and that they show your implementation layer data, rather than the default demonstration data. This can be an automated test.
3. Test all integrations, both independently and with associated integrations.

Test integrations for any optional Pega Sales Automation for Financial Services components and other applications that you plan to use. See the product documentation for the component or application to determine which product components to test.

4. Test security. Test the most common roles to ensure that the required access groups are configured and point to the correct software version.

Testing in the test or production environments

After you import your application to a test or production environment, test the application in the new environment to verify that it works correctly in that environment.

1. Verify that the source and destination files are the same.
2. Run functional tests, to test specific features from the user perspective.
3. In the test or production environment, run the Application Guardrails Compliance Score to ensure that the application meets guardrails.
4. Verify that the out-of-the-box reports and your custom reports run successfully, and that they show your implementation layer data, rather than the default demonstration data. This can be an automated test.
5. Test all integrations, both independently and with associated integrations.

Test integrations for any optional Pega Sales Automation for Financial Services components and other applications that you plan to use. See the product documentation for the component or application to determine which product components to test.

6. Verify that the integrations point to the correct system of record, and not to the system of record for the Build environment.

7. Test security. Test the most common roles to ensure that the required access groups are configured and point to the correct software version. Use these common roles in your smoke tests (see next step).
8. Run a smoke test to compare the source and destination environments. Verify that all tests that pass in the build environment also pass in the test or production environment. If anything fails, compare the environments to determine whether it is a difference in environment that causes the test to fail. If the environment causes a failure, either fix the issue that causes the failure or adjust the test as appropriate for the new environment.
9. Run performance tests to verify that performance meets expectations. Pega recommends automated performance testing. Save the results so that you can compare them to future performance test results to determine whether an application update has a performance impact.

Testing in the UAT environment

After you complete testing in a Test environment, it is common to perform User Acceptance Testing (UAT) in a designated UAT environment, which could be a preproduction environment. UAT ensures that users will be able to successfully complete their work and meet business objectives.



Note: Organizations that use Scrum for application development will complete less formal UAT as part of each sprint cycle.

1. Verify the integrity of the UAT environment.
2. Have the end-users (or business analysts acting as end-users) run scripts to test all scenarios, including boundary and exception testing. The end-users (trainers, managers, and directors), must then perform the following steps during UAT:
 - a. Verify that there are no major issues.
 - b. Review changes to understand the features.

Packaging an application

To migrate a new application to a different environment, you must package the application before you can import it to the new environment.

- [Merging application changes](#)
- [Packaging an application for migration](#)
- [Importing the packaged application](#)

Merging application changes

If you develop your application features in separate branches, use the **Merge Branches** wizard to merge the branches before you package the application. The wizard shows any merge conflicts so that you can correct them before you merge the branches.

Packaging an application for migration

Before you can migrate a new application to a different environment, you must package the relevant data instances and rulesets into a product rule. The product rule is an instance of *Rule-Admin-Product*, which Pega Platform refers to as the RAP file.

1. In the header of Dev Studio, click **Configure > Application > Distribution > Package** to start the **Application Packaging** wizard. For more information about using the wizard, see [Product rules](#).
2. Complete each page of the **Application Packaging** wizard.
3. On the last page of the wizard, click **Preview**.
4. Review the contents of the generated RAP file.
5. If you want to make any changes, on the last page of the wizard, click **Modify**.
6. When you have completed your review of the RAP file, click **Export**.

The wizard creates a .ZIP file in the **ServiceExport** directory on the current application server node.

Importing the packaged application

To deploy a new application to a different environment, you must import the .ZIP file that contains the packaged application to the new environment.

1. In the header of Dev Studio, click **Configure > Application > Distribution > Import**.
2. Use the **Import** wizard to import the target .ZIP file. For more information, see [Importing rules and data from an archive by using a wizard](#).

For information about how to swap the database connection pointers to your production database after importing an application to a production environment, see the *Pega Platform Upgrade Guide* at [Deploy Pega Platform](#).

Production maintenance and monitoring

Production maintenance and monitoring includes the following procedures:

- [Business rule maintenance in the Production environment](#)
- [Application health monitoring](#)
- [Identifying and reporting issues](#)

Business rule maintenance in the Production environment

As a manager, you can update Dialogs and Coaching Tips in a production environment by using the **Tools > Configuration** option that is available in each process action of the case type. Managers can change these options without having to wait for a rule deployment, but must have the same privileges associated with the *PegaCA:Manager* role in order to maintain these rules.

You can give managers the ability to update rule types in a production environment. For example, managers can update the Goals and Deadline for a certain case type. You must delegate these rules in Dev Studio first. After you delegate a rule, you can access it in the <<MISSING VARIABLE VALUE!!!>> by clicking **Profile > My rules**. For more information on rule delegation, see [Delegating a rule or data type](#).

As sales ops, you can configure different lists of values and business rules in the production environment by using the Tools landing page. This feature allows sales ops to change options without having to wait for a rule deployment.

Application health monitoring

[Pega Autonomic Event Services](#) is an application that automatically monitors, retrieves, and organizes the alert data from one or more clustered systems throughout the enterprise. Pega also provides the [Pega Predictive Diagnostic Cloud](#), which allows you to benefit from Pega Autonomic Event Services without installing it locally. Pega Predictive Diagnostic Cloud is a Software as a Service offering of Pega Autonomic Event Services.

Implementing the following best practices in your application can help to ensure optimal response times and overall application health:

- Segment your application's agent processing to a dedicated JVM (Java Virtual Machine). This configuration ensures that end users do not have to share resources with background processes.
- Monitor integration response times. Over time, slow integration points can cause average handle times to increase. When queues start to grow, it becomes very difficult to recover, and might require the use of offline services or a backup application.

Identifying and reporting issues

As with any application, as your users begin to use the application they will encounter issues that they need to report. When deploying your application to a production environment, complete the following steps to help your users to identify and report the issues that they find:

1. Identify the operational staff who will be responsible for responding to issues reported in the production environment.
2. Establish procedures with those resources to triage, respond to, and escalate issues.
3. Determine procedures for delivery of changes to the production environment.