Pega Customer Service
Implementation Guide
7.4

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Overview

Pega Customer Service helps reduce service costs and improve customer satisfaction through a process-driven approach that resolves customer issues with context, immediacy, and relevance at the initial point-of-contact. With this application, your company has new capabilities to:

- Improve service effectiveness by providing guided and personalized customer service processes.

- Increase operational productivity by automating work across business and technology silos.

- Increase customer retention and cross-sell revenue.

- Reduce training time.

- Ensure an optimal customer service experience with self service channel or assisted service channel.

- Ensure rapid deployment and continuous adaption.

The Pega Customer Service application includes multiple components. Some components are optional.

The Industry Specific Data Model and Industry Specific Service Processes are provided for you in the Pega Customer Service application.

Pega Customer Service comes with a number of capabilities that are licensed based on a tiered edition model. This implementation guide covers the full suite of features. For more information on the editions and the products available in each edition, see Pega product page.

- Implementation delivery methodology

- Prerequisites

- Pega Customer Service application stack

Implementation delivery methodology

In most cases, use a scrum-based, Agile delivery model for a Pega application implementation. In the rare cases where a waterfall-based implementation methodology is better suited, use Pega's Iterative Waterfall approach. These two implementation methodologies help break down the work into manageable components that you can deliver to production faster. The Pega delivery approach has the following primary stages:

- Initiation stage

- Delivery stage

Initiation stage

In the Initiation stage, the implementation teams build the foundation or baseline of the application and prepare for the work that is necessary to configure the first production release and subsequent extended production releases. Keep in mind that the first production release is the minimal required scope to go live into production. Other capabilities can be added as part of the extended production releases. Building a strong foundation to support expansion and reuse is key to the success of an implementation.

The Initiation stage is further organized into the following sub-stages:

Plan

Align the vision and roadmap to establish the foundation for the implementation. The Plan sub-stage includes the following tasks:

- Defining the production release milestone
- Refining scope alignment

Set up

Validate and review the Pega-provided features and capabilities to see if they meet your requirements and expectations. This sub-stage includes the following tasks:

- Establishing environments and processes
- Reviewing application feature descriptions (in Designer Studio, click **Application** > **Overview**)
- Reviewing Application Guides for first production release setup information (in Designer Studio, click **Resources** > **Application Guides**)
- Creating the baseline application
- Loading customer data
- Demonstrating the baseline application
- Reviewing artifacts from the solution assessment
- Reviewing business needs and outcomes

Prepare

Prepare for the delivery of Pega Customer Service by completing the following tasks:

- Confirming resources
- Enabling team members
- Establishing governance

At the conclusion of the Initiation stage, the scope of the work for the first production release is clearly defined. For Scrum, the scope of the work is represented in an initial backlog. For Iterative Waterfall, a specification list and schedule are prepared and finalized.

Delivery stage

The Delivery stage is dependent on the methodology selected (Scrum or Iterative Waterfall). During this stage, the delivery team designs, builds, configures, and tests the application by using the selected implementation methodology. The goal is to accomplish the tasks that are described in this document by organizing the Application Feature backlog so that the delivery team can configure the application incrementally with the result being a fully tested and performance-tuned application in production.

The Delivery stage is organized into the first production release and the extended production release types.

First production release

This release includes only the essential features that are defined during the solution proposal stage and are required for the first release into production. The first production release should be implemented in 90 days or less, depending on the scope of the essential features. This release type includes the following features:

- Core Pega-provided features
- Extended features considered essential for your business
- Key integrations with your systems to get data that you require

Extended production release

This release includes the non-essential features that are defined during the solution proposal stage. The following features are implemented incrementally after the first production release:

- Non-essential Pega-provided features

- Extended features that you have identified as required for your business

This guide provides information to support both Scrum and Iterative Waterfall implementation methodologies during the first production release and the extended production release.

Prerequisites

Before you start your Pega Customer Service implementation, make sure that you understand the following information:

- Support for various browser versions. Review the Platform Support Guide.

- Basic functionality of the Pega Customer Service application. Enroll in *Pega Customer Service Foundation* on the Pega Academy site.

- Telephony terminology and architecture. For an overview, watch the *Understanding Telephony with Pega Call* video on the Pega Call product page .

- Basic functionality of the Pega platform. Enroll in *Pega Platform Fundamentals* on the Pega Academy site.

- Net Promoter™ capability is part of the Pega Customer Service application, but its use is optional. Pega Co-Browse, Pega Knowledge, Pega Marketing, Pega Social, Pega Call, and Pega Chat are optional components that can be implemented at the same time as Pega Customer Service, or added to the application afterwards.

Pega Customer Service application stack

Your Application

Pega Customer Service | Pega Sales Automation | Pega Marketing (Installed separately)

Customer Decision Hub

Pega 7 Platform

Pega Customer Relationship Management (CRM)
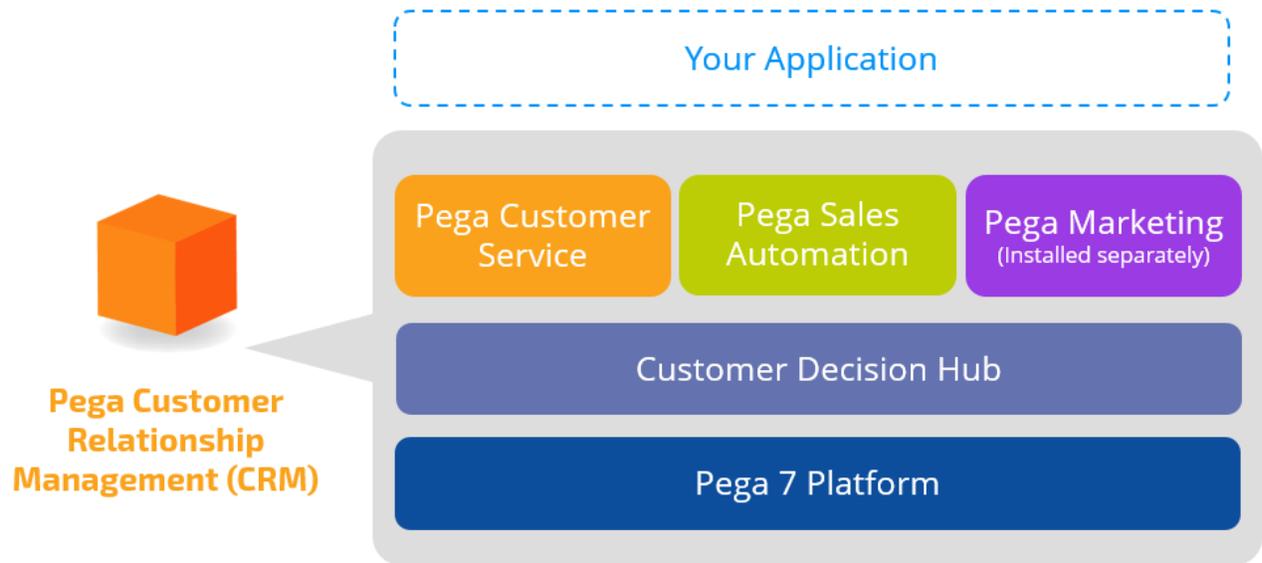
A new Pega Customer Service installation includes Pega Sales Automation, but Pega Sales Automation is enabled only if licensed. If you are using Pega Marketing, you must install that application separately.

Initiation stage

During this stage, the implementation teams build out the foundation or baseline of the application and prepare for the work that is necessary to configure the first production release and subsequent extended production releases. For more information, see Implementation delivery methodology.

The Initiation stage includes the following tasks:

- Creating your application

- Optional: Configuring your applications for Pega Customer Relationship Management

- Updating an access group to allow shared access

- Generating specification documents

Creating your application

To meet your organization needs, create your application on which your extended application will be built. Use the New Application wizard to create your new application.

When you run the New Application Wizard for Pega Customer Service, it creates a set of Pega-provided access groups. You are required to create your own operators and add them to the required access groups.

1. Log in by entering an administrator user name and password. If you have enabled a sample administrative operator for this application, optionally log in using that operator ID.

2. In the Designer Studio header, click the name of your current application and click **New Application** to start the wizard.

3. Follow the New Application wizard instructions.

   For more information, see Creating an application.

4. Enter the operator names or email addresses to invite users to work with your new application, and select the corresponding role for each operator you set up.

   It is a best practice to create at least one operator in the application-specific administrator role for use in completing the implementation.

5. Optional: To fully set up your application, in the upper-right corner of **Designer Studio**, click **Resources** > **Application Guides** and follow the setup steps.

6. Optional: Update your application stack to be built on PegaFSIF 07.21 to use the data model and features like the Risk Engine and master profile included in the Pega Foundation For Financial Services application.

The New Application wizard creates the application class structure for you. You can reuse the classes and rulesets that are created by the wizard in future applications that you create. As you implement this application and future applications, you can apply class hierarchy and inheritance principles to help you decide where in the class structure to create your rules to improve the maintainability and overall efficiency of your application.

For more information, see Class layers.

Optional: Configuring your applications for Pega Customer Relationship Management

These procedures are required only if you will use the Pega Customer Relationship Management features to share data and service cases across the Pega Customer Service, Pega Sales Automation, and Pega Marketing applications. These procedures involve configuration across all three applications, and they include links to the other implementation guides as needed.

📝 **Note:** If you have installed industry-specific applications on top of Pega Customer Service and Pega Sales Automation, complete these configuration steps in the industry applications, and not in the Pega Customer Service or Pega Sales Automation applications. For instructions, see the implementation guide for the industry application on the Pega PDN .

Your Pega Customer Service, Pega Sales Automation, and Pega Marketing applications must already be created as described in Creating your application.

To configure the Pega Customer Relationship Management features, complete the following steps:

1. For environments that include both Pega Customer Service and Pega Sales Automation, complete the following steps:

   a) Add the Pega Sales Automation implementation rulesets to your Pega Customer Service application, and add the Pega Customer Service implementation rulesets to your Pega Sales Automation application. See Adding shared rulesets.

   b) Create an integration ruleset for your Pega Customer Service and Pega Sales Automation 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 or disabling shared features.

   d) In your Pega Customer Service 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.

2. For environments that also include Pega Marketing, complete these additional steps.

   a) Configure your Pega Customer Service application to support Pega Customer Decision Hub.

      1. Enable Pega Customer Decision Hub. See Configuring application settings.

      2. Configure Customer Decision Hub settings. For each setting, copy the rule to the highest ruleset shared by Pega Customer Service and Pega Sales Automation, and save your changes in that ruleset. See Configuring Customer Decision Hub.

   b) In Pega Marketing, configure the application to support the Pega Customer Relationship Management features. See "Configuring Pega Marketing to support the Pega Customer Relationship Management features" on the *Pega Marketing Implementation Guide* on the Pega Marketing product page.

   c) In your Pega Sales Automation application, configure the integration between Pega Sales Automation and Pega Marketing. See "Configuring the integration between Pega Sales Automation and Pega Marketing" in the *Pega Sales Automation Implementation Guide* on the Pega Sales Automation product page.

   d) In your Pega Sales Automation application, test the integration with Pega Marketing local campaigns. See "Testing the Pega Sales Automation integration with Pega Marketing local campaigns" in the *Pega Sales Automation Implementation Guide* on the Pega Sales Automation product page.

e) In Pega Marketing, train the adaptive model for sales offers. See "Configuring Adaptive Decision Manager for sales offers" in the *Pega Marketing Implementation Guide* on the Pega Marketing product page.

f) In Pega Marketing, run a Marketing campaign for batch evaluation. See "Running a marketing campaign for batch evaluation" in the *Pega Marketing Implementation Guide* on the Pega Marketing product page.

g) In your Pega Sales Automation application, test the integration with Pega Marketing next best offers. See "Testing the Pega Sales Automation integration with Pega Marketing next best offers" in the *Pega Sales Automation Implementation Guide* on the Pega Sales Automation product page.

The following topics include detailed information about how to complete these steps:

- Adding shared rulesets
- Creating integration rulesets
- Enabling or disabling shared features

Adding shared rulesets

To enable sharing of data between your Pega Customer Service and Pega Sales Automation 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.

Note: This procedure is required only if you are using the Pega Customer Relationship Management features.

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 overwrite 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 Designer 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 application to the bottom of the ruleset stack for your Pega Customer Service application.

    a) Log in to your Pega Customer Service application in Designer Studio.

    b) Click **Application menu** > **Definition**.

    c) In the **Application rulesets** section, click **Add ruleset** to add Pega Sales Automation rulesets to the bottom of the ruleset stack, and then click **Save**.

3. Add the implementation rulesets from your Pega Customer Service application to the bottom of the ruleset stack for the Pega Sales Automation application.

    a) Log in to the Pega Sales Automation implementation application in Designer Studio.

    b) Click **Application menu** > **Definition**.

    c) In the **Application rulesets** section, click **Add ruleset** to add Pega Customer Service rulesets to the bottom of the ruleset stack, and then click **Save**.

Creating integration rulesets

When using a Pega Customer Relationship Management configuration that includes both Pega Customer Service and Pega Sales Automation, 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.

📝 **Note:** This procedure is required only if you are using the Pega Customer Relationship Management features.

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

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 is SAforCS, and the sample integration ruleset for Pega Sales Automation is CSforSA.

Complete the following steps to configure the integration rulesets:

1. Log in to your Pega Customer Service application in Designer 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 application.

Enabling or disabling shared features

An application setting enables or disables the Pega Customer Relationship Management features that support the shared functionality between your Pega Customer Service and Pega Sales Automation applications. For information about how to configure this setting, see <u>Configuring application settings</u>.

Updating an access group to allow shared access

In order for a Pega Customer Service operator to use Pega Sales Automation functionality within a Pega Customer Service application, you must update the access group for that operator to include the `CustomerService:CSRSalesAccess` access role.

📝 **Note:** This procedure is required only if you are using the Pega Customer Relationship Management features.

This procedure is not needed for Pega Sales Automation operators because that application has a built-in security model.

1. Log in to your Pega Customer Service application.

2. In Designer Studio, click **Designer Studio > Org & Security > Organization > Operators** .

3. In the **Access group** column, click the access group for an operator who requires Pega Sales Automation functionality.

4. In the **Available roles** section, click **Add role**.

5. Enter `CustomerService:CSRSalesAccess.`

6. Click **Save**.

7. Repeat this procedure for all Pega Customer Service operators who require Pega Sales Automation functionality.

Generating specification documents

To avoid duplicating existing features, review the following documents to familiarize yourself with the default rules and rulesets of your application. During the solution assessment, a number of requirements, specifications, and other artifacts are captured to represent the scope of the work. If they are captured in the Pega Platform, these artifacts can be reused to streamline the first production release scope identification.

You can export application specification and requirements artifacts from the Pega Platform, and then import them into your new baseline application so that you can build on the content that has already been created. For more information, see Exporting specifications and requirements and Importing specifications and requirements.

Follow these procedures to generate documents that define what is contained within your application:

- Generating the Application profile

- Generating the Application document

- Generating the Specification document

Generating the Application profile

This document is created during the Sales stage and includes the process stages and steps, case types, reports, requirements, specifications, participants, collaborators, and actors that are associated with the implementation of your application. It is a document that defines the scope of the application, and it also includes the results of the presale gap analysis.

When you generate this document, you can include process flow diagrams.

To generate the document, log into your application by entering your newly created credentials, and follow the procedure in Generating an application profile document.

Generating the Application document

This document and its associated controls provide the ability to customize the presentation of the application information based on the document's intended audience. When you run the Application Document tool, you can include or exclude content by selecting and clearing various options.

During an implementation, this document reflects the current state of your application. The Application Document tool automatically updates the content of your document as you modify and extend your application to reflect additional requirements. If you have not yet built anything, the content of this document is the same as the application profile.

To generate the document, log into your application by entering your newly-created credentials, and follow the procedure in [Generating an application document](#).

Generating the Specification document

This document shows all of the specifications and linked requirements associated with your application at the time that you generate the document. You can generate this document at any point during the implementation life cycle to include any updates to the application's specifications and requirements.

Review this document before and after each sprint by using the available filters to tailor the content to meet the business requirements of your implementation.

To generate the document, log into your application by entering your newly-created credentials, and follow the procedure in [Generating a specification document](#).

Delivery stage

During this stage, the delivery team designs, builds, configures, and tests the application by using the selected implementation methodology. For more information, see Implementation delivery methodology.

The Delivery stage includes the following tasks:

- Defining requirements
- Building features
- Testing a new application
- Packaging a new application

Defining requirements

To ensure that you stay on target for a successful deployment, use a structured approach for your implementation methodology. You will need to prepare for your implementation and determine key aspects of the design that will affect the behavior of your application. Defining requirements for an implementation includes the following tasks:

- Reviewing extension requirements
- Refining customizations and determining the availability of required data and integrations
- Prioritizing, for example, revising the solution backlog, re-estimating the effort for extensions and customizations, and confirming the project scope

Defining your requirements also involves DCO sessions and incorporating those requirements into the application design. During these sessions, you review each of the case types and process flows that the application already provides.

Update the Application Specifications with planned changes as described in Specifications.

The *Implementation Planning Workbook* helps you capture decisions as you define your requirements. You can download the *Implementation Planning Workbook* from the Pega Customer Service product page.

- Defining the case type modifications and attributes
- Defining the data model
- Defining integration
- Defining application behavior
- Defining behavior for additional components
- Defining the user experience (UX) customization
- Defining the security model and organization structure
- Defining reporting requirements

Defining the case type modifications and attributes

Your application includes a set of predefined case types. A case is defined as a service case or a service request, which is a process that your staff will execute to service your customers.Each case contains one or more processes that will be extended or created to meet your business requirements. If you do not see an existing case type, you can create one during your planning process.

Case types, in the context of a customer service application, are used to define the work your customer is asking you to perform. Examples of case types include: Issue a Credit Card, File a Claim, and Open Up a New Account.

- Updating case types
- Adding case types
- Defining class group to database table mapping
- Confirming case type locking setting

Updating case types

If an existing case type is close to meeting your business requirements, modify it and use it.

1. Open Pega Express by logging in to your application with your administrator credentials.
2. To enable editing mode, click the **Turn editing on** link in the top-right corner.
3. In the **Explorer** panel, click **Cases** to open the Case Type Explorer.
4. Click the case type that you want to modify.
   The Case Designer tool opens.
5. Use Case Designer to configure fields and data integration, stages and steps, and user views.
6. Click **Done** to save the changes.

Adding case types

Your application includes some case types. If you require a case type that is not similar to an existing case type, create a new one that meets your business requirements.

The new case type inherits the class of the top case in the application. If a new case type requires a different class, use Designer Studio to change the top case before adding the new case type.

1. Open Pega Express by logging in to your application with your administrator credentials.
2. To enable editing mode, click the **Turn editing on** link in the top-right corner.
3. In the **Explorer** panel, click **Cases** to open the Case Type Explorer.
4. Click **New** at the top of the Case Type Explorer.
5. Enter the name for the new case type, and then click **Next**.
   The Case Designer tool opens
6. Use Case Designer to configure fields and data integration, stages and steps, and user views.
7. Click **Done** to save the changes.

Defining class group to database table mapping

To define how your cases are stored in the database, create a relationship between the class and the physical database table where the class instances will be stored. Work with the database administrator at your site on this task.

To record your decisions during this procedure, use the "Class group mapping" worksheet in the *Implementation Planning Workbook*. See the Classes and Properties landing page.

1. Log in to Designer Studio.
2. In the **Explorer** panel, click **App**.
3. Right-click the first class name and select **Definition**.

4. In the **Settings** section, select `is a class group` or `belongs to a class group` from the **This class** list.

5. If **This class** field belongs to a class group, then select the class from the **Class group** list.

6. Click **Test Connection** to see the name of the table currently mapped to this class.

7. Determine the name of the table that the database administrator resource at your site wants you to use for storing instances of this case type.

8. Optional: Repeat steps 2 through 6 for each class in your application.

Confirming case type locking setting

After creating and reviewing settings for each case type, determine the locking behavior of each case.

Identifying the most appropriate lock setting for your application is important because it can affect the throughput of work in your application. For example, if user1 locks a case to work on it, then other users cannot work on the locked case until user1 unlocks the case or the lock expires according to the timeout period.

Contrary to this, if multiple users are allowed to work on a case simultaneously, the case content could be modified for one or more users while they work on the case. For example, assume that user1 is working on a case then user2 opens the same case a few minutes later. When user1 saves changes to the case, user2 is notified of the changes and is enforced to accommodate changes done by user1 in the case.

To record your decisions during this procedure, use the "Case type modifications" worksheet in the *Implementation Planning Workbook*.

Choose any of the following locking types.

- A case is opened

  Allows one user at a time to open and work on a case.

- An action taken on case

  Allows multiple users to work on a case at the same time.

📝 **Note:** If you have already considered and set the locking behavior for each case type, you can skip this procedure.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Cases**.

3. Click the first case type.

4. Click **Locking** in the case-wide settings.

5. Determine if the case should be locked when the case is opened or when an action is taken on the case.

6. Determine the lock timeout period for this case.

7. If you are certain at this point how locking should be handled for this case type, you can update this setting now.

8. Repeat these steps for each case type.

Defining the data model

The application provides a set of data types, data pages, and sample data to begin implementing your application. You will need to use the data from your site's system of record instead of using the sample data provided by the application.

To view the application data types and the currently configured sources for each data type, open the External Data Entities landing page.

- Application data model

Application data model

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

Data modeling involves creating a conceptual model of how data items relate to each other in an application. In the Pega Platform, the data model refers to a set of rules that work together to populate the data in your application. The system displays this data to help you process the information and can help you make decisions in your sales processes. The following rule types constitute your data model:

Data types
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. Data pages also control the loading of that data from a source system, as shown here.
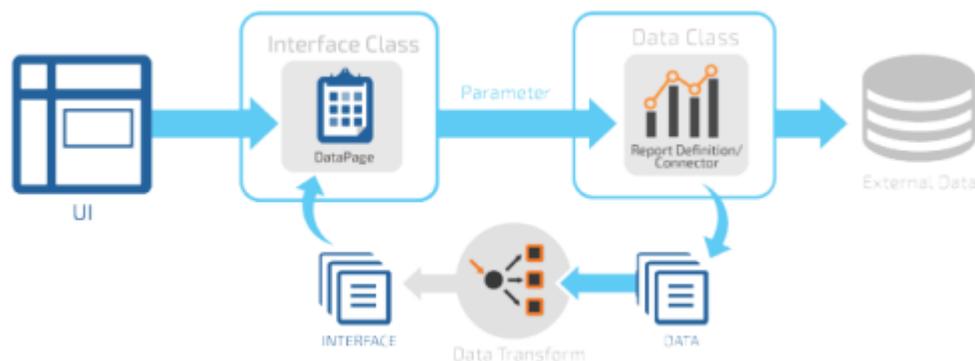
When planning your data model, work with the data modeling resource at your site to understand the attributes of the data types that need to be supported by your application.

> **Note:** Pega Customer Service uses the Pega Platform system of record for application data. Optional: You can integrate your application data with your Pega Platform system of record.

To view the Pega Customer Service data model, see Financial Services Industry Foundation data model.

Defining integration

Inventory the external applications that exist at your site and plan how to connect to them.

> **Note:** Identify integration points as early in your planning as possible. If a connection to an external data source is required and either the data does not exist or the interface to that data

does not exist, you must account for the time to publish these data sources and the time to configure the interface for this application.

The External Data Entities landing page lists the application data types and shows the source for that data.

To record your decisions during this procedure, use the "Integration" worksheet in the *Implementation Planning Workbook*.

1. Identify all integration points for your application.

2. Identify which data is needed from each system of record, if you have not already done so during the defining the data model step.

3. Determine whether an interface to that system of record already exists and how to connect to it.

- Mapping application data

Mapping 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.

To record your decisions during this procedure, use the "Data model" worksheet in the *Implementation Planning Workbook*.

You can also use the "Data planning" worksheet to record any new data types that are needed by the application.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Data**.
   The list of all available data types is displayed. By default, Pega Customer Service includes Contact, Organization, and Address and their relationship data types.

3. Click the first data type.

4. On the **Data model** tab, determine the properties to add, remove, or leave unchanged. For more information about data types, see Viewing data type details.

5. Repeat steps 3 and 4 for all existing data types.

Defining application behavior

To configure the functionality that is provided in Pega Customer Service, complete the following procedures.

- Defining interaction types, driver categories, and tasks

- Defining dialogs and coaching tips

- Defining the search behavior

- Defining the interaction goals

- Defining the call duration goal

- Defining the call verification method

- Defining application settings

- Defining common phrases

- Defining customer events to track

Defining interaction types, driver categories, and tasks

Interaction types (known as **Channels** in the Interaction Portal during Pega Express configuration) and driver categories (known as **Add Task menu categories** in the Interaction Portal in Pega Express) determine the tasks that a customer service representative accesses during an interaction with a customer. The interaction type appears in the **New** menu list of the Interaction Portal. Selecting an interaction type from **New** menu list, enables you to start a new Interaction. Intent tasks are references to service requests and provides information to determine which service request category must be displayed and when for each interaction channel. Intent Task rules are created automatically along with the Service Requests (Case types) in Pega Express.

When you finish running the New Application wizard in the Designer Studio, the interaction types are created for you. You can determine which tasks are associated with those interaction types or channels. The defined tasks appear in the **Add Task** menu of the Interaction Portal during a customer interaction.

- Defining interaction types and add task menu categories

Defining interaction types and add task menu categories

Use the Interactions and Add task menu category worksheets in the *Implementation Planning Workbook* to record your decisions during this procedure.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Settings** and then click **Interactions**.

4. Determine the interaction types that your application is going to use.

5. Determine if the coaching tips, dialog, or quick wrap-up features should be available or not for each interaction type.

6. In the **Add task menu categories** section, determine the category name, when rule, and behavior for the interaction type.

7. Repeat for each interaction type for your application.

Defining dialogs and coaching tips

Dialogs and coaching tips help the support representative provide the best possible experience for the customer. Dialog and coaching tips are not enabled for mobile interactions.

📝 **Note:** Integration with the optional Pega Knowledge application enables Pega Customer Service to suggest contextual content to representatives in the context of the service processes that they are working on. For information about how to plan for Pega Knowledge integration, see <u>Defining the configuration</u>.

- Mapping the dialogs to the flows
- Defining coaching tips
- Defining knowledge content integration

Mapping the dialogs to the flows

Dialogs prompt the representative to ask the customer for the right information that is needed to resolve the request. Using the **Configuration Tools** option, users with the Manager role can update the dialogs directly in the flow action that requires it.

To record your decisions during this procedure, use the "Dialog" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Designer Studio** > *Customer Service application name* > **Dialog Management** > **Dialog Cross Reference**.

3. In the **Show references in** field, select **All Inherited**.

4. Click **Run**.

5. Select the first Work Type (case type).

   ℹ️   **Tip:** You can click **Export to Excel** for easier viewing of these records.

6. Determine the dialog that should be associated with each flow action.

7. Repeat these steps for all application work types.

For more information on how to configure and edit dialog or coaching tips, see [Configuring dialogs and coaching tips](#).

Defining coaching tips

Authorized supervisors or managers create coaching tips for their employees that remind them of best practices or areas to improve. Coaching tips are assigned to individual customer service representatives or to entire work groups.

To record your decisions during this procedure, use the "Coaching tips" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Designer Studio** > **Customer Service** > **Quality management and coaching** > **Coaching Tip Inventory**.

3. In the **Show coaching tips in** field, select **All Inherited**.

4. Click **Run**.

5. For each work type, click the corresponding **Action** column to see the existing coaching tip.

6. Determine the coaching tip for the work type, process action, user, and workgroup.

Defining knowledge content integration

The Pega Knowledge application supports the creation of contextual, multi-media content. Knowledge articles can be linked directly to service cases so that they are suggested to the customer service representatives, providing quick, contextual answers to expedite resolution to customer issues.

If you plan on using this feature, complete the following steps. To record your decisions during this procedure, use the "Pega Knowledge" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Cases**.

3. Click the first case type in your application.

4. Click **Run** to run the processes for that case type.

5. Determine the knowledge content needed for each stage and step in your process.

6. Repeat steps 1 through 4 for all case types.

For more information on configuring a Pega Knowledge content, see [Configuring Pega Knowledge content](#).

Defining the search behavior

Users can search for cases, knowledge content, and data such as accounts, contacts, and business units in the application portals. To search for instances related to Customer Service data source, you can configure the portal search option on the data source form as described below. For all other instances, you can use the Full-text search.

To record your decisions during this procedure, use the "Portal search" worksheet in the *Implementation Planning Workbook*.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Data types**.

3. From the list of available data types, determine the data type that should be searchable.

    For more information on search configuration, see Configuring the portal search.

Defining the interaction goals

The application displays an interaction goal to the user to guide the conversation with the customer. For example, values for customer value and net promoter category can affect how the representative interacts with the customer.

To record your decisions during this procedure, use the "Interaction goal" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records** > **Decision** > **Decision Table**.

3. In the **Purpose** field, click the filter icon and enter `DetermineInteractionGoal` in the **Search Text** box.

4. Click **Apply**.

5. In the results list, click each instance of **DetermineInteractionGoal** in the latest ruleset.

6. In the decision table, review the value in the **Conditions** column to determine which properties drive the value of the interaction goal property.

    ℹ️ **Tip:** For example, see the DetermineInteractionGoal decision table in the sample ruleset.

7. Click the **Results** tab.

8. In the **Results** section, expand **Additional Allowed Results** to determine if any new return values need to be added.

Defining the call duration goal

The call duration goal provides a call guidance message to the representative during a phone interaction. The DetermineCallDurationGoal decision table can include information such as contact center volume indicator, customer lifetime value, and last NPS score to set the value of the call duration goal.

To record your decisions during this procedure, use the "Call duration goal" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records** > **Decision** > **Decision Table**.

3. In the **Purpose** field, click the filter icon and enter `DetermineCallDurationGoal`.

4. Click **Apply**.

5. In the results list, click the instance of **DetermineCallDurationGoal** in the latest ruleset.

6. In the decision table, review the value in the **Conditions** column to determine which properties will be used to set the call duration value.

7. Click the **Results** tab.

8. In the **Results** section, expand **Additional Allowed Results** to determine if you need to add any entries need to the allowed results.

Defining the call verification method

When customers contact a customer support center, their authenticity is verified through account or contact information. In addition to existing verification methods, a new verification method can also be added by appending a new method to the **AppVerificationParam** map value.

To record your decisions during this procedure, use the "Call verification" worksheet in the *Implementation Planning Workbook*.

Follow these steps to determine the value for this setting.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records** > **Decision** > **Map Value**.

3. In the **Map Name** field, click the filter icon and enter `AppVerificationParam`.

4. Click **Apply**.

5. In the results list, click the PegaCA-Work version of **AppVerificationParam** in the latest ruleset.

6. Click the **Configuration** tab.

7. In the **Results** section, review the **Additional Allowed Results** for the map value.

8. Determine which method you will use to verify your customer.

Defining application settings

In Pega Customer Service, you can configure your application settings based on how you want your application to behave.

To record your decisions during this procedure, use the "Application settings" worksheet in the *Implementation Planning Workbook*.

1. Determine whether to enable Pega Customer Decision Hub for the display of suggestions for the next best action based on the current context.

2. Determine whether you want to enable pre-integrated Pega Sales Automation features.

3. Determine whether to enable an automatic refresh for the **My Work** tab.

4. Determine whether you want to allow customer service representatives to delete the pulse or interaction notes.

5. Determine whether to display the call volume indicator and then determine the refresh rate.

6. Determine how to set refresh rates for the following items.

   • Messages and alerts

   • Call timer

7. Determine whether to enable Pega Knowledge for the display of applicable articles to the Customer Service Representative (CSR) during a call.

8. Determine whether to enable Co-Browse so that you can share a browser session with a customer.

9. Determine whether you want to connect to the Pega Workforce Intelligence server.

10. Determine whether you want to enable the customer service representatives to access the **Robot settings** icon in the Interaction portal.

11. Determine whether you want to suggest automated response to the customer service representatives using **Agent Augmentation AI**.

To configure these settings in the software, see Configuring application settings.

Defining common phrases

You can enable customer service representatives to insert frequently used phrases in the chat window by selecting them from the **Phrases** menu during a chat session. The common phrases can be used for all channel interactions, such as chat, social and email channels. From Pega Express, you can configure this capability for one channel or all.

To record your decisions during this procedure, use the "Common phrases" worksheet in the *Implementation Planning Workbook*.

1. Define the channel for which you want to use the common phrases.

2. Define the categories of common phrases that will be seen by the customer service representative. During a chat, social, or email session, each category is presented as a separate sub-menu from which they can select a phrase.

3. Define a short name for each phrase that will clearly identify the phrase to the customer service representative.

4. Define the complete text that a customer sees in the chat window when a customer service representative selects the phrase. If the phrase includes text that is formatted as a link (for example, the text starts with "http://"), then the chat window converts the text to a link when a customer service representative sends the phrase.

5. To restrict selection of this phrase to customers with specific browser locales, identify the language of the phrase. By default, a phrase applies to all languages and locales.

For more information of configuring common phrases, see Configuring common phrases.

Defining customer events to track

Pega applications automatically track the most common customer activities and display the activities chronologically in a Customer journey widget on the customer composite. To track an additional activity, create an event for the activity.

For more information about tracking customer events, see *Timeline view of customer events* on the PDN.

For information about how to configure a new event type to track, see Creating an event type in the Event Catalog.

To record your decisions during this procedure, use the "Customer events" worksheet in the *Implementation Planning Workbook*.

1. Determine whether there are customer events that you want to track that are not tracked by default. To view a list of event types that are always tracked, see *Timeline view of customer events* on the PDN.

2. For each new event that you want to track, determine the source of the event, the source of the customer ID, and the storage and retrieval options.

Defining behavior for additional components

Your implementation can have multiple components associated with it. Each of these components requires planning for a successful implementation.

Net Promoter™ capability is part of the Pega Customer Service application, but its use is optional. Pega Co-Browse, Pega Knowledge, Pega Marketing, Pega Social, Pega Call, and Pega Chat are optional components that can be implemented at the same time as Pega Customer Service, or added to the application afterwards.

- Defining Pega Intelligent virtual assistant for the Facebook Messenger configuration
- Defining Pega Co-Browse configuration
- Defining the Pega Knowledge configuration
- Defining Pega Customer Decision Hub behavior
- Defining Pega Social
- Defining Pega Call configuration (telephony integration)
- Pega Chat requirements
- Defining Net Promoter Score settings

Defining Pega Intelligent virtual assistant for the Facebook Messenger configuration

Customers can use Pega Intelligent virtual assistant to interact with Pega Customer Service using the Facebook Messenger. The Pega Intelligent virtual assistant for the Facebook Messenger provides automated answers to customer questions. When a customer wants to chat with a customer service representative, the Intelligent virtual assistant escalates the current chat session to a customer service representative. Escalation requires the Pega Chat application.

The customer service representative can review the current interaction transcripts before responding to the chat request. Also, the customer service representative can select any in-progress service case listed under **Next Best Action** and continue processing the case from the point where it was transferred by the Intelligent virtual assistant.

For information about how to add this feature to a service case type, see *Configuring the Facebook channel* on the PDN.

To record your decisions during this procedure, use the " Pega Intelligent virtual assistant for the Facebook Messenger " worksheet in the *Implementation Planning Workbook*.

1. Decide whether you want to use an Intelligent virtual assistant for any of your service case types. For example, you might want to use Intelligent virtual assistant to increase the customer average handling time percentage.

2. Decide which Facebook page you will use to configure the Intelligent virtual assistant. For example, you might choose your Wind energy Facebook product page. For more information, see *Configuring the Facebook channel* on the PDN.

3. Identify the Facebook channel you will use to configure the Intelligent virtual assistant. For example, you might want to use Asia-Pacific Facebook channel to market your products. For more information, see *Configuring the Facebook channel* on the PDN.

4. Identify case types that will support Intelligent virtual assistant interactions with customers. For example, you might want to use a conversational channel to open a case to report a problem. For more information, see *Conversational user channels* and *Adding a conversation to a case type* on the PDN.

5. Decide whether your application requires customized responses, in addition to the application-provided responses. For example, configure the Intelligent virtual assistant to provide a business-

specific error message instead of the generic error message. For more information, see *Configuring Facebook chatbot system responses* on the PDN.

6. Decide whether you need to modify the text analyzers. For example, you might want to modify the text analyzer for your business class customers. Also, decide whether to support a custom taxonomy, and, if yes, which custom categories to add to the text analyzers. For more information, see *Natural language processing text analyzers* on the PDN.

7. Determine which Pega operator ID you will use as a template for the Pega operator ID that gets created when a new user interacts with the Intelligent virtual assistant. Select a template with the appropriate access group and roles for the most likely interaction types.

Defining Pega Co-Browse configuration

With Pega Co-Browse, your customers and agents can collaborate by sharing a web browser session on the customer's PC, tablet, or mobile phone.

To record your decisions during this procedure, use the "Co-Browse" worksheet in the *Implementation Planning Workbook*.

1. Determine which activation mode presenters will use to invoke the Co-Browse session.

   - **Stealth** - Enables the presenter to use the Ctrl+Enter key combination to start the session. To use Pega Co-Browse with Pega Chat, always select this mode.

   - **API** - Enables the presenter to start a Co-Browse session using a custom method that they have defined using JavaScript and the Co-Browse API. For example, they could start a session from a custom button.

   - **Button** - Enables the presenter to start a Co-Browse session by clicking a **Support** button on the left side of the web page. This is the default mode.

   For more information about how to configure each mode, see the *Pega Co-Browse Implementation Guide* on the Pega Customer Service product page.

2. Determine which web pages that you would like Co-Browse to work on.

3. Determine which website fields require masking.

4. Determine whether the Pega Co-Browse window must be customized to match branding standards at your site.

5. Define a message that you want to appear before the viewer connects with the presenter.

6. Determine whether to enable remote control. Remote control allows the viewer to take control of the presenter's screen.

Defining the Pega Knowledge configuration

Pega Knowledge is a standalone application that is integrated with Pega Customer Service. Pega Knowledge supports the creation and organization of rich content that can be suggested to representatives in the context of the service processes that they are working on.

Planning your application to support Pega Knowledge involves three major tasks.

- Identifying service cases that need content.

- Developing relevant content needed to support specific service cases.

- Identifying the product lines that need Pega Knowledge articles.

When planning, focus on which content is necessary for complex service cases. Write the content concisely and limit the number of Pega Knowledge articles so that the agent does not have a large number of search results.

To record your decisions during this procedure, use the "Pega Knowledge" worksheet in the *Implementation Planning Workbook*.

To configure Pega Knowledge content in Pega Customer Service application, see Linking Pega Knowledge content .

1. In the **Explorer** panel, click **Cases**.

2. Click the first case type in your application.

3. Click **Run** to run the processes for that case type.

4. Determine the knowledge content that is needed for each stage and step in your process.

5. Repeat these steps for all case types.

Defining Pega Customer Decision Hub behavior

Pega Customer Decision Hub can be used with Pega Customer Service to drive up-sell, cross-sell, and retention offers, and provide additional guidance to representatives on the next best action for the current customer and context. These suggestions appear as **Suggested Tasks** during the interaction. Customer Decision Hub also helps the wizard to create the marketing-related rules in the new application layer interaction.

To use this feature, ensure that Pega Customer Decision Hub is installed and licensed. If using local campaigns with a Pega Sales Automation application, Pega Web Mashup must also be installed on the Pega Customer Service application server.

For more information about Pega Marketing, see the Pega Marketing page. For information about how to install Pega Customer Decision Hub, contact your Pega support representative.

For more information on configuring Customer Decision Hub, see Configuring Customer Decision Hub .

Defining Pega Social

Customers can implement Pega Socialat the same as Pega Customer Service, or they can add this component later.

For information about the planning considerations for a Pega Social implementation, see Pega social configuration.

Defining Pega Call configuration (telephony integration)

Planning for telephony integration involves two major tasks.

- Planning the infrastructure

- Planning the Customer Service Representative (CSR) experience once the call is received

To plan the connectivity to your telephony infrastructure, complete the following steps:

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 Pega Call 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.

   To record your decisions during this procedure, use the "Pega Call telephony setting" worksheet in the *Implementation Planning Workbook*.

For more information on CTI-specific configuration details, see the individual configuration guides available on the Pega Call product page.

Planning the CSR experience

To record your decisions during this procedure, use the "Pega Call telephony setting" worksheet in the *Implementation Planning Workbook*.

1. Determine how customer service representatives control their phone calls (hold, retrieve, and transfer) and manage their agent state (make themselves available or unavailable to receive customer calls). A CSR can choose to take calls by using Pega desktop application (full telephony mode) or another tool. For more information, see the individual configuration guides available on the Pega Call product page.

2. Determine which data will be sent from the telephony environment to the Pega Platform. Understand which variables and formats will be used for the data and determine how to map these to Pega Platform properties.

3. Determine how the call will be handled when it arrives at the user's desktop.

   - Screen Pop – A popup notification displays information about the incoming call. Determine which telephony elements will be displayed on the screen pop window.

   - Start Interaction (also known as Auto-Accept) – A call interaction is started automatically. No screen pop window is displayed.

   - No Action – No interaction or screen pop window is triggered. For example, use this setting for internal calls that are not related to the customer interactions.

4. If the call is handled by a screen pop or start interaction, determine the timeout. For more information, see *Configuring screen pops section* in the configuration guide found on the Pega Call product page.

5. Determine which type of call transfers will be supported.

   - Warm transfer – The customer service representative receiving the transfer has the opportunity to consult with the person transferring the call and has the option to accept the call.

   - Blind transfer – The call is transferred without the CSR first talking with the transferee. The call is transferred without a consultation call.

6. Define transfer reasons. Default reasons include Call in Wrong Queue, Caller Needs Additional Services, Escalated to Supervisor, and Other.

   Note: Use this option only if you want to transfer the interaction and cases with the call.

Pega Chat requirements

Customers can implement Pega Chat at the same time as Pega Customer Service, or they can add this component later.

For information about the planning considerations for a Pega Chat implementation, see Implementation.

Defining Net Promoter Score settings

During interaction wrap-up, the application calculates a Net Promoter Score ™ based on the response to this question: `On a scale of 0-10, how likely are you to recommend us to a friend?` This response can be used to drive future interactions with the customer.

The Net Promoter application, bundled with core Pega product, is an optional component of Pega Customer Service. When installed, the application generates follow-up cases for managers and supervisors to investigate.

> **Note:** Pega Customer Service includes customer satisfaction survey capabilities that you can leverage if you do not have the Net Promoter application installed. For more information about customer satisfaction survey configuration, search for the related topics on the PDN.

If you are using the Net Promoter application, follow these steps.

1. Determine how the follow-up cases from Detractor or Passive scores will be handled.

2. Record your decisions in the " Net Promoter Score worksheet" in the *Implementation Planning Workbook*.

For more information, see the *Net Promoter Tech Note* on the Pega Customer Service product page.

Defining the user experience (UX) customization

Customizing the Pega Customer Service user experience to meet the UX standards at your site includes the following procedures.

Localization and accessibility are also common user experience requirements. For more information, see the Pega Platform help.

- Designing the customer composite
- Designing the portals
- Determining the application skin and styles to modify
- Designing for screen performance
- Designing web self-service
- Determining which part of the user interface to modify

Designing the customer composite

To record your decisions during this procedure, use the "Customer composite" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Launch** > **Interaction Portal**.

3. Click **New** > **Demo Screen Pops** > **Demo Pop - JOHN BROWN**.

4. Click **Accept**.

5. For each field on the customer composite, determine the following information.

   - If this information is needed more than once during the call.

   - The probability of the information to be referenced during the call.

   - The probability of the information to change the customer's behavior, questions, or perception.

   - The probability of the information to change the representative's behavior.

   - The time frame when this information is needed.

6. Based on these responses, determine the following information.

- If the information should be visible, available, or accessible.

  - Visible: Always present on the screen.

  - Available: Ability to quickly view and make permanently visible.

  - Accessible: Data is reachable within 2 clicks.

- Which screen quadrant should show the information.

Designing the portals

To ensure a more effective user experience, determine the contents of the **Interaction** and **Back Office Operations** portals to ensure that only relevant data is presented. In addition, determining how users enter the application, including customers, helps you plan for a better overall experience.

To record your decisions during this procedure, use the "Portals" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Launch web interface** > **Interaction Portal**.

3. Open the Dashboard section.

4. To edit and personalize the dashboard, click the **Personalize dashboard** icon.

5. In the **Edit dashboard** section, choose your layout template and add your own widgets or select from the set of available widget options.

6. Click **Publish** to publish your settings. You can choose to publish the settings to the default dashboard or to the access group.

7. Review the **My Reports**, **Manager Tools**, and **Pulse** and determine if any modifications are required based on your business needs.

8. Repeat these steps for the Account Manager portal.

   For more information, see Configuring your dashboard.

9. Define the application entry point.

   The Pega Customer Service portal can be accessed as is, or individual processes can be embedded as a mashup in an existing portal or application.

   a) Review features provided by Pega Web Mashup.

   b) Discuss these options with the resource currently managing the application in which you want to embed your process.

   c) Decide on the most appropriate entry point for your site.

      These processes can also be made available to your customers directly. See Designing web self-service.

Determining the application skin and styles to modify

You can customize the skinning of the application so that it complies with the branding and styling standards at your site.

To record your decisions during this procedure, use the "Skinning" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Designer Studio** > **User Interface** > **Skins, interfaces, & templates**.

3. On the **Skins** tab, double-click the **CSEndUser** skin in the PegaAppCA ruleset.

   The **Component styles** tab opens.

4. Determine which components require customization and update.

For more information on customizing the application skin and styles, see Component styles tab of the Skin rule form.

Designing for screen performance

Determine screen performance requirements for your applications. The following list describes examples of performance requirements.

- The round-trip time from the server to client must be 1 second or less.

- The screen-to-screen time must be less than .5/second.

To design for these types of requirements, consider the following items.

1. Which business service level agreements exist. For example, the customer details must be available in one second or less while a representative is on the phone with the customer.

2. How long it takes backend systems to gather the data it needs to display customer details.

3. Which fields does the representative absolutely need for the task that they need to perform.

4. Whether any network configuration could cause latency, for example, representatives logged in through the corporate VPN or in a remote location.

Designing web self-service

You can allow your customers to directly perform tasks themselves in the Pega Customer Service application using web self-service. Web self-service capabilities can be implemented by performing the following tasks.

- Embedding a portion of the application directly into an existing portal. This is done through Pega Web Mashup.

- Providing the Pega application itself as the user experience. This approach can take the form of a desktop application, a mobile application, or both.

1. Review features offered by Pega Web Mashup .

2. Review features offered by Pega Mobility.

3. Discuss these options with the resource currently managing the customer-facing user experience.

4. Determine the approach most appropriate for your site.

Determining which part of the user interface to modify

When users first access the Interaction Portal, they see the Home page, which typically contains information about the user, a menu along the left side, and various sections such as My cases and My workbaskets that display information to a customer service representative (CSR). You can customize the user interface and display any data that you have integrated into your application.

For more information to modify user interface, see Modifying the user experience.

Defining the security model and organization structure

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

Authentication

Proves to the application that you are who you say you are.

Authorization

Determines the functions that you can perform in the application. This corresponds to access group and role configuration.

Security planning also involves setting up the organization structure and operator attributes. The application provides security in the form of access settings and denial rules. Many integration rules also incorporate authentication.

For more information about the additional aspects of security, enroll in the *Lead System Architect* course on Pega Academy and cover the Security lessons that correspond to the following topics:

- Authentication schemes

- Defining your authentication scheme

- Defining your authorization scheme

- Defining the organization

- Defining the operator attributes

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 using Secure Sockets Layer (SSL) using 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.

Defining your authentication scheme

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

To record your decisions during this procedure, use the "Security Model" worksheet in the *Implementation Planning Workbook*.

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.

Defining your authorization scheme

Pega Customer Service application comes with a predefined set of access groups, roles, and privileges. You can use the application roles as a starting point, but you should create your own application-specific access groups and roles to avoid any future problems when upgrading.

Other rule types such as sections, flow actions, and activities use roles and privileges to allow access to these rules at run time.

📝 **Note:** You can review the Pega Customer Service access groups and roles in Pega Express.

- Defining access roles and privileges
- Defining your access groups

Defining access roles and privileges

You can associate one or more roles to an access group. Roles are additive. The more roles that you add to an access group, the more authorization there is. Privileges can be associated with one or more roles.

To record your decisions during this procedure, use the "Security model" worksheet in the *Implementation Planning Workbook*.

1. Determine which roles are needed for your application. You can use the Pega Customer Service roles as a starting point.

2. Determine which privileges to associate with each role.

3. Associate each role with an access group.

For more configuration information, see Groups and roles.

Defining your access groups

To record your decisions during this procedure, use the "Security model" worksheet in the *Implementation Planning Workbook*.

1. Identify additional access groups that are needed for your application.

2. Identify portals associated with these access groups.

Defining the organization

Use the organization structure for routing and reporting within the application. Typically, the application organization structure does not map operators exactly to the site's organization chart but instead, it maps the work that those operators do.

1. For additional guidance, see Organization landing page.

2. To record your decisions during this procedure, use the "Organization structure" worksheet in the *Implementation Planning Workbook*.

To configure your organization, see Updating business organizations.

Defining the operator attributes

An operator's access group affects what the operator can do in the application. In addition to the access group, three fields in the operator record influence how the application handles assignment of work to the user.

- Work group
- Skills

- Calendar

📝 **Note:** In many implementations, it is more efficient for the application to set values in the operator record during the authentication process than it is to have an administrator manually maintain these records. These rules must be configured as part of the authentication mechanism for your site. For more information, see More about Authentication Services.

- Defining the operator work group

- Defining the operator skills

- Defining the operator calendar

Defining the operator work group

The work group setting in the operator record affects how the application delivers work to the operator.

1. Review the Operator record.

2. Determine the rules for assigning a work group to an operator or the role that multiple operators hold.

To record your decisions during this procedure, use the "Organization structure" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Designer Studio** > **Org & Security** > **Organization** > **Operators**.

3. Select an operator ID.

4. On the **Work** tab, review the work group information for the operator record.

5. Determine your policy for assigning a work group to an operator or the role that multiple operators hold.

Defining the operator skills

Skill settings in the operator record affect how the application routes work to the operator. Skill settings also affect how the application gets the most appropriate work when using the Get Next Work feature. You must determine the skills that are appropriate for your application and operators.

To record your decisions during this procedure, use the "Organization structure" worksheet in the *Implementation Planning Workbook*.

1. Define the skills that are needed for the application.

2. Determine which operator records or roles should be associated with those skills.

Defining the operator calendar

The application calendar affects date calculations within the application, such as the date between business days calculation, and the SLA goal and deadline date calculation. The calendar on the operator record is relevant only if you have users who are not working in the same time zone as the rest of the organization. Otherwise, the application uses the calendar on the organization record and you can skip this step.

Operator calendars will have an impact on chat availability. If a chat request comes in after or before the business hours defined in the specified calendar, then the requestor receives "Off-hours behavior message".

To record your decisions during this procedure, use the "Organization structure" worksheet in the *Implementation Planning Workbook*.

1. Determine the calendar instances that are needed for your application.

2. Determine which operator roles need a distinct calendar.

3. Determine the operator location.

For more information, see [More about Calendar data instances](#).

Defining reporting requirements

Consider your reporting requirements early in the planning process. Before introducing a new report, answer these questions.

- Does the report already exist? (For detailed information about the application-provided reports, see the [Pega Customer Service reports](#)).
- Who needs the report?
- When do they need the report?
- What is the content of the report?
- Why do they need the report?
- Where will it be run? Will it be run in the Pega Customer Service application, or using another reporting tool and source?

With reporting, you should plan your reporting needs ahead of time to give you more flexibility later on.

- Determining reporting architecture
- Reviewing existing reports
- Identifying key metrics
- Identifying dashboard reports

Determining reporting architecture

Determine which reports you are going to generate from the application, and which you are going to generate using a different reporting tool.

To record your decisions during this procedure, use the "Reports" worksheet in the *Implementation Planning Workbook*.

To understand reporting requirements, 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 other reporting tools at your site.

Reviewing existing reports

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

To record your decisions during this procedure, use the "Reports" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.
2. Click **Launch** > **Interaction Portal**.
3. Click the **My Reports** link.
4. In the **Explorer** panel, click **Reports**.
5. Review each of the reports in the **Public categories** section.
6. Determine who needs the report, what it contains, and when and why it is needed.

Identifying key metrics

Identify key metrics early in the planning process so that you can structure your application to generate the required metrics.

To record your decisions during this procedure, use the "Reports" worksheet in the *Implementation Planning Workbook*.

1. Review the list of existing reports with supervisors and managers, sales managers and sales representatives.

2. Identify any metrics that are already provided by the application.

3. Identify metrics that are not already provided by the application.

4. Determine who needs each report, what it contains, and when and why it is needed.

Identifying dashboard reports

Additional application-provided reports are available from the Dashboard. Identify the application-provided dashboard reports that meet your business needs.

To record your decisions during this procedure, use the "Reports" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio.

2. Click **Launch** > **Interaction Portal**.

3. Click the **Dashboard** link on the **Home** tab.

4. Identify the reports that are relevant to your application, and decide if any report needs to be replaced by a different report.

Building features

As you build and modify features, update the Application Specifications to reflect the changes. For instructions, see About Application Specifications.

To build application features, review the topics in the following sections:

- Building a new application
- Integrating data
- Configuring channels
- Configuring dialogs and coaching tips
- Configuring the behavior of additional components
- Modifying the user experience
- Configuring the customer verification settings
- Configuring the portal search
- Quality reviews and customer satisfaction surveys
- Customer Decision Hub feature
- Configuring access groups
- Configuring reports

Building a new application

Before you can implement your new Pega Customer Service implementation, create a new application using the New Application wizard.

Building an application includes these steps.

- Configuring application settings

Configuring application settings

Pega Customer Service contains several settings that you review and configure to affect the behavior of the application. These settings include enabling pre-integrated Pega Sales Automation features, Pega Knowledge, Pega Co-Browse, Pega Workforce Intelligence, and Pega Customer Decision Hub, automatically refreshing the **My Work** tab, adjusting call volume refresh rate, using the Robotics settings icon in the interaction portal, and using Agent Augmentation AI.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Settings** and then click **Behaviors**.

4. To display suggestions for the next best action based on the context of the customer, the contact center, and any other contextual information configured in Customer Decision Hub, select the **Enable Customer Decision Hub** check box and enter the **Customer Decision Hub server URL**. For additional information, see the Customer Decision Hub product page.

5. To enable your application to use the pre-integrated Pega Sales Automation features, select the **Enable Sales Automation** check box.

6. In the **General Settings** section of the **Behaviors** page, ensure that the **Auto-refresh My work** check box is selected so that each time you open the **My Work** tab, it is automatically refreshed.

7. To allow the customer service representatives to delete the interaction or pulse notes added to a contact during an interaction, select the **Allow CSRs to delete Interaction or Pulse notes** check box.

8. If you want to display the **Contact Center volume indicator** gadget in the Interaction Portal header, select the **Display Call volume indicator** check box.

9. If you select the **Display Call volume indicator** check box, the **Call Volume refresh rate (secs)** list appears. Select how frequently you want to refresh the indicator.

10. From the **Messages and Alerts refresh rate (secs)** list, select the refresh rate to refresh the **Messages and Alerts** gadget that notifies the customer service representatives with the number of messages or alerts received.

11. From the **Call timer refresh rate (secs)** list, select the refresh rate to refresh the call timer. Using the default 1-second rate provides a realistic timer for the Customer Service Representative (CSR).

12. From the **Default service request category** list, select the default category. The new service case gets displayed in the interaction portal under the Add Task menu.

13. To display relevant articles that help the customer service representatives during an interaction, in the **Knowledge** section, select the **Enable display of knowledge articles** check box. There are additional knowledge display configuration options available. For information on additional knowledge configuration option, see Configuring Pega knowledge.

14. To share a browser session with a customer, in the **Co-Browse** section, select the **Enable Co-Browse** check box. The **Co-Browse token** and **Co-Browse API key** fields are auto populated. After you enable co-browse capability for your application, you can also choose to record the co-browse session for future reference, to enable co-browse recording, select the **Enable Co-Browse recording playback** check box. For more information see, Pega Co-Browse Implementation Guide.

15. To connect to the Pega Workforce Intelligence server, in the **Workforce Intelligence** section, enter the Workforce intelligence server URL. When you enter the server URL, a connection is established between the Pega Customer Service application and the Pega Workforce Intelligent server that displays real-time user data on the Workforce Intelligence dashboard. This enables you to gain actionable insights on your team's activity inside Pega Platform and other desktop or browser applications, and also helps to quantify automation opportunities and savings. For more information, see the Pega Workforce Intelligence product page.

16. To enable the **Robot settings** icon in the interaction portal, which enables customer service representatives to launch and log into other production applications, select **Enable robotics assisted "Start My Day"** in the **Robotics** section. For more information, see the Robotics product page.

17. To suggest an automated response to the customer service representative, in the **Agent Augmentation AI** section, select **Enable agent augmentation**. There are additional Agent Augmentation AI configuration options available. For more information on the additional configurations such as enabling Agent Augmentation AI suggestions for channel capabilities such as common phrases, page push, and knowledge articles, see Configuring the Agent Augmentation AI suggestions.

18. Click **Done**.

Integrating data

You can integrate data from other sources into your application.

To integrate data into a Pega Customer Service application, follow these steps.

1. Generate a data class to connect to your external data.

   You can use a connector to a web service or the Database Table Class Mapping wizard for a database.

2. Create a report definition to retrieve the data.

3. Create an Implementation class based on the PegaCA-Interface class that you are implementing.

4. Update the data pages for that class by changing the sourcing of the data page to the report definition that you created.

5. Create a response data transform for the data page to convert the data class fields to the interface class fields.

6. Repeat this process to populate all of the data pages.
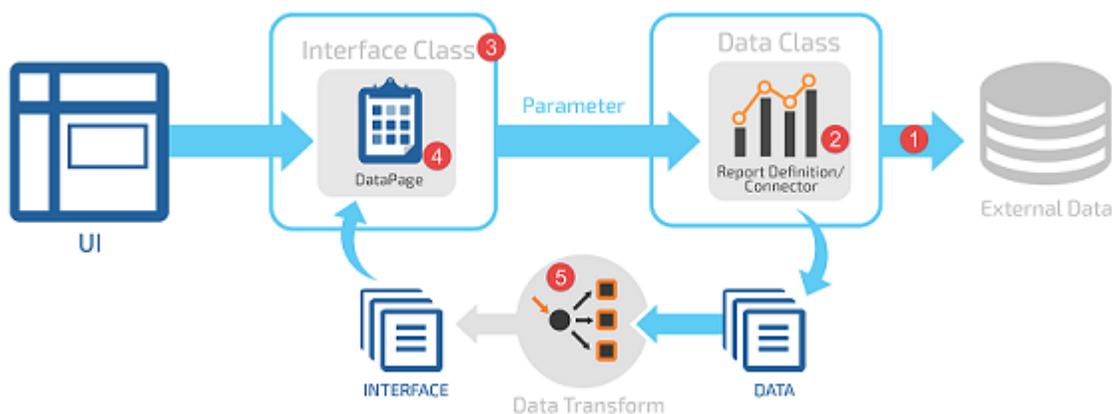
Here is an example of the process that you follow to load account data from an external database for an application named MyApp.

1. Use the Database Table Class Mapping wizard to generate a data class named MyApp-Data- Account that accesses the external database table with account information.

2. Create a report definition named GetAccount ByLastName that returns a list of accounts where the last name is matched with a value entered in the UI.

3. Create an implementation class by doing a save as from the PegaCA -Interface-Account and naming that class MyApp-Int-Account.

4. Update the MyApp-Int-Account data pages (for example, D_Account_Details) to use the report definition that you created.

5. Create a response data transform in the MyApp-Int-Account class to map the Interface and Data classes.

> **Note:** Pega applications include data types that need to be configured to point to a site's data. You must configure these data types to integrate the site's data source into the application. To configure the data types, go to **Designer Studio** > **Data Model** > **View external data entities**. For more information, see Viewing external data entities.

Configuring channels

A customer service representative communicates with customers through channels and can manage multiple service requests as part of a single customer session. A customer can call into a call center and make several changes to their account without having to speak to several different representatives. Interactions can occur over several different types of channels including those listed below.

- Inbound and Outbound Phone calls
- Chat
- Email
- Social
- Mobile

Complete the following tasks to configure interactions.

- Add Task Menu categories
- Configuring Add Task Menu categories for each channel
- Creating service cases
- Modifying service cases
- Editing service request options
- Creating Intent When rules
- Creating interaction goals
- Creating call duration goals
- Adding data sources
- Configuring suggested work item reviews
- Configuring common phrases
- Adding and enabling data masking
- Configuring Page push
- Configuring chat queues for Pega Chat
- Configuring suggested Augmented Agent AI responses

Add Task Menu categories

The Add Task menu categories (known as Interaction driver categories in Designer Studio) manages the interaction configuration for a channel. You can toggle settings per interaction type for the following types of properties.

- Coaching tips

- Dialogs

- Chat sayings

- Quick wrap-up

Additionally, you can configure categories to organize the Service Requests performed by the customer service representatives.

Note: Only the categories that are defined in the default driver class property of the specified driver will be displayed in Pega Express. To modify categories that are not listed, switch to Designer Studio.

Configuring Add Task Menu categories for each channel

Add Task menu categories (known as Interaction driver categories in Designer Studio) are already created for each supported channel, including Chat, Child Interaction, Email, Mobile, Phone-inbound, Phone-Outbound, Research and Social. You can modify these categories to add new categories and modify the behavior of those categories during customer interactions.

Follow these steps to modify an existing category.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings** and then click **Interactions** to see a list of all the task menu category instances for each channel type.

3. Click a channel that you want to edit. For example, Email and Mobile.

4. Add a category to the channel by supplying the following information.

    - **Category Name** - Name of the category to organize Service Requests.

    - Optional: **When** - When rule used to control if the category displays to a user.

    - **Behavior** - Determines whether this category displays all tasks and suggestions or only tasks, or only suggestions.

5. Add more categories as defined in the Defining requirements section of this guide.

6. Click **Save**.

Creating service cases

Service cases (known as Case Types in Designer Studio) represent the business transactions that you provide to a customer service representative for execution during an interaction. You can create your service cases based on your business requirement.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Cases**. The list of all available cases is displayed.

3. Click **New** to create a new service case.

4. Enter the **Case type name** and then click **Next**.

5. Add the required fields to your case type. Optionally, if you want to use the existing fields provided by the application, select **Show reusable fields**, to list all the fields that are available from which you can choose to reuse. For more information, see Pega Platform help .

6. Click **Done**.

Modifying service cases

You can modify the existing service cases. Modifying a service case can include editing or rearranging fields, modifying or adding a stage or step of a case type, or changing a service case layout by selecting a different design template using Pega Express. Use Designer Studio to modify the other service cases that are not Express compliant.

📝 **Note:** You cannot edit the views in Express if you open or modify them in the Designer Studio.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Cases**. The list of all the existing cases is displayed.

3. Click on the service case that you want to modify. The editor window is displayed.

4. To add a new data field or to modify an existing field in the data source, click the **Data model** link. For more information, see Adding fields to your data model.

5. To modify or add a stage or step to the case type, click the **Life cycle** link. For more information, see Defining a life cycle for a case type.

6. You can configure the behavior of a case type by modifying settings, such as the goal and deadline setting, timeout value for a service-level agreement or the service request options (known as Intent tasks in Designer Studio). For more information, see Adding functionality to a case type.

7. To modify the service request options specific to the application, click the **Settings** link. For more information, see Editing Service request options.

Editing service request options

When using Pega Express, you can edit the Service request options (known as Intent Tasks in Designer Studio) based on your requirements.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Cases**.

4. Click the case that you want to open.

5. Click the **Settings** tab to open the different editable configurations in the left panel of the window.

6. In the left panel, click **Service request options**.
   The configuration parameters display in the right panel of the window.

7. Click the **Change interaction driver category** list and select an appropriate category to change the category for the service request.

8. Go to the **Suggestion Criteria** section, click the **Suggest Service Request When** list, and then select an appropriate value to edit the existing intent when conditions.

9. Optional: Click **Add item** to add a new condition or click **Delete** to delete the existing condition.

   📝 **Note:** You can change categories only when the intent is available in an unlocked ruleset.

10. When you are finished editing all of the required parameters, click **Save**.

11. Repeat steps 3 through 9 for each Service request that you want to edit in your application.

Creating Intent When rules

Intent When rules are used by Intent Tasks (known as Service request options in Pega Express) to determine when tasks should be suggested, queued, or automatically launched.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records**, then expand **Decision**.

3. Right-click **Intent When** and select **+Create**.

4. Complete the following information.

   - **Label** - The name for your Intent When rule.

   - **Apply To** - This should be your interaction class, for example MyApp-Work-Interaction.

   - **Add to ruleset** - An open ruleset to save the rule to.

5. Click **Create and open**.

6. Configure the Intent When rule by using one or more conditions.

   - **Label** - The name of the condition which you will use in the criteria logic

   - **Data Source** - The data source to use.

   - **Field** - The property from the data source to use.

   - **Operation** - The comparison operation.

   - **Value** - The value to compare the field against.

7. Use the labels from your conditions to complete the criteria logic, for example (a and b).

You can also configure the auto launch of a service process at the start of an interaction based on a When condition defined in the **Criteria** tab. For more information, see [Configuring the Auto-Launch of Intent Tasks](#).

Creating interaction goals

Interaction goals help guide a customer service representative during an interaction. An interaction goal is the overall goal for a particular customer interaction and guides the outcome of the interaction toward a desired resolution. For example, if a company knows that a customer is dissatisfied, an interaction goal of remediate can trigger certain offers or tasks to make the customer happy, such as waiving a fee. Suggested offers or tasks are displayed in the **Next Best Action** section of the Interaction Portal during a service request.

To display the current interaction goal, the Interaction Portal uses the `InteractionGoal` property located in MyApp-Work-Interaction. The `InteractionGoal` property uses a declare expression to load the correct value from the `DetermineInteractionGoal` decision table. When you create a new application, a blank `DetermineInteractionGoal` decision table is created for you. You need to populate it based on the information from the [Defining the interaction goals](#) procedure.

To populate the decision table, follow these steps.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records**.

3. Click **Decision > Decision Table**.

4. In the **Purpose** * field, click the filter icon and enter `DetermineInteractionGoal` in the **Search Text** box.

5. Click **Apply**.

6. Click each instance of **DetermineInteractionGoal** in the results list.

7. Update the decision table.

8. Click **Save as**.

9. Specify your class, MyApp-Work-Interaction, ruleset, and version.

10. Click **Create and open**.

11. Click **Save**.

Creating call duration goals

Call duration goals guide a customer service representative during an interaction. They are used to communicate the speed at which an interaction can be configured to reflect the needs of their customers based on attributes, such as customer value, number of years with your business, or other variables that help to set the call duration goal.

To display the current call duration goal, the Interaction Portal uses the `CallDurationGoal` property located in MyApp-Work-Interaction. The `CallDurationGoal` property uses a declare expression to load the correct value from the `DetermineCallDurationGoal` decision table. When you create a new application, a blank `DetermineCallDurationGoal` decision table is created for you. You must populate it based on the information from the [Defining the call duration goal](#) process.

To populate the decision table, follow these steps.

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records**.

3. Click **Decision > Decision Table**.

4. In the **Purpose** * field, click the filter icon and enter `DetermineCallDurationGoal` in the **Search Text** box.

5. Click **Apply**.

6. Click **DetermineCallDurationGoal** in the results list.

7. Update the decision table.

8. Click **Save as**.

9. Specify your class, MyApp-Work-Interaction, ruleset, and version.

10. Click **Create and open**.

11. Click **Save**.

Adding data sources

Pega Customer Service uses data source rules extensively throughout the system. Data sources are used to abstract class, clipboard references, and other parameters to simplify the configuration.

A new data source rule is required if you create a new data type and want to utilize the related fields in the following scenarios:

• Interaction driver tasks and suggestions

• Composite displays

• Data references within dialog scripts

• Portal search data retrieval and display

1. Log in to Designer Studio.

2. In the **Explorer** panel, click **Records** > **Data** > **Customer Service Data source**.

3. Select an instance and complete the fields described in the following steps to save the instance to your ruleset.

4. In the **Detail** tab enter the following details.

    a) Click the **Source** list and select one of the following from the list.

- **Clipboard Page** to specify the associated **Page**, **Class**, and related **Property** fields information required for this data source (see associated fields below).

- **Data Page** to refresh the rule form and display the **Data Page** field (Smart Prompt) to specify the desired data page rule for this data source.

    b) Click the **Page** field and enter the name of the clipboard page to use for this data source.

    c) Click the **Class** field and enter the class of the clipboard page given in the Page field.

    d) Optional: Enter `.pxResults` in the **Property** field, if you selected **List** in the **Type** field.

    e) Optional: Enter the class of the `.pxResults` list in the **Property class** field, if you selected **List** in the **Type** field.

    f) Click the **Type** list and select an option.

    g) Select the **Dialog data source** check box to indicate that the data source can be used for data references within dialog scripts. This field is evaluated to populate the data source selection field when configuring dialog scripts using the Configuration Tools wizard.

    h) Select the **Phrase Data Source** check box to indicate that the data source can be used for data references within Chat phrases. Properties defined in this data source are available in the **Configure Phrases capability** in the **Manager Tools** page (requires the PegaCA:Manager role).

    i) Click the **Default interaction container** field and specify the name of the class to use as the default interaction class when a user selects a result from the portal search results list.

    j) Click the **Interaction Flow** field and specify the name of the interaction flow that describes the starting flow to launch a Research interaction.

5. In the **Properties** tab, enter the appropriate value in the **Property** field.

Properties included on this tab are used to populate the list of available fields that users can insert into dialog scripts using the Configuration Tools wizard. These properties are made available wherever the data source is referenced, such as dialog scripts and chat phrases.

6. In the **Search** tab, enter the following details.

    a) Select the **Use in portal search?** check box to indicate that this data source should be searched as part of a portal search.

    b) Select the integration activity to use to perform the search operation in the **Search activity** field.

- Editing data source rules

Editing data source rules

You can personalize and edit the dialogs and common phrases for the data source rules and their related fields during a customer interaction.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Data** and then select the data type that you want to edit.

4. On the data page, click **Settings** > **Data source options**.

5. From the **Select the data source category** list, select the data source. The configured fields appear for editing.

6. To add the fields that are configured for the data source rule for dialogs or common phrases, you can select either **Dialog** or **Common phrases** check box.

> 📝 **Note:** The data source rules that are specific to dialogs cannot be used for common phrases so for those dialog data types, the common phrases check box is disabled.

7. To add a field, click **Add new** and select a field name from the list.

8. Optional: to delete a pre-configured field, click the **delete** icon.

Configuring suggested work item reviews

During customer interactions, Pega Customer Service can suggest the review of a pending work item to a CSR. To configure the suggested work item review, copy the *CAReviewServiceItems* rule from the PegaAppCA ruleset to your application ruleset and configure the rule based on your business requirements. For more information, see Configuring suggested work item reviews.

Configuring common phrases

Common phrases are frequently used phrases that are displayed in the Pega Chat or Pega Social channel window, such as Twitter, during an interaction. During an interaction, the customer service representative clicks the **Phrases** link and selects the configured phrases to display to the customers. This helps to reduce the average handle time of the social interactions.

The common phrases that are used as during a chat, email or social interaction, are categorized into different categories based on their usage. You can add a new category or edit an existing category from the Common phrases page. When a customer service representative clicks to add a phrase during an interaction, the categories are listed from where he can select the phrase to use.

- Adding common phrases
- Editing or deleting common phrases

Adding common phrases

Common phrases can be grouped into categories based on the usage and these categories are displayed in the channel interaction window for the customer service representatives to add the phrase.

You can add common phrases for your application by following the given steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Tools > Common phrases**.

4. To add a phrase, on the **Common phrases** page click **Add phrase**.

5. On the **Add phrase** dialog, complete the following fields:

   a) **Phrase name** - The short indicative name of the common phrase that you want to add.

   b) **Phrase category** - The category to which the common phrase belongs.

   c) **Language** - The language in which the common phrase is displayed.

   d) **Channel** - The channel where the customer service representative adds common phrases. It can be a chat channel, a social channel, email, or all.

   e) **Phrase text** - The complete text that you want to display as a common phrase in the channel window.

6. Optional: To append existing sample text to the new phrase that is created, on the **Configure phrase** dialog, choose the following and click **Append**:

   - **Refer to** - Select an existing phrase from the list.

- **Attribute** - Select an attribute from the list.

7. To save your changes, click **Submit**.

Editing or deleting common phrases

You can edit or delete a common phrase for your application based on your business needs using Pega Express.

Editing and deleting the common phrases is simple from Pega Express. Perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Tools > Common phrases**.

4. To edit a common phrase, click the **Gear** icon and modify the values in the **Edit phrase dialog** and then click **Submit**.

5. To delete a common phrase, click the **Delete** icon and then click **Save**. Deleting removes the phrase permanently from the category list.

Adding and enabling data masking

The channel interactions, such as chat and social and the related history logs can contain sensitive data such as credit cards , phone numbers, and Social Security numbers. You can hide this data and mask it in the transcripts that are shared with a customer service representative (CSR). The sensitive data is masked to ensure that the confidential information is not displayed in interaction scripts or emails and is not stored in a database.

When you add a mask to the interaction scripts, the user-entered values are masked in the configured format, for example XXX-XX-NNNN for Social Security number. You can enable or disable a mask based on your business needs.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Tools** > **Data masking**.

3. To add a new mask, click **Add mask**.

4. If you want to enable the mask, select **Enable this mask**. The **Mask enabled** column displays a green tick mark that indicates the mask is enabled.

5. To add data masking to a specific channel, select the **Channel** from the list.

6. In the **Add chat mask** dialog, enter the values for the required fields and click **Submit**.

7. If the data entered has special characters, in **Add chat mask** dialog, enable **Advanced mode** and enter the validation masks in **Validation regex**.

8. Optional: To test and validate the configuration, enter the sample text under **Test your validation** field and click **Test**. Verify that the correct result is displayed in the **Validation format** field.

To disable an existing mask, select the mask from the list and click the **Gear** icon. In the **Edit chat mask** dialog, clear **Enable this mask**. The **Mask enabled** column displays a cross mark that indicates the mask as disabled.

Configuring Page push

During a chat interaction, the customer service representative can redirect a customer to an online content for further reference. Configuring page push enables the customer service representative to click the Page push link and select the appropriate link to send to the customer.

The Page push URLs that are used during a chat interaction, are categorized into different categories based on their usage. You can add a new category or edit an existing category from the Page push page. When a customer service representative clicks the **Page push** link to add a Page push URL, the categories are listed and the representative can select the one to use for the URL.

- Adding and editing categories
- Adding and editing the URLs

Adding and editing categories

The Page push URLs that are used during a chat interaction, are categorized into different categories based on their usage. You can add a new category or edit an existing category from the Page push page. When a customer service representative clicks on the Page push link to add a Page push URL, the categories are listed and the representative can select the one to use for the URL.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Tools** > **Page push** > **Page push**.

3. On the page, to add, delete, or modify a category, click **Edit Categories**.

   - To add a category, click **Add new** and enter the name of the category in the empty field, then click **Submit**.

   - To modify a category, change the value of the selected category and then click **Submit**. The updated category is displayed to the customer service representative.

   - To delete a category, click the **Delete** icon and then click **Submit**. Deleting a category deletes the Page push URLs that have been added to it.

   - To view a specific category, click the **Display all categories** list and select a category. The category and the URLs associated with that category display on the page.

Adding and editing the URLs

The Page push URLs can be grouped into categories based on their relevance. These categories are displayed in the chat interaction window when the customer service representative clicks the Page push link.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Tools** > **Page push**.

3. To add a new URL, click **Add URL**.

4. In the Add URL page, enter the values of all required fields.

5. Click **Submit**.

Configuring chat queues for Pega Chat

With Pega Chat, a Customer Service Representative (CSR) interacts with customers from your website by sending and receiving chat messages. Chat queues for a chat server define the skills, schedule, and system generated pre-chat questions. Creating a new chat queue and configuring it to a chat server channelizes the interaction request.

To add a new chat queue and configure it to a chat server, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the Explorer panel, click **Tools** > **Queue configuration**.

3. To view the available queues of a chat server and to add a new queue, select the chat server.

4. To add a new queue, click **Add new**.

5. In the **Add a new queue** dialog, enter the **Queue name** , for example, Billing.

6. To enter the skills that are required for the queue, on the **Mapping & skills** tab, click **Add new** and identify the skills that a customer service representative must have in order to accept chat requests for this queue.

   You can select an existing skill or create a new one. Chat requests in the queue are routed to customer service representatives who have all of the listed skills. For example, if a queue requires English speaking representatives who have the skills to process service requests, you might identify a skill for English and another for Service. Chat requests to the queue are routed to customer service representatives who have both skills - English and Service. Create additional skills as needed to meet the needs of the queue. The new skills must match the desired operators skills that is defined in the operators skill section.

   For more information see, Defining the operator skills. In order for the updated information to be available during a chat session, you must synchronize the chat server with the Pega Platform.

7. Optional: Enter the **URL pattern** for the chat queue. The URL pattern of the organization determines which chat queue should be selected when the request is raised. For example, a banking organization has two divisions, Savings and Credit Card. For Queue A, if the Credit Card URL is configured, then the request raised from that URL will be routed to Queue A.

8. On the **Hours of operation** tab, select a calendar that reflects the hours of operation of a queue. For information about defining calendars, see Defining the operator attributes. In order for the updated information to be available during a chat session, you must synchronize the chat server with the Pega Platform.

9. On the **Wait time and SLA** tab, complete the following:

   a) **Off-hours behavior** - enter a message to display to a customer who requests to chat when the queue is not in service.

   b) **Agents not available** - enter a message to display to a customer who requests to chat when no representatives are logged in who can serve the queue.

   c) **Service level** - enter your service level goal by identifying what percent of customers you want to respond to within a selected number of seconds. For example, you might want to respond to 75% of customers within 60 seconds of their chat request. These goal numbers are used for reporting, and are not enforced.

10. In the **Wait time** section, complete the following fields:

    a) **Maximum wait time (Secs)** - enter the maximum wait time in seconds for the calculated wait time on the server. If the calculated wait time is more than this value then chat becomes unavailable.

    b) **Default wait time (Secs)** - enter the default wait time in seconds for a queue. If the wait time calculation threshold is not met and if there are customer service representatives available to serve customers then the chat server returns this value.

    c) **Chat offer timeout** - enter the time limit in seconds for a customer service representatives to either accept or decline a chat request. After this value is exceeded, the chat expires.

11. To add pre-chat questions, on the **Pre-chat questions** tab, click **Add new** and enter the name of the property and the pre-chat question that will be presented to the customer.

12. To add more chat queues, repeat all of the above steps.

13. Click **Save**.

Configuring suggested Augmented Agent AI responses

The Augmented Agent AI suggests relevant responses to a customer service representative by analyzing the customer inputs in the chat interaction and determining if content is available in the knowledge articles, common phrases, or page push entries. Every suggestion made to a customer support

representative is given a score by the Customer Decision Hub, based on its relevance to the customer input in the chat session. The suggestions are made to the customer service representatives when the confidence threshold score is exceeded. If the score is below the threshold value then the suggestion is not made.

Note: Enable Customer Decision Hub to use the Augmented Agent AI capability. Customer Decision Hub is licensed separately. For more information on enabling Customer Decision Hub, see [Customer Decision Hub](#)

To enable Augmented Agent AI suggestion for channel capabilities such as common phrases, page push, and knowledge articles, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Settings** and then click **Behaviors**.

3. In the **Agent Augmentation AI** section, select **Enable agent augmentation**.

   Note: Enable either of the Common phrases, page push, or Knowledge articles content source so that Agent Augmentation can make a suggestion.

4. Configure your preferences for the Augmented Agent behavior by configuring any of the following options:

   • **Suggest content to agents at** – Determine the minimum value level before the suggestions are made to customer service representatives.

   • **Common phrases** – Configure the Augmented Agent to consider the list of common phrases that is applicable to the chat channel and displays pre-configured phrases to the customer service representatives.

   • **Page push** – Configure the Augmented Agent to consider page push entries and allows the customer service representatives to redirect the customers to a pre-configured destination, such as a web page or help site, during an interaction.

   • **Knowledge articles/discussions** – Insert relevant Pega Knowledge articles as suggested references into the chat conversation.

   • **Allow auto-response** – Trigger the Customer Decision Hub to send automatic suggestions as responses when the confidence threshold for automatic responses is reached. A customer service representative cannot edit or cancel a response before it is sent.

5. Click **Done**.

Configuring dialogs and coaching tips

Dialogs and coaching tips help the support representative to provide the best possible experience for the customer.

Use the Interaction Portal for creating or modifying the dialogs and coaching tips.

Note: To create or modify a dialog or coaching tip, ensure that you update the `DialogCoachingTipRS` property with an unlocked ruleset name that is meant for saving dialogs and coaching tips in the CSGeneralSettings data transform.

You can configure dialogs and coaching tips with the following methods:

• [Creating or editing dialogs](#)

• [Creating or editing coaching tips](#)

Creating or editing dialogs

Dialog suggests scripting to the customer service representative when they interact with customers to resolve an issue or question and also ensures that a consistent message is delivered to the other similar customer interactions.

1. Log in to the Interaction Portal.

2. Click **New** > **Demo Screen Pops** > **Demo Pop** to make a demo call.

3. Open a task that you want to work on from **Add Task** or **Next best action** menu, for example, **Dispute Transaction**.

4. Click the **Other actions** icon > **Configuration tools**.

5. On the **Dialogs** tab, click **Add new** to add a new dialog. Otherwise click the **edit** icon to edit the existing dialog.

6. Select the appropriate condition from the **When** list, if you want to display the dialog in a certain circumstance. Otherwise select `Default`.

7. Optional: To personalize the dialogs, perform the following steps.

   a) Select a value from the **Refer to** list, for example, Contact.

   b) Select an appropriate value from the **Attribute** list, for example, `LastName`, to display the last name of the contact.

   c) Click **Insert**.
   The selected values are displayed in the **Dialog** field.

8. Enter an appropriate message in the **Dialog** field, for example, which transaction were you concerned about?

9. Click **Save**.

Creating or editing coaching tips

Coaching tips provide tips or specific advice to customer service representatives about a specific step in a service case. A new coaching tips can be assigned to a specific workgroup or customer service representative and may need a reminder or other coaching.

1. Open the **Configuration tools** dialog and click the **Coaching tips** tab.

2. Expand **Manage** and click **Add new** to add a new coaching tip. Otherwise click the **edit** icon to edit the existing tip.

3. Enter a value in the **Name** field, for example, `Empathize`.

4. Enter the tip that you want to convey to the CSR in the **Coaching tip** field.

5. Expand **Assign** and click **Assign a tip**.

6. Select a coaching tip from the **Coaching tip** list that you want to assign to the specific workgroup.

7. Select the specific workgroup or operator from the **Assign to** list.

8. Click the **From** field and select a date from when you want to display the tip.

9. Click the **To** field and select a date until you want to display the tip.

10. Click **Save**.

Configuring the behavior of additional components

Pega provides various additional components also known as channels. A channel is a means of communication that a customer uses to interact with a company. Pega Customer Service includes

integrated, multi-channel support capabilities for managing telephone, web chat, e-mail, and web-based service interactions. In addition, in-person interactions may be conducted using a mobile device such as a tablet computer.

With Pega Customer Service, you can build your process once and reuse it in any channel, thereby saving time and money while improving consistency in today's multi-channel contact centers.

Use the following topics to configure your channels:

- Configuring Pega Call

- Configuring Pega Co-Browse

- Pega Chat

- Configuring voice and data transfer for Pega Call

- Pega Social

- Configuring Pega Knowledge

- Email

- Tablet support

- Web self-service

- Configuring anonymous customer interactions

Configuring Pega Call

Pega Call provides robust Computer Telephony Integration (CTI) support including adaptive screen pops, desktop telephony controls, and enhanced callout facilities. By using the business rules engine architecture, service cases and dialogs can be reused across channels from Interactive Voice Response (IVR) to the web. Use Pega Customer Service with Pega Call to leverage the voice and data transfer capability.

For information about how to configure voice and data transfer for Pega Call, see Configuring Voice and Data Transfer for Pega Call.

For more information about configuring Pega Call, see the Pega Call product page .

Configuring Pega Co-Browse

With Pega Co-Browse, your customers and agents collaborate by sharing a web browser session on the customer's PC, tablet, or mobile phone.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Settings > Behaviors**.

4. Select the **Enable Co-browse** check box.

5. Complete the **Co-Browse token** and **Co-Browse API key** fields.

   For more information see, *Obtaining the co-browse API key and token* in the *Pega Co-Browse Implementation Guide* on the Pega Customer Service product page.

6. Optional: If you want to use Co-Browse recording capability, select the **Enable Co-Browse recording playback** check box.

7. Click **Save**.

Pega Chat

Customers can implement Pega Chat at the same time as Pega Customer Service, or they can add this component later.

For information about how to configure Pega Chat, see Pega Chat implementation .

Configuring voice and data transfer for Pega Call

You can transfer a call to another CSR along with the associated interactions using voice and data transfer. When you transfer a call with the associated interaction, the associated service cases are also transferred. Use Pega provided telephony toolbar to transfer the call.

📝 **Note:** To transfer a call, ensure that the CSR is logged into the same portal and use the same navigation method.

Before you configure and use voice and data transfer, ensure that Pega Call is installed, configured, and connected to a CTI platform that supports adding call data elements to a call.

Voice and data transfer supports both warm and blind transfers. Perform the following tasks to configure voice and data transfer.

- Enabling the Transfer tool
- Enabling the Accept button on the Review Harness
- Transfer reasons
- Setting a time limit for voice and data transfers

Enabling the Transfer tool

To enable the voice and data transfer, ensure that you configure the telephony toolbar, and then select a mode (Full telephony, Simple telephony, or Simple telephony with agent state) with integrated voice data transfer option enabled. For more information, see the CTI server-specific guide available on PDN.

Enabling the Accept button on the Review Harness

For warm transfers, the receiving party can view the interaction or service process in a Review harness during the consultation call. After the call transfer is complete, click **Accept** on the harness to open and continue processing the interaction and related service cases.

The Review harness provided in PegaCA-Work and PegaCA-Work-Interaction include the **Accept** button. If you have customized the Review harness in PegaCA-Work-Interaction, ensure that the **PegaCA-Work.CPMWarmTransferAcceptButton** section is included in your custom harness.

In addition, if you use Classic navigation and customized the Review harness for a service process, ensure that it includes the **PegaCA-Work.CPMWarmTransferAcceptButton** section.

Transfer reasons

When transferring a call with its associated interaction, you can select a reason for the transfer. The reasons are listed in the `ChannelServices-Device-Phone-UI.pyCPMTransferReason` property. Save the property to your ruleset and modify the table values to suit your needs.

Setting a time limit for voice and data transfers

Configure a time limit beyond which work objects in the transfer workbasket are moved back to the user who initiated the transfer. The PegaCS default time is set to 15 minutes in an activity rule.

1. In the **Explorer** panel, click **App** and enter `PegaCA-Work` in the search field.

2. Click **Technical** > **Activity** > **CACTIReassignToTransferor**.

3. Click **Save As** to save the activity to your ruleset.

4. On the **Steps** tab, expand Step 1.

5. Update the **PropertiesValue** for the `param.TimeDiff2` property. The last two parameters of the **@addToDate** value represent minutes and seconds.

   Ensure that you update the values as negative integers to reflect the desired transfer time in minutes and seconds.

6. Click **Save**.

Enable the ReassignToTransferor Agent, which is included in the `PegaAppCA` Agents rule to run the activity periodically. If you modify the activity in your custom ruleset, ensure that the service package used by that rule can access your ruleset.

Pega Social

Customers can implement at the same time as Pega Customer Service, or they can add this component later.

For more information about how to configure Pega Social, see [Pega Social Implementation guide](#).

Configuring Pega Knowledge

Configure Pega Knowledge articles to suggest the relevant content to customer service representatives while working on a specific service case. This saves the time of customer service representative by providing the necessary answers and information without requiring a time-consuming search. You must create and publish articles in the Pega Knowledge application before linking them to the service requests using the Configuration Tools capability in the interaction portal. Log in as Manager to link the articles, for more information, see [Linking knowledge content articles](#).

To configure the display of knowledge articles, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. To enable editing mode, click the **Turn editing on** link in the top-right corner.

3. In the **Explorer** panel, click **Settings > Behaviors**.

4. Select the **Enable Display of Knowledge articles** check box.

5. Select the **Limit the number of suggested articles** check box to restrict the number of articles displayed in the Knowledge Management **Suggested articles** section in the Interaction Portal. Specify the maximum number of articles that you want to display in the **Suggested articles**, **Other relevant articles**, and **Articles viewed by the customer** sections. By default, 3 articles are displayed in the interaction portal. Clearing this check box removes the display restrictions and provides pagination and scrolling capabilities to navigate additional articles in these sections.

6. Select the following options under **Article push options for chat**:

   • **Insert as link** - Enabling this option allows the customer service representative to push the in-context knowledge article into the chat transcript as a clickable link.

   • **Share abstract?** - Enabling this option inserts the article abstract into the chat window.

   • **Insert as text** - Enabling this option allows the customer service representative to insert the article into the chat window as plain text.

   Configuring article push for chat supports the display of a Pega Knowledge content link, content text, or both link and text in a chat window that is configured for service requests during an interaction.

7. To save your configurations, click **Done**.

• [Linking Knowledge content articles](#)

Linking Knowledge content articles

You can link Pega Knowledge articles directly to service cases. These links serve as suggestions to customer service representatives for quick, contextual answers that expedite customer issue resolutions.

Use the Interaction Portal for linking the articles to a flow action of a service case.

📝 **Note:** To link or unlink an article, ensure you update the *DialogCoachingTipRS* property with any unlocked ruleset name.

While linking articles for the first time, all the articles are copied to the rest of the flow actions in that service case. You can select different articles at each step or flow action of a service case.

To configure the articles, follow these steps.

1. Log in to the Interaction Portal as an operator with manager role credentials.

2. Click **New** > **Demo Screen Pops** > **Demo Pop** to make a demo call.

3. Open a task that you want to work on from the **Add Task** or **Next best action** menu, for example, **Dispute Transaction**.

4. Click the **Other actions** icon > **Configuration tools**. The **Configuration tools** dialog opens.

5. On the **Knowledge Content** tab, under **Search articles to add** field, search for articles by entering the article key word already created in Pega Knowledge. The search results are displayed.

6. Select the desired article from the list and then click **Save**. The articles that are linked are displayed under the **Suggested articles** section.

   To unlink an article, click the **Unlink article** icon and then click **Save**.

Email

You can configure Pega Customer Service to create correspondence cases from inbound email messages and respond to customer inquiries by using outbound email.

- Updating an email account
- Creating an email channel from the landing page

Updating an email account

You need to update an email account with the sample email to create a new account.

1. Log in to Designer Studio.

2. Click **Records > Integration-Resources > Email Account> SmartEmailSample**.

3. Click **Save > Save As** to create a new account.

You can modify the sample email account for your own needs, or you can duplicate it using **Save As** if you plan to create multiple email accounts and corresponding interaction channels. For more information about email accounts, see the Pega Platform help .

Creating an email channel from the landing page

You can use the email channel in your application to route emails received from email accounts to operators and workbaskets. You can configure the email channel in your application by clicking the **Application menu** > **Channels and Interfaces** > **Email**.

To create an email channel for your application, perform the steps provided in the Configuring the email channel.

> 📝 **Note:** To send email for out of the box service cases in sample application, update the email address passwords for Default, PegaComm-FW-CF-Work and PegaComm-FW-CPMCFW-Work workpools.

Tablet support

Pega Customer Service provides a touch-friendly user experience for service personnel using tablets. Using Pega Customer Service from a tablet browser, a user may initiate interactions, access customer information (composites), and serve customers using service cases. Users may also access cases from workbaskets and work lists to assist with customer service.

Consider the following topics when building for a tablet.

- Differences between tablet and desktop portals

- Responsive UI

- Interaction class and Interaction Driver

- Rule specialization for a tablet

Differences between tablet and desktop portals

Pega Customer Service provides access to most of the capabilities available on user desktops. However, various elements have been optimized for the use cases typically encountered on a tablet. The following are some key differences between the tablet portal and the interaction portal.

- Slide-out menu ☰ : To provide a touch-friendly navigation experience, various items that are presented in separate tabs on the desktop are accessed from a slide-out menu in the tablet portal. This includes the dashboard, workbaskets and work lists, and interactions in progress.

- Service processes and suggestions: Service processes, suggested service processes, and offers are presented at the top of the interaction area. The current service process is shown in blue with a star icon. Completed service processes are shown in blue with a check icon. Offers and suggestions are shown in gray.

- No customer validation: Customer validation is not included in the default interaction flow.

- Dialog and coaching tips: Dialog and coaching are not enabled for tablet interactions, as these are typically in-person interactions.

- Quick wrap-up: Tablet interactions do not include an explicit wrap-up stage. The interaction may be closed quickly using the **Close** button. Any service-case that is open as part of the interaction will remain assigned to the users and can be accessed from their respective work list.

- Chat and CTI support: Telephony integration (Pega Call) and web chat (Pega Chat) integration are not available on tablets.

Responsive UI

The tablet portal uses responsive UI design techniques to ensure that UI elements and screens are rendered appropriately on a tablet. While developing UI for composites and service processes, you should use Pega Platform layouts and the application skin to ensure that screens are rendered appropriately on the smaller screen sizes typical of tablets. Where required, UI elements may also be specifically adapted for tablets using rule-specialization techniques such as circumstancing, as described in the next section.

Interaction class and Interaction Driver

Interactions performed on tablets use the interaction class PegaCA `-Work-Interaction-Mobile`. Various rules related to interaction management have been specialized in this class. You should ensure that your tablet interaction class inherits from PegaCA `-Work-Interaction-Mobile`.

The tablet interaction class includes an Interaction Driver rule specialized for tablets. By default, dialog and coaching tips are turned off for tablet portal interactions. Quick wrap-up is enabled.

The tablet interaction class includes a version of the AppVerifyContact flow that does not require verification of the contact.

> **Note:** Intent Task rules include a **Show in List of Available Mobile Tasks?** check box. This check box is no longer used. The mobile Interaction Driver does not filter Intent Tasks (suggested tasks) based on this check box.

Rule specialization for a tablet

When required, rules are specialized to provide a more touch-friendly experience. Rules that are part of the Interaction Portal (apply to CPM-Portal) and those that apply to Pega Customer Service work classes (for example, `-Work`) are specialized by circumstancing, as described below. Rules that are part of the interaction class (for example, `-Work-Interaction`) are specialized by class by creating a specialized rule in the Interaction-Mobile subclass (for example, `-Work-Interaction-Mobile`) class.

Rule Circumstancing using CPMPortalType: Pega Customer Service uses the circumstance template CPMPortalType to determine when the Pega Customer Service interaction portal is being accessed from a tablet. Various UI rules (in class CPM-Portal) are circumstanced to specialize them for tablets, that is when CPMPortalType = CPMInteractionMobilePortal. For example, the **New** work menu (CPMInteractionPortalMenu navigation rule) has been circumstanced so that only tablet interactions may be created using the **New** menu.

The following rules have been circumstanced.

- Mobile Interaction Portal Harness: The CPMInteractionPortal harness has been circumstanced to provide touch-friendly portal behavior. Note that the harness includes various sections that are similarly circumstanced.

  > **Note:** When reviewing the harness and related UI rules, note that Designer Studio displays the base version of each included rule rather than the one circumstanced for use on tablets. To review the circumstanced version of a rule, select **View Versions** from the **Actions** menu and select the circumstanced version. At run time, the circumstanced versions will be rendered.

- Slide-out menu: The circumstanced version of the CPMInteractionPortal harness uses a HeaderLeft screen layout. In the application skin, this layout includes a responsive breakpoint for the left sidebar so it is presented as a slide-out menu at screen sizes typical of tablets.

- Tablet Dashboard: The **CPMDashboard** section and associated sections have been circumstanced to ensure that they render appropriately on tablets. The dashboard uses two charts (rather than three on the desktop portal) to ensure that content fits at lower screen sizes. In addition, the user's work list and workbaskets are not displayed on the dashboard.

Web self-service

The availability of the service cases that you create is not limited to the Interaction Portal. You can use [Pega Web Mashup](#) to embed the cases you create into another application.

Configuring anonymous customer interactions

The anonymous customer interactions functionality helps customer service representatives assist customers who are not identified in the application through chat, email, phone, or social channels.

Customer service representatives often interact with users who are not identified as customers in the database. The users might call, chat, or post on Facebook to seek information about a new product. In such cases, a customer service representative does not need to pull up a contact or account information to reply to general enquiries from these users. Customer service representatives can assist anonymous customers using the following tabs: **Search, General assistance**, and **New customer**.

1. To start an interaction with customers based on the channel of your choice, you can configure any of the following three tabs **Search, General assistance**, and **New customer** to be active. For example, to start the Chat channel on the **General assistance** tab, perform the following steps:

   a) In the Designer Studio **Explorer** panel, click **App**, and in the search filed, enter `PegaCA-Work-Interaction`.

   b) Click **Chat > data model > data transform > pyDefault**.

   c) Click **Save as** to save the rule in your open ruleset.

   d) In the **Label** field, enter a name, and then click **Create and open**.

   e) In the **Source** field of the **.DefaultTabInSearchScreen** row, enter `GeneralAssistance`.

   f) Click **Save**.

   g) Repeat steps 1a to 1f for each of the channels that you want to modify.

2. By default, the anonymous customer functionality is enabled. You can disable the **General assistance**, and **New customer** tabs by performing the following steps:

   📝 **Note:** You cannot disable the **Search** functionality.

   a) In **Designer Studio**, in the search field, enter and select `CSInteractionSettings`.

   b) Click **Save as** to save the rule in your open ruleset.

   c) In the **Label** field, enter a name, and then click **Create and open**.

   d) In the **Source** field of the **.EnableAnonymousInteractions** row, enter `false`.

   e) Click **Save**.

Modifying the user experience

There are multiple places where you can change the user interface of the Interaction Portal. Each location that you want to update follows a similar process.

📝 **Note:** As you implement changes to the user interface, make sure that end users test the changes. Do not wait until the end of a project to perform the testing because it costs more to make a change at the end of the release cycle.

- Customizing the header and composite section of Interaction Portal

- Customizing the user interface of service requests

- Modifying other Interaction Portal elements

- Implementing user interface changes to the Interaction Portal

Customizing the header and composite section of Interaction Portal

You can customize the interaction header and composites of the Interaction Portal based on your business requirements and to improve the user experience for customer service representatives. Customization can include adding, deleting, or editing sections and fields located in the sections of the

header and composites. The customization ensures that your application users have an optimal view and a user experience for customer interactions.

The application provides a variety of design templates that you can select to configure the header and composite user interface views.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Launch an interaction.

3. Click the **Toggle design mode** icon.

4. To modify the header section, click the **Workarea** icon in the header.

5. To change the template, click **Change** and then select a template of your choice.

6. To add sections in the template, click the **Add** icon and drag and drop the section of your choice to the header.

7. To delete a section, click the section and then click the **Remove this section** icon.

8. To edit the fields of the section, click the section, highlight the field that you want to edit, and then click the **Edit this field** icon.

9. Update the required fields in the right corner of the page and click **Apply**.

10. To modify the composites, go down to the composite section and then click the **Workarea** icon.

11. Perform steps 5 through 7 to edit the template and sections of the composite section.

12. To revert the changes that you made, click **Undo**.

> 📝 **Note:** The modifications that you made are auto-saved.

Customizing the user interface of service requests

You can customize the user interface of some Pega provided service requests based on your business requirements. In Pega Express the library of design templates make the customization of service requests easy and helps in modifying the user interface experience. The customization of user interface includes the ability to rearrange, add, or delete the fields that helps to expedite the implementation process and makes it easy to manage.

Pega Express enables the configuration of the following service requests:

- Dispute Transaction

- Lost or Stolen card

- Address Change

- Complaint or Compliment

- Update contact profile

- Schedule Activity

- Send Correspondence

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Launch an interaction.

3. Click **Add Task** and then click the service case that you want to edit.

> 📝 **Note:** You cannot edit the user interface view in Express if the service request is created manually in Designer Studio. As a best practice, create new service requests using Pega Express to ensure on-going maintenance can be supported through Express.

4. Click the **Toggle design mode** icon.

5. Click the **Workarea** icon in the header or composite section of the service case depending on your requirement.

6. To change the template, click **Change** and then select a template of your choice.

7. To add sections in the template, click the Add icon and drag and drop the section of your choice to the template.

8. To delete a section, click the section and then click the **Remove this section** icon.

9. To edit the fields of the section, click the section, highlight the field that you want to edit, and then click the **Edit this field** icon.

10. Update the required fields in the right corner of the page and click **Apply**.

11. To add fields in the section, click the **Add icon** on the right panel and then click **Add to review**.

12. To delete the fields from an existing section, right-click the field name on the right panel and then click **Delete**.

> **Note:** You cannot edit the grids of the composite sections.

Modifying other Interaction Portal elements

You can update the other elements of Interaction Portal that may require Designer Studio to reflect the style of your business. The following steps guide you to identify the sections and the fields that you want to modify.

1. Click the **Live UI** icon .

2. Select the element that you want to change.

   When an element is selected, Live UI provides information about that element, such as the sections and harnesses that the element is a part of.

3. Click the **Open rule in Designer Studio** icon to open that rule in Designer Studio and update it as needed.

Implementing user interface changes to the Interaction Portal

The application supports the following changes to the Interaction Portal.

- Adding a new property to a section
- Adding a new section to the Interaction Portal
- Updating the Interaction Portal skin
- Configuring Interaction Portal tabs
- Launching a service case from the composite
- Logging an event during an interaction
- Changing the home page reports

Adding a new property to a section

1. In the Interaction Portal, click the **Live UI** icon and determine the section that you want to modify.

2. Click the **Open rule in Designer Studio** icon to open that rule in Designer Studio.

3. In the Application Explorer, locate the property that you want to add to the section.

4. Drag the property into the section where you want it to display.

5. Click **Save as**.

6. Save the rule to the default Applies to class and make sure that the ruleset is for your application.

7. Click **Create and open**.

8. Click **Save**.

Adding a new section to the Interaction Portal

You can add sections to the Interaction Portal to meet your business needs.

1. In the Interaction Portal, click **Live UI** and determine the section to which you want to add a section.

2. Click the **Open rule in Designer Studio** icon to open that rule in Designer Studio.

3. In the Application Explorer, locate the section that you want to add.

4. Drag the section into the section where you want it to appear.

5. Click **Save as**.

6. Save the rule to the default Applies to class and make sure that the ruleset is for your application.

7. Click **Create and open**.

8. Click **Save**.

Updating the Interaction Portal skin

You can update the look and feel of the Interaction Portal to reflect the color scheme of your company. You can customize the Interaction Portal either by using Pega express or Designer Studio. It is recommended to use Pega Express for making basic customizations to the Interaction Portal.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings** > **Theme**.

3. Update the look and feel options as required. For example, logo, theme, and edit CSS.

4. Click **Save**.

Pega Customer Service takes advantage of the standard Pega Platform skinning features within an application for doing complex customization to the Interaction Portal.

1. Log in to Designer Studio.

2. Click *ApplicationName* > **Definition**.

3. Update the look and feel options as appropriate.

4. When you are finished, click **Save as**.

> 📝 **Note:** To learn more about skins, click **Help**.

5. Click **Create and open**.

6. Click **Save**.

If you give your skin a different name, you need to update the application to reflect the new name.

1. In Designer Studio, click *ApplicationName* > **Definition**.

2. Change the **Skin** field to the skin that you created.

3. Click **Save**.

Configuring Interaction Portal tabs

When creating a Pega Customer Service application, you can add or modify the tabs located in the composite. The composite uses standard Pega Platform user interface elements. To create a new tab,

create a section containing the information that you want to see. Once you create a section, add it to the composite.

1. In the Interaction Portal, click **Live UI** and determine the section used to display composites.

2. Click the **Open rule in Designer Studio** icon to open that rule in Designer Studio.

3. In the Application Explorer, locate the section that you want to add.

4. Drag the section into the section where you want it to appear.

5. Click **Save as**.

6. Save the rule to the default Applies to class and make sure that the ruleset is for your application.

7. Click **Create and open**.

8. Click **Save**.

Launching a service case from the composite

It is easier and more efficient to launch a service case directly from the composite rather than using the **Add Task** menu. For example, you want to display an **Edit** link next to the customer's address to enable a CSR to change an address more quickly.

1. In the Interaction Portal, click **Live UI** and determine the section where you want to launch the service case.

2. Click the **Open rule in Designer Studio** icon to open that rule in Designer Studio.

3. Add a UI element, for example a button or link, into the section where you want to launch the service case.

4. Click the **View properties** icon to configure the UI element.

5. Click **Actions**.

6. Click **Create an action set**.

7. Click **Add an event**.

8. Click **Click**.

9. Click **Add an action**.

10. Click **All actions**.

11. Click **Create work**.

12. Specify the **Class Name** and **Flow Name** of the service case that you want to launch.

13. Click **OK**.

14. Save your updated section.

Logging an event during an interaction

Customer Service Representatives (CSRs) convey information when interacting with customers. For example, a CSR can remind customers when their next payment is due. You do not want to create a process for this, but you do want to capture the information conveyed to the customers.

1. In the Interaction Portal, click **Live UI** and determine the section where you want to log information.

2. Add a UI element, for example, a check box, in the section where you want to log the conveyed information.

3. Click the **Open property panel** icon to configure the UI element.

4. In the **Cell Properties** dialog box, click **Change** to modify the control type used.

5. Click **Other** in the **Advanced** section.

6. In the **Select a control** text field enter **CPMHistory**.

7. Click **Parameters** tab and enter the field details.

   - **FieldName** - Name of the Field Value property to use.

   - **FieldValue** - Value of the Field Value property to use.

   - **DefaultImage** - Image that should appear when not selected.

   - **ClickedImage** - Image that should appear when a CSR clicks the default image.

   - **ReasonFieldValue** - In the Wrap Up, this option appears in the **Reason for interaction** list.

   - **TickedImage** -The image that you want to display when the Express History check box is selected.

8. Click **OK**.

9. Save your changes.

Changing the home page reports

You can modify the reports shown on the home page. The reports shown can change, based on the role of the user logged into the Interaction Portal.

1. In the Interaction Portal home page, click **Dashboard**.

2. Click the **Personalize dashboard** icon to configure the charts and reports based on your business requirements.

3. Configure this section by removing the charts that you do not want and adding charts to this section.

4. Click **Publish** to save your changes.

Configuring the customer verification settings

By configuring customer verification settings, you can control important settings that are related to the customer verification process. This process launches at the start of any channel, such as chat, social, and call with an unverified customer. The configuration settings include a minimum number of questions that need to be answered correctly by the customer in order to be successfully verified. You can configure the number and types of questions that a customer service representative asks a customer for verification. You can also add, modify, or delete the customer-defined security questions of the relevant contact fields.

- Configuring the customer verification options

Configuring the customer verification options

As an administrator, you can configure the customer verification settings to enable the customer service representatives to verify an unidentified customer before starting an interaction.

You can control the questions that are presented to the customers for verification. The questions that are displayed to customer service representatives can come from sources, including the contact database and a list of security questions that the customers configured. You can manage these security questions from this page as well. As an administrator, you can add new questions and delete the unused security questions.

To configure the settings, perform the following steps:

- Modifying the number of security questions

- Modifying the fields to display and verify

- Managing security questions for customer verification

Modifying the number of security questions

As an administrator, you can modify the number of security questions that a customer service representative must ask to verify an unidentified customer. If the customer does not answer the minimum number of configured security questions correctly, then the verification fails. You can add a maximum of five questions to successfully verify a customer.

To modify this setting, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools**>**Customer verification**.

3. To increase or decrease the number of questions to ask and verify, select the value from the **Minimum number of fields for CSR to verify successfully** list. You can select a minimum value of one and a maximum of five.

4. Click **Save**.

Modifying the fields to display and verify

As an administrator, you can select the fields that you want to display as part of the information-based authentication process. The selected fields are displayed with the answers in the Interaction Portal for the customer service representative to verify. For example, if you have selected the **City** field, then the unidentified customer must answer which city was provided while registering to successfully complete the verification process.

To configure the fields, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools**>**Customer verification**.

3. To add a new field to verify, under the **Fields** section, click **Add field**.

4. Select the new field. You can also modify the existing field displayed by selecting the new field value.

5. Click **Save**.

Managing security questions for customer verification

As an administrator, you can manage the security questions that the customer service representatives use for customer verification. You can include security questions that customers provided or standard security questions. You can also add new questions for the relevant fields to include as part of the verification process.

To modify this setting, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools**>**Customer verification**.

3. To include customer provided or standard security question to the list to verify, select the **Include security questions** check box.

4. To add additional questions, click the **Manage security questions** button.

5. In the **Manage security questions** dialog, click **Add question** and then add the security question for the relevant field and click **Submit**.

   Note: You can only delete the questions that are not being used by customers.

6. Click **Save**.

Configuring the portal search

With the search functions of the Pega Customer Service portal, users can search for cases (work objects), knowledge content, and data sources such as accounts, contacts, and business units. A basic search and an advanced search is available for use in the Interaction portal.

You can perform a basic search by entering the search text in the search field of the Interaction portal. In the advanced search section, you can configure more fields as filters for a better search experience. When you select the fields for the **Search results** field as filters, the sequence of your selection determines the order in which you want the fields to appear in the **Search results** section.

Complete the following tasks to configure portal search:

- Enabling the data source for portal search
- Configuring the portal search for data sources
- Configuring search for cases and work objects

Enabling the data source for portal search

In the Pega Customer Service application, to enable a data page for portal search, you must enable the data source rule to adopt the data page. Every data page is associated with one or more data source rules. Ensure that you create the list based data page for the targeted data source object and source it from a report definition.

To enable the portal search for a data source, perform the following steps:

1. In Designer Studio, create a new section as a wrapper section which includes two sections, one for advance search filters and other for displaying search results. The **Search result** section contains a grid that is sourced from the clipboard page *pySearchResults.pxResults*. This requires an open ruleset on top of your current application ruleset. For more information to create a new section, Sections - Completing the Create or Save As form.

   📝 **Note:** The name of the wrapper section that includes the search filter and the search grid section must be in the given format: *Search_<data source name>* and is case sensitive. For example, Search_Account where the Account is the data source name.

2. Create a new data page Create a new data page or open an existing data page by clicking the **Data types** category in the Records Explorer. For more information to create a new data page, see Data page rules - Completing the Create, Save As, or Specialization form.

   📝 **Note:** When you create a data page, do not add any **Refresh Strategy** under the **Load Management** tab.

3. In the **Definitions** tab, change the **Edit mode** field to `Read only`.

4. Configure the **Scope** as `Requestor`.

5. Click **Save**.

6. Search for the **MatchingRecordsCountForFilter** data transform rule.

7. In the **Definitions** tab, click the **Add a row** icon.

8. Add a **When rule** condition to pass the data source specific search properties.

9. Call the data source specific data page that fetches the records.

10. Check for the records, if they exist, then add **Append and Map to** under **Action** and map the data page results to `pySearchResults`.

11. In the next sub-step, set the properties to data page property type.

12. Click **Save**.

Configuring the portal search for data sources

Pega Customer Service uses Data Source rules to configure portal search functions for data sources. For any data source that you want to include in the Pega Customer Service portal search, complete the following steps.

In Pega Express, you can configure the search fields that you want to appear in the Advance search and the search results section of the portal search page.

📝 **Note:** The **Search configuration** option does not appear in Pega Express if the data source is not added to the *SetRDandClass* and *SetDTandClass* decision tables.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Data types**. The list of available data pages is displayed.

3. From the list, select the data type for which you want to configure the portal search.

4. In the **Settings** tab, click **Search Configuration**.

5. In the **Search Configuration** section, select your data source from the **Select your data source category** drop-down list.

   📝 **Note:** The data source drop-down list appears only if your data page is associated with multiple data sources.

6. To enable the portal search for the selected data source, select the **Portal search?** check box.

7. To make the selected data source the default tab when all search is performed, select the **Default tab in search results?** check box.

   📝 **Note:** If no data sources are configured as default, then the Cases tab is selected as default.

8. From the list of available **Field names**, select the fields you want to display in the **Advanced search** section and in the **Search result** section.

   📝 **Note:** Select the fields in the order you want them to be displayed in the Search results section of the interaction portal. Ensure that you have a minimum of one field selected for both the advanced search and search results. You can select a maximum of seven fields to display.

9. Click **Save**.

Configuring search for cases and work objects

Pega Customer Service uses the Pega Platform search facility for work objects and case data. Pega Customer Service searches for your work types and other objects only if they are listed on your application rule or an inherited application rule.

When a user selects a work object or case from the portal search results list, a tab opens in the general work area using the Review harness for that work type.

For more information on enabling search of work data for your application, see the Pega Platform help.

Quality reviews and customer satisfaction surveys

You can configure the content and scoring rules used to implement quality management reviews and customer satisfaction surveys.

Complete the following tasks to configure reviews and surveys.

- Configuring survey rules

- Configuring survey rating categories

- Configuring survey selection

- Determining interactions to survey for customer satisfaction
- Changing Net Promoter settings

Configuring survey rules

Pega Customer Service uses survey rules for both quality management and customer satisfaction survey processing.

Survey rules determine the scoring criteria and the questions asked in the survey.

1. Log in to Designer Studio.

2. Enter `SampleQualitySurvey`, in the **Search** field of the Designer Studio landing page.

3. Click **Save as**, select the Applies To class, and enter the name of the survey as the **Purpose**. Save it to your ruleset.

4. Enter a short description for the survey. This value becomes the name of the survey.

5. On the **Scoring Levels** tab, enter a title name for each scoring level. The titles appear when a user is responding to the survey.

6. On the **Questions** tab, enter information in the fields described below. All fields are required.

   a) **Category** - Enter the name of the category to be evaluated.

   b) **Question** - Enter the text question that is to be displayed to the person responding to the survey.

   c) **Weight** - Enter the integer or decimal value that is used as a weighting factor when calculating the survey score for this category.

   d) **Level 1-5 scores** - Enter the numeric score for each level that can be selected for the category.

7. Click **Save**.

Configuring survey rating categories

You can set rating categories for reviews and surveys that are based on the total survey score calculated by the system.

Example: A score of less than 2 results in an overall rating of Needs Improvement while a score greater than 4 results in an overall rating of Exceeds Expectations.

1. Log in to Designer Studio.

2. From the App Explorer, select **PegaCA-Work > Decision > Map Value > CAGetOverallRating**.

3. Click **Save as**, enter a map name, and save it to your ruleset.

4. On the **Matrix** tab, update the table to include the following items:

   a) **Total Score** — enter the evaluation criteria as (for example, < or ≤) and total score.

   b) **Overall Rating** — enter the text that you want to associate with the score.

   c) **Default** — enter the default text; surround the text by quotes.

5. Click **Save**.

Configuring survey selection

With Pega Customer Service, you can differentiate surveys first by work type (the class name that the survey applies to) and then by decision rules that specify custom criteria.

For example, you want your high-value customers to receive different satisfaction surveys from those received by standard customers. Entry-level CSRs and experienced CSRs could be evaluated using two different surveys.

1. Log in to Designer Studio.

2. From the App Explorer, select **PegaCA-Work > Decision > Decision Tree**.

3. Select one of the following instances and save it to your ruleset.

   - CADetermineQualitySurvey — sample quality review survey

   - CADetermineSatisfactionSurvey — sample customer satisfaction survey

4. On the **Decision** tab, enter the decision criteria and the name of the survey that you want to display.

5. Click **Save**.

Determining interactions to survey for customer satisfaction

You can configure the criteria used to determine which customer interactions initiate customer satisfaction surveys.

1. Log in to Designer Studio.

2. Enter `SatisfactionSurvey`, in the **Search** field of the Designer Studio landing page.

3. Select the Intent Task instance and save it to your ruleset.

4. On the **Criteria** tab, add the Intent When rule Select as the Intent Condition.

5. Indicate whether you want to suggest the process or queue the process when the condition evaluates as true.

6. Enter the visual cue that you want to associate with the condition from the image catalog that is displayed when you click the **Lookup** icon

7. Click **Save**.

Changing Net Promoter settings

The NPS survey embedded section (NPSRatingInWrapUp) in wrap-up has been configured to not display using a Visibility Condition. To enable display of the NPS section during interaction wrap-up, remove the Visibility condition in the appropriate interaction class for the relevant section (example: PegaCA-Work-Interaction.CAWrapUpCommon).

The following section assumes that the Visibility condition (referenced above) has been removed.

During interaction wrap-up, Pega Customer Service will calculate a Net Promoter scores based on the response to this question.

On a scale of 0-10, how likely are you to recommend us to a friend?

The Net Promoter Score question UI is contained in the section PegaCA-Work.NPSRatingInWrapUp. To remove the NPS question from your wrap-up process, copy the CAWrapUp section for your interaction class into your site-specific ruleset and delete the embedded section for NPSRatingInWrapUp.

In Pega Customer Service, the question detail is stored on the interaction object itself upon clicking **Submit**. Pega Customer Service will calculate the response and quantify the interaction as one of the following.

- Detractor (0-6)

- Passive (7-8)

- Promoter (9-10)

This detail can be used in future interactions to set the Interaction Goal property and to drive specific application behaviors when configured.

Pega also offers a Net Promoter Framework. If installed, answering the Net Promoter question in wrap-up also creates a Net Promoter object. When the response is `Detractor` or `Passive`, a follow-up case is created.

More details on the Net Promoter Framework can be found in the Technical Note - Using the Net Promoter Framework.

Customer Decision Hub feature

The Customer Decision Hub provides the suggested actions to the customer service representative (CSR) during a customer interaction with the help of Pega Customer Service and Pega Customer Decision Hub .

📝 **Note:** To use Customer Decision Hub features, install the Pega Customer Decision Hub application. Those applications require a separate license. For information about how to install Pega Customer Decision Hub, contact your Pega support representative.

- Configuring Customer Decision Hub

Configuring Customer Decision Hub

Before configuring Customer Decision Hub, ensure that the Pega Customer Decision Hub application is installed. For installation information, contact your Pega support representative.

The Customer Decision Hub configuration page enables the communication with the Pega Customer Decision Hub application to provide next best actions.

1. Log in to Designer Studio, and then click **Designer Studio > Customer Service > Customer Experience > Customer Decision Hub configuration**.
   The **Customer Decision Hub configuration** page opens.

2. Click the **NBA Enabled** link and update the **.NBAAdapterSetting** target value to **"**`true`**"** to enable the communication with decision hub.

3. Save the rule into your implementation layer. For additional information about locked and unlocked rulesets, see Copying a rule or data instance.

4. On the **Customer Decision Hub configuration** page, click the **Customer Decision Hub Server** link and add the Pega Customer Decision Hub URL, for example, *http://<localhost>:<port>*. Click **Save** to save the data instance.

5. Optional: On the **Customer Decision Hub configuration** page, click the **Map Additional Interaction Context** link to update or add context information for strategies to process and respond with appropriate actions. Then, update the data transform rule.

6. Save the rule into your implementation layer. For additional information about locked and unlocked rulesets, see Copying a rule or data instance.

   📝 **Note:** Pega Customer Decision Hub follows a defined structure to map the context properties. Follow the examples from the data transform rule. Be cautious while adding or updating Type, Key and Value properties in the data transform rule.

7. On the **Customer Decision Hub configuration** page, click the **Update Containers** link and update the `mapvalue` rule, to update the container name.

8. Save the rule into your implementation layer. For additional information about locked and unlocked rulesets, see Copying a rule or data instance.

9. On the **Customer Decision Hub configuration** page, click the **Update** button in the center of the page to update the list of configured actions, such as TopOffers, RetentionPeak, NeedsAssessment, and LostStolenCard. Each action is mapped to a call, a flow rule, a Boolean property to display or hide peak offers, and an image.

10. Save the rule into your implementation layer. For additional information about locked and unlocked rulesets, see Copying a rule or data instance.

Configuring access groups

A new application includes Pega-provided access groups and access roles that you can view in Pega Express by clicking **Users** > **Roles**.

To associate an access group with a role, follow these steps.

1. Open Pega Express by logging in to your application with your administrator credentials.
2. Click **Users** > **Roles**. The list of all access groups and access roles provided by the application is displayed.
3. Click **Add role** and enter the details. This adds an access group to a particular role.
4. Click **Done**. For more information, see Access Group data instances.

- Adding an access group
- Adding an access role

Adding an access group

You might need to add an access group to meet your business needs.

1. Open Pega Express by logging in to your application with your administrator credentials.
2. Click **Users** > **Roles**. The list of all access groups and access roles that are provided by the application is displayed.
3. Select the access group that you want to modify and update the details. You can only change the portal details for the access group.
4. Click **Done**. For more information, see Access Group data instances.

Adding an access role

You can update or add a new access role details only from Designer Studio.

1. Log in to Designer Studio.
2. Click **Designer Studio** > **Org & Security** > **Groups & Roles** > **Access Roles**.
3. Select the access role that you want to use, for example `PegaCA:Manager`.
4. Select the access role that you want to use.
5. In the **Access Role** field, click the filter icon and enter `PegaKM` in the **Search Text** box.
6. Select the access role that you want to use, for example `KMApprover`.
7. Click **Apply**
8. Click **Create and open**.
9. Update the new role details.
10. Click **Save**.

Configuring reports

Pega Customer Service includes many standard reports for monitoring and analyzing work. For detailed information about each report, see Pega Customer Service reports .

For information about creating reports, see Creating reports in Case Manager.

- Configuring the Estimated Application Savings report

Configuring the Estimated Application Savings report

The Estimated Application Savings report calculates the savings achieved using Pega Customer Service by comparing the call duration for a service process against an average benchmark for the same process run in a legacy system. The time savings are then multiplied by a cost factor to apply a dollar value to the savings achieved.

- Setting up the report
- Configuring the report
- Modifying the Savings report
- Modifying the Drill-down report

Setting up the report

Record the following information.

- An interaction cost per second value
- A benchmark duration value for each process that you want to calculate
- The SavingsAmount and TimeSavings Declare Expression rules
- Optional updates to the savings report

Configuring the report

1. Identify the relevant service case class that you want to add to the Estimated Application Savings report.

2. Copy an instance of `.CAProcessTimeCost` to your ruleset, and then apply it to the relevant service case class.

3. On the **Expressions** tab, update the cost value of CAProcessTimeCost as cost per second.

4. Click **Save**.

5. Copy an instance of `.CABenchmarkDuration` to your ruleset, and then apply it to the relevant service case class.

6. On the **Expressions** tab, update the value of the duration in seconds.

7. Click **Save**.

8. Copy an instance of `.SavingsAmount` to your ruleset, and then apply it to the relevant service case class.

9. On the Change Tracking tab, change **Execute this expression** to **regardless of any pages it is contained in**.

10. Click **Save**.

11. Copy an instance of `.TimeSavings` to your ruleset, and then apply it to the relevant service case class.

12. On the **Change Tracking** tab, change **Execute this expression** to **regardless of any pages it is contained in**.

13. Click **Save**.

Repeat these steps for each service case class that you want to include in the calculation. Samples are provided for the following classes under the PegaCA-Work class.

- AddressChange

- CloseAccount

- Complaint

- Correspondence

- DisputeTransaction

- General

- Interaction

- Interaction-InCorr

Modifying the Savings report

1. Log in to Designer Studio.

2. From the Application Explorer, select **PegaCA-Work** > **Reports** > **Report Definition** > **CPMApplicationSavings**.

3. Edit the report to meet your requirements.

4. Click **Save**.

Modifying the Drill-down report

1. Open the **User Interactions** tab for the `CPMApplicationSavings` report definition.

2. Copy an instance of the drill-down report to your ruleset.

3. Modify the drill-down report.

4. Update the `CPMApplicationSavings` report definition to point to the modified drill-down report.

Testing a new application

Testing a new application includes the following procedures:

- Testing your application in the Build environment

- Testing in the Test or Production environments

- Testing in the UAT environment

Testing your application in the Build environment

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

1. Run functional tests to test specific features from the end-user perspective.

2. Test features used by all service intents, such as: security, eligibility, search, and loading of data. For this unit testing, automated scripts are recommended but not required.

3. Use the Performance tool to measure the performance of the application. For information about the Performance tool, see About the Performance tool.

- Prior to extending your site-specific Pega implementation, establish a performance benchmark (baseline) using the Performance tool. This allows subsequent, iterative performance tests against the established baseline to help identify any degradation in performance resulting from development efforts.

- Use the Performance tool to check the performance of the following features:

  - Search

  - Account selection

  - Loading of components

  - Kickoff of all service intents. For this unit testing, automated scripts are recommended but not required.

- Save the test results so that you can compare them to future test results to determine whether an application update has a performance impact.

4. Verify that the Pega-provided 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 Customer Service 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.

   For Pega Call, check the following pieces of moving infrastructure:

   - Switch

   - Provider software

   - Connectivity (network)

   - CTI engine

   - Integration to the CTI engine

   In addition, check all delegated rules (for example, coaching tips).

6. 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 the application to a Test or Production environment, test the application in the new environment to verify that it works correctly in that environment.

> **Note:** For a multitenancy configuration, run tests in each tenant region. The testing performed in the Test environment should include usability testing to ensure that the application meets the UI standard.

1. Verify that the source and the destination files are the same.

2. Run functional tests to test specific features from the end-user perspective.

3. Test features used by all service requests, such as security, eligibility, search, and loading of data. For this unit testing, automated scripts are recommended but not required.

4. In the Test or Production environment, run the Application Guardrails Compliance Score to ensure that the application meets guardrails.

5. Verify that there is an open Production ruleset so that managers will be able to edit dialogs, coaching tips, and knowledge content in the Test and Production environments, and so that they can share

those changes. Rulesets are typically locked during migration; you will need to unlock the ruleset after migration.

6. Verify that the Pega-provided 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.

7. Test all integrations, both independently and with associated integrations.

   Test integrations for any optional Pega Customer Service 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.

   For Pega Call, check the following pieces of moving infrastructure.

   • Switch

   • Provider software

   • Connectivity (network)

   • CTI engine

   • Integration to the CTI engine

   In addition, check all delegated rules (for example, coaching tips).

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

9. 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).

10. 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 a difference in environment could cause the test to fail. If the environment caused the failure, either fix the issue that caused the failure or adjust the test as appropriate for the new environment.

11. 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 for large call centers to perform User Acceptance Testing (UAT) in a designated UAT environment, which could be a pre-production environment. UAT ensures that end users will be able to successfully complete 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 the role of end-users) run scripts to test all scenarios including boundary and exception testing. The end-users (that is, the trainers, managers, and directors), perform the following steps during UAT:

   a) Verify that there are no major issues.

   b) Review changes in order to better understand the features.

   c) Customize the delegated rules (for example, coaching tips) as needed.

Packaging a new application

To migrate a new application to a different environment, you must first package the application so that it can be imported to the new environment.

Packaging and importing a new application includes the following procedures:

If deployment is to a Multitenancy environment, see [Multitenancy deployment considerations](#).

- Merging application changes
- Packaging an application for migration
- Importing the packaged application
- Multitenancy deployment considerations
- Overriding rules to use Pega Social

Merging application changes

If you developed 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.

For more information about using Merge Branches wizard, see [Branch development](#).

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`, and it is referred to as the RAP file.

1. Click **Designer Studio** > **Application** > **Distribution** > **Package** to start the Application Packaging wizard. For information about using the wizard, see [Application Packaging wizard](#).
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. On the last page of the wizard, click **Modify** to make any changes.
6. When the RAP file is complete, 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, import the .ZIP file that contains the packaged application to the new environment.

1. Click **Designer Studio** > **Application** > **Distribution** > **Import**.
2. Use the Import Gadget to import the target .ZIP file. For more information, see [Import wizard landing page](#).

For information about how to swap the database connection pointers to your Production database after an import to a Production environment, see the Pega Platform Upgrade Guide at [Deployment Guides](#).

📝 **Note:** For an on-premises Pega Co-Browse integration, be sure to update the data transform rule to point to the correct Pega Co-Browse server if necessary.

Multitenancy deployment considerations

In a multitenancy environment, the shared application components are deployed only to the shared environment, and the tenant-specific components are deployed only to the tenant region.

For information about how to package and deploy a shared application or a tenant-specific application, see the Multitenancy Administration Guide.

A deployment to a multitenancy environment has the following requirements.

- The package for the tenant layer should include production rule sets for that tenant. The package for the shared layer should not include production rule sets.

- The package for the tenant layer should include the tenant-specific Pega Call configuration settings, such as sample operators, service packages, CTI links, and call objects. The package for the shared layer should include the global Pega Call configuration settings that apply to all tenants, such as Pega Call rules.

- The package for the tenant layer should include the table definitions for that tenant.

Note: Multitenancy is not supported for Pega Social.

Overriding rules to use Pega Social

To configure Pega Social, override the following rules in the implementation layer class where interaction work instances are created.

Feature	Rules
Profile	Data page - `D_Contact_Details`
Widget - Agent performance	Report definition - `TeamPerformance`
Widget - Team performance	Report definition - `TeamPerformanceForWorkgroup`

After you override the rule, complete the following steps for widgets - Agent performance and Team performance.

1. Log in to Designer Studio.

2. In the search field, enter `TeamPerformance`.

3. Open the report definition - TeamPerformance.

4. On the **Data Access** tab, in the **Class joins** section, enter your class in the **Class name**

5. On the **Pages & Classes** tab, in the **Class** field, enter your class.

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 the Production environment using the **Tools** > **Configuration** option available in each process action of the case type. This feature allows managers to change these options without having to wait for a rule deployment. Managers must have the same privileges associated with the PegaCA:Manager role in order to maintain these rules.

📝 **Note:** Skills instances need to be created in order for them to be available in the selection of available Expert Skills.

Managers can also create reports in the **My Reports** section of the portal. For more information, see Report Browser features.

You can give managers the ability to update other rule types in the Production environment. For example, managers can update the Goals and Deadline for a certain case type. These rules must be delegated in Designer Studio first. After the rule has been delegated, you can access it in the Interaction Portal by clicking **Profile** menu **> My rules**. For more information on rule delegation, see Delegating a rule or data type.

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 application 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 time. Over time, slow integration points can cause average handle times to increase. When queues start to grow, it becomes very difficult to recover, which might require usage of offline services or a backup application.

- Regularly perform a Layer 7 health check. Layer 7 is the application layer of the OSI model. Having visibility into the details of a connection can allow you to filter out unwanted traffic from entering your call center, such as for example, in the form of a DDoS attack. It can also help with load balancing. Having visibility into call details also provides information that is needed to more intelligently route the call.

- Regularly perform a health check on the CTI layer. Periodically check to ensure that the application can communicate with the switch. Periodically call the application to make sure it can get through an entire process.

- Monitor social accounts (for example, your Facebook and Twitter accounts) to ensure that they do not expire. For more information, see [Pega Social configuration](#) .

Identifying and reporting issues

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

1. Identify 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.

Pega Chat implementation

Customers can implement Pega Chat at the same time as Pega Customer Service, or they can add this component later. For more information about Pega Chat, see the Pega Chat product page .

Pega Chat implementation includes the following processes.

> 📝 **Note:** Pega Chat includes features that use the Text Analytics/Natural Language Processing features of the Pega Platform. If you have licensed Pega Chat, you can use Text Analytics/Natural Language Processing features solely with Pega Chat unless you have licensed these features separately for other purposes. Contact your Pega Account Executive if you require a license to use the Text Analytics/Natural Language Processing features for other purposes.

- Defining common phrases
- Defining requirements for a Pega Chat implementation
- Building Pega Chat features
- Testing, packaging, and maintaining Pega Chat

Defining common phrases

You can enable customer service representatives to insert frequently used phrases in the chat window by selecting them from the **Phrases** menu during a chat session. The common phrases can be used for all channel interactions, such as chat, social and email channels. From Pega Express, you can configure this capability for one channel or all.

To record your decisions during this procedure, use the "Common phrases" worksheet in the *Implementation Planning Workbook*.

1. Define the channel for which you want to use the common phrases.

2. Define the categories of common phrases that will be seen by the customer service representative. During a chat, social, or email session, each category is presented as a separate sub-menu from which they can select a phrase.

3. Define a short name for each phrase that will clearly identify the phrase to the customer service representative.

4. Define the complete text that a customer sees in the chat window when a customer service representative selects the phrase. If the phrase includes text that is formatted as a link (for example, the text starts with "http://"), then the chat window converts the text to a link when a customer service representative sends the phrase.

5. To restrict selection of this phrase to customers with specific browser locales, identify the language of the phrase. By default, a phrase applies to all languages and locales.

For more information of configuring common phrases, see Configuring common phrases.

Defining requirements for a Pega Chat implementation

Pega Chat has the following implementation requirements:

- Defining which web pages will have chat capabilities
- Defining the chat window branding
- Defining optional proactive chat

- Defining the chat queues and operator skills
- Defining URL mappings for chat
- Defining web pages to push for chat
- Defining optional Pega Co-Browse settings
- Defining dashboard widgets
- Defining the chat server location and communication settings
- Defining customized and localized chat system messages

Defining which web pages will have chat capabilities

To list the pages on your website that will have chat capabilities, use the "Chat-enabled web pages" worksheet in the *Implementation Planning Workbook*.

Defining the chat window branding

You can customize the chat window to better match your website or branding.

The header section of the chat window is the logo and message that appears at the top of the window.

The text section of the chat window is the conversation area, which includes system messages.

To record your decisions during this procedure, use the "Customer chat experience" worksheet in the *Implementation Planning Workbook*.

1. Determine the font family, font color, and background color for the text, the chat header text, and the message header oval sections.
2. Determine which image to display to the left of the chat header text. For example, you can display a company logo. The header can fit a 21 pixel by 21 pixel image.

Defining optional proactive chat

For web pages that are enabled for chat, you can optionally configure Pega Chat to invite the customer to a chat session, rather than waiting for the customer to request assistance.

To record your decisions during this procedure, use the "Proactive chat" worksheet in the *Implementation Planning Workbook*.

1. Determine whether to enable proactive chat.
2. To enable proactive chat, define the criteria that determines when the customer will be invited to a proactive chat session. The criteria can include one or more of the following metrics.
   - How long (in seconds) that a customer views a chat-enabled web page.
   - How long (in seconds) that a customer views a website that has at least one chat-enabled web page. The customer will be invited to proactive chat only when they have a chat-enabled web page open.
   - The number of chat-enabled pages that a customer views.
3. Determine the message to display to a customer to invite them to the proactive chat session.

Defining the chat queues and operator skills

A chat queue is the work queue for chat requests that are received from one or more chat-enabled web pages. The chat server routes a chat request to a CSR based on whether the CSR has the required skills for that queue, and whether the request is received during working hours for that queue.

For a chat window, you can configure a chat queue to send pre-chat questions to a customer in order to gather information before the chat request is routed to a CSR. For example, the chat server can request a customer's name, account number, and the question that they have.

The answer can be used for subsequent interaction processing.

> **Note:** If the answer to a pre-chat question is known before the chat session starts, you can pre-populate the answer when you enable chat for a web page. In that case, the chat server will not ask the pre-chat question. An answer can also be pre-populated automatically by your website based on user login credentials or other information. For information about how to pre-populate an answer, see Enabling chat on your website.

To record your decisions during this procedure, use the "Chat queues" worksheet in the *Implementation Planning Workbook*.

1. Identify the different types of chat requests that you expect to receive and the skills required to service each request.

2. Determine how many different chat queues you need to route chat requests to operators with the required skills.

3. Determine a name for each chat queue.

4. Identify the hours of operation for each chat queue.

5. Determine what message to display when a customer requests a chat session outside of business hours for the chat queue.

6. Determine what message to display when a customer requests chat when there are no agents available or no agents available with the required skills.

7. Determine the service level goals for each chat queue. Identify the percentage of chat customers that your CSRs should be able to respond to, and the number of seconds within which they should respond.

8. Determine which pre-chat questions you want to ask for each chat queue.

9. Define a property name (also known as a key) for each pre-chat answer. During a chat interaction, a CSR can access the property and other metadata related to this chat request from their Pega clipboard.

   The metadata are available in the form of key-value pairs in a value group ChannelServicesInteraction.pyUserData on the interaction page. Answers to pre-chat questions are accessed from pyUserData using the key specified. The answers can be displayed on the CSR desktop, and they can be used to trigger, modify, or suggest service processes.

   The Configuring interaction topic describes tasks that can include Pega Chat metadata.

10. Determine whether and when to pre-populate pre-chat answers. For example, certain values might be pre-populated based on the user's profile on your website.

11. Identify which CSR operators have the required Pega Chat skills to respond to the chat queue. For information about defining operator skills, see Defining the operator attributes.

    > **Note:** Only the following characters are allowed in the operator ID of a Pega Chat CSR: alphanumeric characters, @, &, ', and <space>. The operator ID cannot contain any other special characters, nor can it contain more than one @ symbol.

For more information on how to configure, see Configuring chat queues for Pega Chat.

Defining URL mappings for chat

For web pages that are enabled for chat, you can assign a chat queue to one or more web pages based on the URL pattern of the web pages. For example, you can assign all web pages that include the term "-sales" in their URL to a specific queue. This enables you to quickly assign or modify the chat queue for multiple pages.

Note: The JavaScript snippet that enables chat for a web page includes parameters that determine whether the page uses URL mappings to assign a chat queue.

To record your decisions during this procedure, use the "URL mapping for chat" worksheet in the *Implementation Planning Workbook*.

1. Identify each URL pattern.

   Note: Use the * wild card pattern to define a default chat queue for web pages that do not match any other pattern.

2. Identify the chat queue for each pattern.

Defining web pages to push for chat

During a chat session, a CSR can select a chat-enabled web page to share with a customer in order to guide them or point them to the information that they need. The customer receives a message asking for permission to redirect their web browser to the pushed page.

To record your decisions during this procedure, use the "Page push for chat" worksheet in the *Implementation Planning Workbook*.

1. Define categories of pages to push as will be seen by the CSR. During a chat session, each category is presented to the CSR as a submenu from which they can select a web page.

2. Define a name that identifies each chat-enabled web page that a CSR can push during a chat session.

3. Define the URL of each chat-enabled web page that a CSR can push during a chat session.

4. To restrict selection of this web page to customers with specific browser locales, identify the language of the web page. By default, a shared web page applies to all languages and locales.

For more information on configuring page push, see Configuring Page push.

Defining optional Pega Co-Browse settings

To enable Pega Co-Browse capabilities from a chat window, obtain the Pega Co-Browse API key that is needed to start the co-browsing session.

For more information about how to obtain that key, see the *Pega Co-Browse Implementation Guide* on the Pega Customer Service product page.

To record the Pega Co-Browse API key, use the "Chat-enabled web pages" worksheet in the *Implementation Planning Workbook*.

Defining dashboard widgets

Chat widgets display historical or real-time chat statistics on the Interaction Portal dashboard.

To record your decisions during this procedure, use the "Chat widgets" worksheet in the *Implementation Planning Workbook*.

1. Log in to Designer Studio using the administrator operator ID for your application.

2. Click **Launch** > **Interaction Portal**.

3. Click **Dashboard**.

4. Click the **Personalize dashboard** icon.

5. Under Widgets, click **Add Widget(s)** icon.

6. On the Widgets window, scroll to the **CHAT** section, and decide which chat widgets you want to show on your dashboard.

For detailed information about how to add widgets to the dashboard, see [Designing the portals](#).

Defining the chat server location and communication settings

There are two options for the chat server installation. Pega can install it for you as part of the Pega Cloud Collaboration Services, or you can install it yourself on premises. Once the chat server is installed, you must configure how Pega Customer Service connects to that chat server.

To record your decisions during this procedure, use the "Chat server" worksheet in the *Implementation Planning Workbook*.

1. Determine whether the chat server will be installed in the cloud using Pega Cloud Collaboration Services or on-premises.

   📝 **Note:**

   For information about installing a chat server on-premises, see the *On-Premises Chat Server Installation* article on the [Pega Chat product page](#).

   If you use Pega Cloud Collaboration Services, you must configure your application to use the `AllowPegaCollaborationServices` security policy. For more information, see [Configuring the security policy](#).

2. Determine the following communication information for the chat server.

   • The host name, IP address, or domain name of the installed chat server or chat infrastructure. For an on-premises server, this value is likely to be a domain name that resolves to a load balancer. For Pega Cloud Collaboration Services, this is usually `chat.usefirefly.com`.

   • The protocol (http or https) used to configure chat. Pega Customer Service server will connect to the chat server using this protocol.

   • The TCP port used to configure the chat server. Pega Customer Service server will connect to the chat server on this port.

   • The unique configuration key used to configure the specific chat server.

   If you use Pega Cloud Collaboration Services, you will receive this information in an email sent to the provisioning email address that you provided. If you install the chat server on-premises, request this information from the person who installed the chat server.

   📝 **Note:** A chat server is identified by its configuration key. A chat server (and configuration key) must be associated with only one Pega Platform environment. You should create only one chat server record on the Pega Platform to represent each chat server. If you select the same configuration key in more than one record or environment, then each subsequent record or environment will attempt to delete configuration elements (for example, queues and operators) created by the other configuration or environment.

3. Determine the following client communication information.

   • The protocol (http or https) used by the CSR and customer web browsers to communicate with the chat server.

   • The TCP port used by the customer and CSR web browsers to communicate with the chat server.

- The frequency (in seconds) to reconnect the customer and CSR web browsers to the chat server, in the event or a network interruption or chat server restart.

- The maximum number of reconnection attempts.

- The maximum number of chat conversations that a CSR can engage in at the same time.

4. Whether to use the Type Ahead feature, which enables the CSR to see what a customer is typing in the chat window before the customer sends the chat entry. A CSR can use this extra time to plan an appropriate response or search for predefined content to send.

Defining customized and localized chat system messages

To better meet the needs of your business and to better meet the language requirements of your chat users, you can customize and localize any of the text content that a customer sees during a chat interaction, such as system messages and window names. During a chat interaction, if you have defined localized chat system messages, the default language that is configured for the customer's browser determines which language pack is used to display the chat system messages.

To record your decisions during this procedure, use the system-generated spreadsheet file described in the procedure below.

1. Follow the steps in Customizing and localizing chat system messages to generate a spreadsheet file that contains the default chat system messages.

2. Determine whether to customize any of the default chat system messages, in the English language pack.

3. Determine whether to localize the chat system messages into any languages other than English.

Building Pega Chat features

To configure the Pega Chat features, complete the following tasks:

- Configuring the content security policy
- Configuring the chat server communication settings
- Configuring common phrases
- Configuring pre-chat questions for chat
- Branding the customer chat window
- Configuring optional proactive chat
- Configuring URL mappings for chat
- Enabling chat on your website
- Configuring Pega Co-Browse in Pega Chat
- Configuring chat queues for Pega Chat
- Enabling automatic Pega Chat login
- Customizing and localizing chat system messages

Configuring the content security policy

A content security policy is a type of security provided through the HTTP response header. It specifies the uniform resource locators from where web page resources such as frames, images, and stylesheets are loaded. It helps to prevent common web vulnerabilities such as code injection and cross-site scripting. If

you do not define this policy then the browser loads page resources that might have malicious content. For more information about content security policy, see Content Security Policies.

📋 **Note:** Complete this task only if you have hosted Pega Chat on cloud. On-premises clients must take care of security of their own installation.

If your Pega Chat implementation uses the Pega cloud collaboration services, update your Pega application to use the `AllowPegaCollaborationServices` content security policy. For more information on Pega cloud collaboration services, see Pega Cloud Collaboration Services.

1. Log in to Designer Studio by entering your administrator credentials.

2. Click the **Application menu > Definition**.

3. On the **Integrity & security** tab, in the **Policy name** list, select **AllowPegaCollaborationServices**.

4. Click **Save**.

Configuring the chat server communication settings

Configure the chat server settings to communicate with the Pega Customer Service application. To configure the settings, identify the details such as host name, IP address, and port as described in Defining the chat server location and communication settings.

1. Click **Designer Studio** > **Channel Services > Pega Chat** > **Administration & Configuration** .

2. To add a new chat server, click **Add New**.

3. On the **Create Chat Server Configuration** page, complete the required fields and click **Create and open**.

4. In the **Server Configuration** section, perform the following steps:

   a) In the **Chat server type** list, select a server type.

   b) In the **Chat server hostname** field, enter the host name or IP address of the chat server, or the domain name of the chat infrastructure.

   📋 **Note:** Do not enter http or https, enter only the host name, such as example.com

   c) In the **Configuration protocol** list, select a protocol.

   d) In the **port** field, enter the port number.

   e) In the **Server configuration key** field, enter the server configuration key so that the chat server can communicate with Pega Customer Service.

   f) In the **Asset host URL** field, enter the URL for this chat server.

   📋 **Note:** Do not create more than one chat server configuration using the same configuration key.

5. In the **Client Settings** section, perform the following steps:

   a) In the **Communications protocol** list, select a protocol.

   b) In the **Port** field, enter the port number for communication between the customer and customer service representative web browsers and the chat server.

   c) In the **Reconnect interval (Sec)** field, enter the frequency in seconds that the customer and customer service representative web browsers should reconnect with the chat server if the connection is lost.

   d) In the **Reconnect attempts** field, enter the maximum number of times to reconnect the customer and customer service representative web browsers with the chat server.

   e) In the **Max concurrent conversations** field, enter the maximum number of simultaneous conversations allowed for a customer service representative.

f) In the **Chat transcript update interval** field, enter the frequency in seconds to update the chat transcripts.

6. In the **Chat Wait Time Information** section, perform the following steps:

a) To calculate the average time that a chat server takes to handle the number of chats, in the **Average handle time evaluation window** field, enter the time in minutes, for example, 60. This value is the minimum amount of time before the average wait time is calculated.

b) To calculate the average wait time that a customer has to wait before interacting with a customer service representative, in the **Minimum number of chats for average wait time calculation** field, enter the minimum number of chats, for example, 15. This value is the minimum sample size before the average wait time is calculated.

7. To enable the Type Ahead feature so that a customer service representative (CSR) can see what a customer is typing before the customer sends the entry, select the **Type Ahead** check box.

8. Click **Save**.

9. To modify an existing chat server, on the **Administration and Configuration** page, select the chat server that you want to modify, click on the gear icon, and then click **Edit**.

10. Follow the instructions provided in steps 4 to 8.

Configuring common phrases

Common phrases are frequently used phrases that are displayed in the Pega Chat or Pega Social channel window, such as Twitter, during an interaction. During an interaction, the customer service representatives clicks the **Phrases** link and selects the configured phrases to display to the customers. This helps to reduce the average handle time of the social interactions.

The common phrases that are used as during a chat or social interaction, are categorized into different categories based on their usage. You can add a new category or edit an existing category from the Common phrases page. When a customer service representatives clicks to add a phrase during an interaction, the categories are listed from where he can select the phrase to use.

To add and edit categories, complete the following steps.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the **Explorer** panel, click **Tools > Common phrases**.

3. On the **Common phrases** page, to add, delete or modify a category, click **Edit Categories**. The **Edit categories** dialog opens.

- To add a category, click **Add Category** and enter the name of the category in the empty field, then click **Submit**.

- To modify a category, change the value of the selected category and then click **Submit**. The updated category is displayed to the customer service representative.

- To delete a category, click the **Delete** icon and then click **Submit**. Deleting a category deletes the common phrases added to it.

- To view a specific category, click **Display all categories** list and select your category. The category and the common phrases of that category is displayed on the page.

Configuring pre-chat questions for chat

In the **Question** field, enter the pre-chat question that will be presented to a customer.

1. Click **Designer Studio** > **Channel Services > Pega Chat** > **Administration & Configuration**.

2. Select the chat server, click the **Gears** icon, and then click **Edit**.

3. Click the **Queues** tab.

4. Select the queue for which you will configure pre-chat questions, and then click the **Edit** icon ✐ .

5. In the **Pre-chat questions** section, click **Add New** to add a pre-chat question for this queue.

6. In the **Key** field, enter the name of the property to create for the answer to this question.

> 📝 **Note:** For information about how to pre-populate a pre-chat answer for your website, see [Enabling chat on your website](#).

7. Repeat these steps for additional pre-chat questions.

8. Click **Submit**.

9. Repeat these steps for each additional chat queue.

10. Click **Save**.

Branding the customer chat window

To configure the chat header settings, in the **Chat Header** section, perform the following steps:

1. Click **Designer Studio** > **Channel Services** > **Pega Chat** > **Administration & Configuration** .

2. Select the chat server, click the **Gears** icon, and then click **Edit**.

3. Click the **Customer Chat Client** tab.

   a) Complete the font family, the header font color, and the header background color fields.

   b) In the **URL for chat icon** field, enter the URL of an image file (21 pixels in height and width) to show at the left side of the header section.

4. To configure the chat text settings, complete the fields in the **Chat Text** section.

5. To configure the message header settings, complete the fields in the **Message Header Oval** section.

6. Click **Save**.

Configuring optional proactive chat

If you enable proactive chat, select one or more of the following check boxes to determine when a customer will be invited to a proactive chat session. You must select at least one check box.

1. Click **Designer Studio** > **Channel Services** > **Pega Chat** > **Administration & Configuration** .

2. Select the chat server, click the **Gear** icon , and then click **Edit**.

3. Click the **Proactive Chat** tab.

4. To enable proactive chat, select the **Enable Proactive Chat** check box.

   a) To start a proactive chat session based on how long a customer views a chat-enabled web page, select the **Offer chat when user stays on a page for NN seconds** check box, and then enter the number of seconds.

   b) To start a proactive chat session based on how many chat-enabled pages the user views, select the **Offer chat when user views NN pages** check box, and then enter the number of pages.

   c) To start a proactive chat session from a chat-enabled web page based on how long a customer views your website, select the **Offer chat when user stays on the website for NN seconds** check box, and then enter the number of seconds.

5. In the **Invitation text** field, enter the message to display to the customer to invite them to a chat session.

6. Click **Save**.

Configuring URL mappings for chat

In the **URL Pattern** field, enter the pattern of the chat-enabled web pages that you want to map to a chat queue.

1. Click **Designer Studio** > **Channel Services Pega Chat** > **Administration & Configuration** .

2. Select the chat server, click the **Gears** icon, and then click **Edit**.

3. Click the **URL Mapping** tab.

4. Click **Add Item**.

5. You can enter multiple values separated by the `or` operator, and you can include the `*` wildcard character. For example: `yoursite.com/*-sales or yoursite.com/newcustomer`

6. From the **Queue** list, select the chat queue to assign to web pages that match the pattern.

7. Click **Save**.

Enabling chat on your website

Insert a JavaScript snippet similar to the one shown below in the web page code.

1. From your code editor, open the layout file that will propagate to all of your site's web pages that require chat capabilities.

   Note: A sample snippet is emailed to the administrator provisioning email address that you provided when the chat server was installed.

```
<script type="text/javascript">
(function() {
window.fireflyAPI = window.fireflyAPI || {};
window.fireflyAPI._log = window.fireflyAPI._log || function(){};
window.fireflyChatAPI = {};
fireflyChatAPI.token=<your Chat API token>;
fireflyChatAPI.cobrowseAPIKey=<your portal co-browsing API
 key>;fireflyChatAPI.queue = <your queue>;
fireflyChatAPI.skipQueueSelection = <true or false>;
fireflyChatAPI.assetHostUrl="https://firefly-chatproduction.
 s3.amazonaws.com";
fireflyChatAPI.type = 'visitor';
fireflyChatAPI.serverHostUrl = <yourchatserverUrl>;
var script = document.createElement("script");
script.type = "text/javascript";
script.src =  <yourchatserverUrl> + "/scripts/loaders/chatLoader.js";
script.async = true;
var firstScript = document.getElementsByTagName("script")[0];
firstScript.parentNode.insertBefore(script, firstScript);
})();
</script>
```

2. In the JavaScript snippet, modify the JavaScript variables listed below to reflect your environment and needs.

fireflyChatAPI.token

The API token for your chat server. This value is pre-populated in the snippet that you receive.

Note: This value is not the same as the server configuration key that you identify when you configure your chat server.

fireflyChatAPI.cobrowseAPIKey

For more information about how to obtain that key, see the *Pega Co-Browse Implementation Guide* on the Pega Customer Service product page.

fireflyChatAPI.queue

The chat queue for this web site. If this variable is defined, then Pega Chat ignores the `fireflyChatAPI. skipQueueSelection` variable.

If this variable is not defined, Pega Chat determines the queue selection based on the following criteria.

- If the `fireflyChatAPI.skipQueueSelection` variable is not defined or is set to `false`, the chat window presents a list of queues for the user to select from, or uses the default queue if only one queue is defined.

- If the `fireflyChatAPI. skipQueueSelection` variable is set to `true`, then Pega Chat uses URL mappings to assign a chat queue for this site.

fireflyChatAPI.skipQueueSelection

This variable is considered only when the `fireflyChatAPI.queue` variable is not defined. Set this variable to `false` if the chat window uses URL mappings to determine the queue selection. Set this variable to `true` if the chat window presents a list of queues for the user to select from, or use the default queue if only one queue is defined.

fireflyChatAPI.assetHostUrl

The URL from which Pega Chat loads assets (images and stylesheets). This value is pre-populated in the snippet that you receive, and is typically set to `https://firefly-chat-production.s3.amazonaws.com`.

fireflyChatAPI.serverHostUrl

The URL of the Pega Chat server. This value is pre-populated in the welcome email that you receive for a Pega Cloud Collaboration Services installation.

3. To pre-populate a pre-chat answer for your website, update the JavaScript snippet to include a statement in the format shown below.

```
fireflyChatAPI.preChatAnswers = {"username" : "Sara Connor",
  "Account":1234560000, "ContactId":CONNOR,  "Verified":"True"};
```

For each value pair, the first part of the value identifies the pre-chat key, and the second value identifies the answer. If an answer is pre-populated, then the pre-chat question associated with that answer is not asked.

Configuring Pega Co-Browse in Pega Chat

By using Pega Co-Browse, a customer service representative can connect to customers' browsers and show them sections of the website by highlighting different elements of the web page. The customer service representative can also click links or fill out forms remotely without additional plug-ins or software.

1. In the Designer Studio **Explorer** panel, go to **Records > SysAdmin > Dynamic System Settings**.

2. Obtain the Pega Co-Browse API key, API token, CobrowseServerURL, CobrowseAssetURL, CobrowseloaderURL, and CobrowseSessionGenerationURL.

    For more information on how to obtain these values, see the *Pega Co-Browse Implementation Guide* on the Pega Customer Service product page.

3. In the search field, enter and select the **CobrowseAPIKey**.

4. In the **CobrowseAPIKey (Internal)** page, in the **Value** field, enter the Cobrowse API key from the JavaScript snippet that you received.

5. Click **Save**.

6. Repeat steps 3 to 5 for **CobrowseToken**, **CobrowseServerURL**, **CobrowseAssetURL**, **CobrowseLoaderURL**, and **CobrowseSessionGenerationURL**. In the relevant pages, enter the cobrowse token, cobrowse server host URL, cobrowse asset URL, cobrowse loader URL, and cobrowse session generation URL.

Configuring chat queues for Pega Chat

With Pega Chat, a Customer Service Representative (CSR) interacts with customers from your website by sending and receiving chat messages. Chat queues for a chat server define the skills, schedule, and system generated pre-chat questions. Creating a new chat queue and configuring it to a chat server channelizes the interaction request.

To add a new chat queue and configure it to a chat server, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. In the Explorer panel, click **Tools** > **Queue configuration**.

3. To view the available queues of a chat server and to add a new queue, select the chat server.

4. To add a new queue, click **Add new**.

5. In the **Add a new queue** dialog, enter the **Queue name** , for example, Billing.

6. To enter the skills that are required for the queue, on the **Mapping & skills** tab, click **Add new** and identify the skills that a customer service representative must have in order to accept chat requests for this queue.

   You can select an existing skill or create a new one. Chat requests in the queue are routed to customer service representatives who have all of the listed skills. For example, if a queue requires English speaking representatives who have the skills to process service requests, you might identify a skill for English and another for Service. Chat requests to the queue are routed to customer service representatives who have both skills - English and Service. Create additional skills as needed to meet the needs of the queue. The new skills must match the desired operators skills that is defined in the operators skill section.

   For more information see, Defining the operator skills. In order for the updated information to be available during a chat session, you must synchronize the chat server with the Pega Platform.

7. Optional: Enter the **URL pattern** for the chat queue. The URL pattern of the organization determines which chat queue should be selected when the request is raised. For example, a banking organization has two divisions, Savings and Credit Card. For Queue A, if the Credit Card URL is configured, then the request raised from that URL will be routed to Queue A.

8. On the **Hours of operation** tab, select a calendar that reflects the hours of operation of a queue. For information about defining calendars, see Defining the operator attributes. In order for the updated information to be available during a chat session, you must synchronize the chat server with the Pega Platform.

9. On the **Wait time and SLA** tab, complete the following:

   a) **Off-hours behavior** - enter a message to display to a customer who requests to chat when the queue is not in service.

   b) **Agents not available** - enter a message to display to a customer who requests to chat when no representatives are logged in who can serve the queue.

   c) **Service level** - enter your service level goal by identifying what percent of customers you want to respond to within a selected number of seconds. For example, you might want to respond to 75% of customers within 60 seconds of their chat request. These goal numbers are used for reporting, and are not enforced.

10. In the **Wait time** section, complete the following fields:

a) **Maximum wait time (Secs)** - enter the maximum wait time in seconds for the calculated wait time on the server. If the calculated wait time is more than this value then chat becomes unavailable.

b) **Default wait time (Secs)** - enter the default wait time in seconds for a queue. If the wait time calculation threshold is not met and if there are customer service representatives available to serve customers then the chat server returns this value.

c) **Chat offer timeout** - enter the time limit in seconds for a customer service representatives to either accept or decline a chat request. After this value is exceeded, the chat expires.

11. To add pre-chat questions, on the **Pre-chat questions** tab, click **Add new** and enter the name of the property and the pre-chat question that will be presented to the customer.

12. To add more chat queues, repeat all of the above steps.

13. Click **Save**.

Enabling automatic Pega Chat login

A CSR or manager has the option to automatically log in to Pega Chat when they log in to the Interaction Portal.

1. Log in to the Interaction Portal as an agent.

2. Click **Operator** > **Preferences**.

3. Click **Desktop Preferences** > **Channels** > **Chat**.

4. Select the **Enable Chat** check box.

5. In the **Chat login preference** list, select **Save Login Info**.

6. Select the **Chat server** to use.

7. In the **Chat Display Name** field, enter the name that will identify you to customers during a chat session.

8. Click **Save Preferences**.

Customizing and localizing chat system messages

After you plan your customized and localized Chat system messages, as described in [Defining customized and localized chat system messages](#), create and modify the translation spreadsheet required for each supported language.

1. Click **Designer Studio** > **Channel Services > Pega Chat** > **Administration & Configuration**.

2. Right-click the **Options menu** icon to the right of the chat server name, and then select **Edit**.

3. Click the **Message Customizations** tab.

4. To customize messages for a language pack for the first time, select the **Add a new language pack** option. To edit chat system messages that you have already customized, select the **Update an existing language pack** option.

5. If editing previously customized system messages, select the language pack from the **locale** list.

6. Enter a **Description** of the language.

7. Click **Download existing language pack**.

   If you are customizing system messages for this language for the first time, the application generates a spreadsheet file that contains the default messages in English. If you previously customized system messages for the selected language, the application generates a spreadsheet file that contains your previous customizations.

8. Modify the values in column B to contain the custom text values.

9. Save the modified spreadsheet file.

10. Click **Choose file** to select the modified spreadsheet file.

11. Click **Upload**.

Testing, packaging, and maintaining Pega Chat

During the Delivery phase, complete the following tasks to test, package, and maintain Pega Chat.

1. Test the component

   Test Pega Chat during product integration testing. For details, see <u>Testing a new application</u>.

2. Package and export the component

   For information about how to package and export an application that includes Pega Chat, see <u>Packaging a new application</u>.

3. Production monitoring

   Production monitoring for Pega Chat includes the following tasks.

   - <u>Synchronizing application updates with the chat server</u>

   - <u>Monitoring chat queues</u>

   For complete information about production maintenance and monitoring tasks for Pega Customer Service, see <u>Production maintenance and monitoring</u>.

- <u>Synchronizing application updates with the chat server</u>
- <u>Monitoring chat queues from the Interaction Portal</u>

Synchronizing application updates with the chat server

Whenever you make changes in Designer Studio that affect Pega Chat (for example, modifying the chat server or adding chat skills to an operator record), the data must be synchronized with the chat server. This synchronization happens automatically any time you save changes to a chat server configuration (for example, when you add a new queue for a chat server). However, this synchronization must be performed manually for other changes, such as the addition of operator skills or a change to a calendar.

📝   **Note:** Because synchronization is resource intensive in environments with a large number of users and chat skills, it is recommended that you perform synchronization off-hours.

1. Click **Designer Studio** > **Channel Services** > **Pega Chat** > **Administration and Configuration** .

   The **Chat Sync Status** column shows the status of the server's most recent synchronization.

   - **Succeeded** - The synchronization was successful.

   - **Failed** - The synchronization was not successful. The **Failed** link shows information about why the failure occurred.

2. Select the chat server.

3. Click the **Gears** icon, and then click **Synchronize**.

📝   **Note:** An alternative method is to modify the agent schedule for the Pega-provided agents rule (ruleset PegaFW-Chat). That rule runs periodically to ensure that the configuration is kept synchronized.

Monitoring chat queues from the Interaction Portal

Monitor the real-time performance of chat queues to ensure that you are delivering the expected levels of service.

1. From the dashboard of the Interaction Portal, click the **Personalize dashboard** icon.

2. Click **Add Widget(s)** icon.

3. In the CHAT section, select **Monitor Chat Queues**, and then click **Add selected** at the bottom of the widget page.

4. Click **Publish**.

5. Select the chat server.

Monitoring chat queues from Designer Studio

1. Click **Designer Studio** > **Channel Services** > **Pega Chat** > **Administration & Configuration**. The Administration and Configuration landing page opens.

2. Select the chat server that you want to monitor, click the **Gears** icon, and then click **Monitor**.

Chat queue statistics

The Chat queue monitor shows the following real-time statistics for the selected chat queue.

Open?
Whether the chat queue is currently open, based on the hours of operation. Only the widget shows this value.

Queue
Name of the queue.

Requests
The number of customer requests currently waiting to be served.

Estimated Wait Time (sec)
The amount of time (in seconds) a new customer joining the queue is likely to have to wait before they are served.

Logged in Agents / Operators
The number of operators logged in and skilled to serve requests in this queue.

Longest Wait Time (sec)
The longest wait time (in seconds) currently being experienced by a customer who is in the queue.

Pega Social configuration

Pega Customer Service helps global service teams deliver relevant, fast customer experiences using social channels. To enhance social Customer Service Representatives (CSR) productivity, Pega Social uses advanced text analytics to cut through social media noise and extract only those conversations that are relevant. Pega Social guides your CSR through every social interaction by analyzing sentiment, topics and influence scores so that your teams can adapt and execute the best service strategy. The CSR can take advantage of interaction histories across service channels, as well as Pega Knowledge and case management tools, when responding to customers.

Pega Social includes features that use the Text Analytics and Natural Language Processing features of the Pega Platform. You may use Text Analytics and Natural Language Processing features solely with the application unless you have licensed these features separately for other purposes. Contact your Pega account executive if you require a license to use the Text Analytics and Natural Language Processing features for other purposes.

Pega Social implementation includes the following processes.

- Defining requirements for the Pega Social configuration
- Building Pega Social functionality
- Monitoring Pega Social

Defining requirements for the Pega Social configuration

During the Define phase, complete the following tasks:

1. Compiling a list of business Twitter handles and Facebook business pages
2. Defining and registering Facebook and Twitter applications
3. Defining operators, access groups, work groups, and workbaskets
4. Defining topics

Compiling a list of business Twitter handles and Facebook business pages

With Pega Social, you can receive tweets and posts from social channels such as Twitter and Facebook and respond to them.

To compile a list of business Twitter handles, remember the following points

- Your business may have branded one or more Twitter accounts for customer service.
- Your customers may contact you through one of your Twitter accounts. You can route their queries to the right team. Compile a list of all Twitter accounts that you need to monitor.
- You can respond to incoming tweets from either a single or multiple outgoing Twitter handles.
- The administrator maps incoming Twitter handles to the outgoing Twitter handles. For example, for the incoming Twitter handle @askmybank , you can set the outgoing Twitter handle @mybank to respond to the customers.

To compile a list of Facebook business pages, remember the following points

- Compile a list of your business Facebook page URLs, from where you intend to provide customer service. If your business does not have a Facebook page, create one using your business profile.

- Your administrator configures listening and response capabilities for your Facebook business pages.

To record your decisions during this procedure, use the "Compile Twitter handles and Facebook pages" worksheets in the *Implementation Planning Workbook*.

Defining and registering Facebook and Twitter applications

Pega Customer Service uses publicly available APIs from Twitter and Facebook to harvest social messages and posts. These messages and posts are subject to the limitations of Facebook and Twitter for accuracy, completeness, and availability. Further, they are subject to versioning and stability of their APIs.

📝 **Note:** Pega does not warrant the accuracy, completeness, and availability of any third-party content. Use of this data by Pega or its customers is subject to the terms of services of Facebook and Twitter. For more information about Facebook and Twitter terms of services, see their websites.

Before you create your Twitter and Facebook applications, consider the following points.

- The number of connectors that you want to create. A connector enables API connectivity to Twitter.

- The number of dedicated Twitter applications. It is recommended that you have a dedicated Twitter application for each connector because reusing Twitter application tokens across multiple connectors will likely result in API rate-limiting issues by Twitter.

- Ensure that you have a dedicated Twitter application for incoming tweets and messages.

- Facebook API tokens can be reused across connectors.

Ensure that you create and register applications with Twitter and Facebook. Creating and registering a Facebook application is a time-consuming process. This process might take 3-7 days for a new application approval. For detailed information about the registration process, see the Facebook website.

Creating and registering a Facebook application

1. Log in to your Facebook developer account.

2. In the **My Apps** list, click **Add a New App**.

3. On the **Add a New App** menu, click **Facebook Canvas**.

4. Complete the form to create the application.

5. Click the **Settings** tab.

6. To add a valid URL, in the given text area, enter the URL in the specified format. For example, *http://<hostname:port>/prweb?pyActivity=PegaFW-Admin-Authorization-Facebook.GenerateFacebookTokens* .

7. Ensure that you request the following access credentials:

   - publish_pages

   - read_page_mailboxes

   - manage_pages

8. Follow the steps in the Quick start wizard to complete the registration process.

9. Submit your application for review.

Defining operators, access groups, work groups, and workbaskets

Pega Customer Service ships many operators, access groups, work groups, and workbaskets. To view them, perform the following steps.

1. Log in to Designer Studio.

2. Click **Designer Studio** > **Application** > **Structure** > **Access Groups and Users**.

Defining topics

Topics are an optional set of keywords that describe a company, brand, department, line of business, or a subject of interest. They are ideal for filtering the data that is harvested from social websites. For example, an airline could set up topics such as "Corporate Customers", "Travel Partners", or "Mobile Check-in. "

Identify each keyword that you plan to use to filter harvested data.

Building Pega Social functionality

During the Delivery phase, follow these steps to configure Pega Social functionality.

1. Updating the GetOpenSocialCasesFromWorkList report definition for your application

2. Configuring social streams

3. Enabling the social agents

4. Authorizing customer service representatives on social channels

5. Setting up an email account

6. Configuring Twitter and Facebook connectors

7. Configuring wrap-up reason codes for social interactions

8. Configuring the social channel settings

9. Attaching Facebook images

Updating the GetOpenSocialCasesFromWorkList report definition for your application

To implement Pega Social in your Pega Customer Service, modify a report definition to point to the social class in your implementation.

1. Log in to Designer Studio by entering your administrator credentials and the password that you specified.

2. In Designer Studio, search for and select the `GetOpenSocialCasesFromWorkList` report definition.

3. Click **Save as** to save this rule to your implementation ruleset.

4. Click the **Data Access** tab.

5. In the **Class joins** section, in the **Class name** field, update the class name to the social class name in your implementation.

Configuring social streams

A social stream is a logical container that stores harvested social messages such as tweets and posts. It is also used to store associated connectors, topics, and taxonomy. Your implementation may require more

than one social stream. For example, your implementation may store all tweets and Facebook posts that belong to the European market in one social stream and the Asia-pacific market in another social stream.

Pega Social provides a sample social stream.

Complete the following steps to configure a social stream from the sample stream.

1. Log in to **Designer Studio**.

2. In the search field, enter and select `SampleSocialStream`.

3. Click **Save as** to save this data flow in an open ruleset.

To know more about data flow, see Data Flow service.

Enabling the social agents

An agent is an internal background process operating on a server that performs activities on a periodic basis. To create a social case from social messages or to append a post from social channels to an existing social case, you must configure the `Process Threaded Documents`, the `Auto Create Cases`, and the `Notify on DF Status Change` agents.

The `Process Threaded Documents` agent appends a new post or message to an existing case in the database. For example, when a customer posts a message on Facebook or Twitter, if this post belongs to an existing case, then this post is appended to that case. This agent must be running so that the posts that belong to the existing case are appended.

The `Auto Create Cases` agent creates new cases in the database. For example, when a customer posts a message on Facebook or Twitter, if this post does not belong to an existing case, then a new case is created for this post. This agent must be running so that new cases are created.

The `Notify on DF Status Change` agent sends an email notification when the status of a social connector changes from **Stopped** to **In Progress**, and from **In Progress to Fail** or **Stop**. The recipients of these notifications are defined in **GroupEmailId** in Configuring the social channel settings.

For more information on agents, see Agent Management in System Operations landing page.

To enable the social agents, perform the following tasks:

1. Log in to Designer Studio by entering your administrator credentials.

2. Go to **System > Operations > Agent Management**.

3. Filter the **Ruleset** column to display the rules for your application implementation's ruleset, and then perform the following steps:

   a) To append a new post to an existing case, select the `Process Threaded Documents` agent.

   b) To create a new case, select the `Auto Create Cases` agent.

   c) To send email notifications when social connector status changes, select the `Notify on DF Status Change` agent.

4. Click **Start**.

   📝 **Note:** In a multi-node environment, by default these agents run on one node at a time. Do not change this default setting.

5. When any of these agent stops, start it by repeating these steps.

Authorizing customer service representatives on social channels

You must authorize Customer Service Representatives (CSRs) to respond to customer tweets and posts from the Customer Service Interaction portal.

Authorizing CSRs on Twitter

1. Log in to the **Customer Service Interaction Portal**, and then click **Operator** > **Preferences**.

2. Under the **Social (Authorization)** group, click **Twitter**.

3. In the **OAuth Profile** list, select the profile that you want to authorize this user.

4. Click **Authorize**. The Twitter window is displayed.

5. Enter text into **User Name** and **Password** fields.

6. Click **Save**.

Authorizing CSRs on Facebook

1. Log in to your Facebook developer account.

2. On the Facebook developer homepage, in the **My Apps** list, select your application.

3. On the application page, click **Settings**.

4. On the **Basic** tab, enter details in the **Secure Canvas URL** and **Site URL** fields.

5. Log in to the Customer Service Interaction Portal, and then click **Operator > Preferences**.

6. Under the **Social (Authorization)** group, click **Facebook**. The Application ID and Application Secret of the application that you selected are populated automatically from the Facebook application.

7. Click **Authorize**, and then enter the access credentials in your Facebook window. Facebook automatically retrieves access tokens and page tokens for all your authorized Facebook business accounts.

8. Click **Save**.

📝 **Note:** To respond, administrators must authorize themselves on the Facebook before CSRs authorize themselves.

Setting up an email account

An administrator sets up an email account to send a complete social interaction conversation history to another CSR, or to a client.

To set up an email account for work pool, see Email Account form �" Completing the Email Account.

Configuring Twitter and Facebook connectors

A connector is implemented through a combination of a data set and a data flow. (To learn more about data sets and data flows, see About Data Set rules and About Data Flow rules).

1. Complete the following steps to configure a Twitter data set.

   a) Log in to **Designer Studio**.

   b) In the search field, enter and select `CSSocialSampleTwitterDataset`.

   c) Click **Save as** to save this in your open ruleset.

   d) Enter the API tokens of the Twitter application that you want to use.

   e) Optional: Enter the Klout API token.

      📝 **Note:** To harvest Klout scores for all Twitter users, you need to enter the Klout API key. If you have not registered with Klout for API access, you can register at the Klout website.

   f) Click **Save** and check-in the data set.

2. Complete the following steps to configure a Twitter data flow.

   a) Log in to **Designer Studio**.

   b) In the search field, enter and select `SampleTwitterConnector`.

   c) Click **Save as** to save this in your open ruleset.

   d) Configure the Twitter data set that you have created in step 1 as the source of this data flow.

   e) Configure the target of this data flow with the social stream in which you would like to store the data.

3. Complete the following steps to configure a Facebook data set.

   a) Log in to **Designer Studio**.

   b) In the search field, enter and select `CSSocialSampleFBDataset`.

   c) Click **Save as** to save this in your open ruleset.

   d) Enter the API tokens of the Facebook application.

   e) Optional: Enter the Klout API token.

4. Complete the following steps to configure a Facebook data flow.

   a) Log in to **Designer Studio**.

   b) In the search filed, enter and select `SampleFacebookConnector`.

   c) Click **Save as** to save this ruleset.

   d) Configure the Facebook data set that you created in step 3 as the source of this data flow.

   e) Configure the target of this data flow with the social stream in which you would like to store the data.

5. Complete the following steps to start a connector.

   a) Open Pega Express by logging in to your application with your administrator credentials.

   b) In the **Connectors** tab, from the **Select the social stream** drop-down list, select your social stream to view the list of connectors.

   c) Click **Start** to initiate the connector data flow.

Configuring wrap-up reason codes for social interactions

When CSRs resolve or dismiss a Pega Social interaction, they assign it a wrap-up reason code.

The application includes many preconfigured reason codes to resolve or dismiss a social interaction.

Adding or modifying the wrap-up reason code - resolved, for social interactions.

1. Log in to Designer Studio.

2. In the search field, enter `GetWrapupReasons`, and then click the **Search** icon.

3. Select the `GetWrapupReasons` data transform from the result list.

4. Click **Save as**.

5. In the **Add to ruleset** list, select a ruleset, and then click **Create and open**.

   The application provides several pre-configured resolved reason codes for the social interaction (for example, `Account maintenance`) that are assigned to a case when it is resolved.

6. In the **Source** list change these reasons for social interaction code (for example, change `Account Maintenance` to `Branch Approval`).

7. opy and paste step 2.1 of data transform to add a new reason for social interaction code.

8. In the **Source** list, replace the copied reason for social interaction code with your own (for example, `Branch setup`).

Adding or modifying the wrap-up reason code - dismissed, for social interactions.

1. Repeat steps 1 through 4 from the above procedure.

2. The application provides several pre-configured dismissed reason codes for the social interaction (for example, `Junk`) that are assigned to a case when it is resolved.

3. In the **Source** list change these reasons for social interaction code (for example, change `Junk` to `Noise`).

4. Copy and paste step 3.1 of data transform to add a new reason for social interaction code.

5. In the **Source** list, replace the copied reason for social interaction code with your own (for example, `Branch closure`).

Configuring the social channel settings

As an administrator, you can configure various settings for the customer service representatives to view and process the social interactions, such as configuring the operations, processing the social posts, and configuring the display of the social interactions for the customer service representatives.

In the **Social Settings** page, you can configure settings to view the number of cases that are resolved during a specified time period, the total number of posts from different social channels, and email IDs to receive error messages when a social connector fails. In **Pega Express**, perform the following tasks.

- Configuring automatic thread overlay
- Configuring the threshold to view resolved cases
- Configuring the default Twitter handle
- Configuring an email notification list
- Configuring social cases access in the application bar
- Starting and monitoring the social connectors
- Configuring response authorization
- Configuring social channel queues
- Configuring social channel topics

Configuring automatic thread overlay

Enabling the automatic thread overlay capability, shows the social conversation in a separate pop-up window giving the customer service representatives more context to their work. For example, when a customer service representative has multiple social cases open, then the overlay automatically refreshes to show the thread for the active tab.

To enable the thread overlay for the social cases, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the general tab, to enable the thread overlay for the social cases, select the **Show thread overlay when social cases loads** check box.

4. Click **Update**.

Configuring the threshold to view resolved cases

The **Resolved cases threshold** value specifies the time period that a customer service representative can view his resolved social cases. If the time period crosses the threshold value then the cases are not

displayed in the overlay. This does not delete or remove the resolved cases, rather manages the display view of the number of cases.

To configure the threshold value to make the resolved cases available for a customer service representative to view for a specified period of time, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the general tab, in the **Resolved cases threshold** field, enter the number of days that you want the cases to be displayed, for example, `10`.

4. Click **Update**.

Configuring the default Twitter handle

A customer service representative can use the outgoing Twitter handles that are configured to reply to tweets. A default handle is the default Twitter username from which a customer service rep will respond to the incoming posts. An organization can have only one default handle, however, the customer service representatives can select a Twitter handle other than the default handle to bring more context to their response, based on the Twitter accounts they have permissions for.

To add a default outgoing handle, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the general tab, in the **Default twitter handle** field, enter a Twitter handle, for example, `@MyBank` . For more information on Twitter handles, see [Configuring social streams](#).

4. Click **Update**.

Configuring an email notification list

You can configure a list of email IDs for sending notifications when a social connector fails and when it restarts. This alert notifications enable efficient functioning of the social cases handling.

To configure an email notification list, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the general tab, in the **Email notification distribution list** field enter the email IDs separated by a comma. For more information on connectors, see [Monitoring connectors](#).

4. Click **Update**.

Configuring social cases access in the application bar

You can choose to display the icon that displays the customer service representative's list of social cases as an aggregate or channel-specific button in the application bar of the Interaction portal. The **Aggregate** displays the generic social icon, when on-click displays all the social cases irrespective of the channels. The **Per social channel** displays distinct icons for Twitter and Facebook in the Interaction portal, which when clicked displays the specific cases for each channel.

To configure the social cases access, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the general tab, for the **Social cases access in application bar** option

   • To display an aggregate of all the cases, select **Aggregate** option.

- To display the number of cases specific to each channel, such as Facebook or Twitter, select **Per social channel** option.

4. Click **Update**.

Starting and monitoring the social connectors

A connector is a Pega Platform created programmatic component that defines and implements an interface between a Pega Platform application that acts like a client and an external system as a server. A connector enables API connectivity to the social channels, such as Facebook or Twitter.

Before you start or monitor a social connector, you must first configure the social streams and the channel connectors. For more information, see Configuring social streams and Configuring Twitter and Facebook connectors.

From the **Connectors** tab of the **Social settings** page, you can start and stop the connectors configured for a social stream and can also view the performance and status of channel specific connectors.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the **Connectors** tab, from the **Select the social stream** drop-down list, select the social stream. The list of available connectors configured for each channel, such as Twitter and Facebook is displayed.

4. To start a connector, click the **Start** button of the connector.

5. To view the performance of the connectors, click the expandable **Performance** link.

Configuring response authorization

You can authorize customer service representatives to respond to customer tweets and posts from the Interaction portal. The authorization process for each channel is different. As an administrator, from the response authorization tab, you can enter the identifiers, keys, and tokens that authorize the customer service representatives to respond along with managing the Twitter handles and the Facebook page name for your organization.

- Configuring response authorization for Twitter channel
- Configuring response authorization for Facebook channel

Configuring response authorization for Twitter channel

Your customer service representatives can respond to customer issues through tweets from a single or multiple Twitter handles. The administrator maps incoming Twitter handles to outgoing Twitter handles. For example, tweets received from the incoming Twitter handle @corporate handle can be set up to respond as either @corporate or @askcustomercare (assuming both handles are owned and configured by your organization).

To configure response authorization for Twitter, perform the following steps:

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the **Response Authorization** tab, click **Twitter** and configure the following fields:

   a. Create a new handle mapping by clicking the **New** icon under **Handle mappings** section. This creates a new handle that can be configured for your authorization profile.

   b. To create an authorization profile, select the handle created from the list. Enter The **oAuth consumer key** and the **oAuth shared secret key** for that profile.

   c. Click **Create**.

You can also update an exiting profile from here. Select the handle from the list and update the details.

Configuring response authorization for Facebook channel

Your customer service representatives can respond to Facebook posts from the configured Facebook pages. To enable this work process, you must authorize the customer service representatives after you request the **Application ID** and the **Application secret** from the Facebook application.

In the Facebook tab of the Response Authorizations tab, after you receive the Facebook app tokens, follow the steps and fill in the details to authorize the customer service representative.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Settings > Social**.

3. In the **Response Authorization** tab, click **Facebook** and configure the following fields:

    a. Enter the values for the **Application ID** and the **Application secret**.

    b. Click **Save**. Facebook automatically retrieves the **Access token** and the **Authenticated user ID** for the account.

    c. To authorize, click the **Authorize** button. The list of authorized Facebook pages is displayed under **Facebook pages authorized and available for engagement** section.

    Note: To de-authorize an application ID, click the **De-Authorize** button.

Configuring social channel queues

The social queues define and manage the criteria for routing social posts to an individual customer service representative or to work baskets and for setting service-level agreements (SLAs). Each queue has general information which sets the context, a set of conditions which can vary depending on the social channel, and actions to be performed when the criteria are met. The queues are listed in alphabetical order, and the all active queues are processed in the same order displayed.

From the **Queues** tab, you can add a new queue and edit an existing queue.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools > Social queues > Queues**.

3. To create a new queue, in the **Queues** tab, click the **New** icon.

4. In the **Create a queue** dialog, complete the following details.

    a. In the **General** tab, you can configure the queue's basic settings, such as the name, the associated stream, the date range until which the queue is active, and the source channel, such as Facebook or Twitter. You can also make the queue active by selecting the **Make Queue Active** check box.

    b. In the **Conditions** tab, set the conditions to trigger an action to be formed.

    c. In the **Actions** tab, you can configure the action to be performed for the set conditions. Assign the queue to an operator and set the SLA.

    d. Click **Apply**.

    You can edit or delete an existing queue by clicking the **Edit** or **Delete** icon and click **Apply**.

Configuring social channel topics

Social topics are keywords that are associated with social posts using Pega's Natural Language Processing system (NLP). The topics configured are displayed to the customer service representatives in the social thread and are associated with social queues to en-route the channel posts to individual operators or to work baskets and to set specific service-level agreements (SLAs).

From the **Topics** tab you can define the topic and the list of **Synonyms** to map to them. You can also choose to edit or delete existing topics from here.

📝 **Note:** To create a topic keyword successfully for your organization, ensure that you have copied the *FTM Template* into your application layer.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools > Social queues**.

3. In the **Topics** tabs, click **Select a social stream** to select a social stream from the topic.

4. To create a new topic, click **New**.

5. Enter the required details in the **Add topic** dialog and click **Add topic**.

• Editing or deleting the existing social topics

Editing or deleting the existing social topics

The social topics configured are displayed to customer service representatives in the social thread. The topics keywords describe your organization, brand, or a subject of interest. The topics are used for filtering and harvesting the data from social websites.

From the **Topics**tab, you can edit an existing topic or delete a topic that is not in use.

1. Open Pega Express by logging in to your application with your administrator credentials.

2. Click **Tools > Social queues**.

3. In the **Topics** tabs, click **Select a social stream** to select a social stream from the topic. The list of configured topics are displayed.

4. To edit, click the **Edit** icon and modify the topic description or add or modify synonyms.

5. To delete a topic, click the **Delete** icon.

Attaching Facebook images

You can attach images posted by customers to the Facebook messages so that the Customer Service Representative (CSR) understands the context of the messages quickly.

1. In Designer Studio, in the search field, enter `SampleFBDefinition`, and then click the search icon.

2. Select the **SampleFBDefinition** data instance from the result list.

3. Copy the values from the application ID, application secret, and then access token fields to a separate text file for easy access.

4. Click **Designer Studio** > **Decisioning** > **Infrastructure** > **Social media Metadata** > **Facebook**.

5. Enter the copied application ID into **App ID**, and application secret into **App secret**.

6. In the **Facebook page URL** field, enter the URL of the web page that you want to monitor (for example, `https://www.facebook.com/pegasystems`).

7. On the **Message** tab, complete the following steps.

   a) In the **Facebook page token** field, enter the page access token that you copied earlier.

   b) In the **Facebook message query** field, enter your query for the information that you need (for example,
   `id,snippet,updated_time,message_count,participants{name,email,id,picture},messages{id,f`
).

8. Click **Retrieve metadata**.

   The Generate message query field shows the query generated from the metadata.

9. In the **Metadata mapping** section, follow these steps.

    a) Click **Add mapping**.

    b) In the **Source field** column, enter the source, and in the **Target field** column, enter the target as shown below

Source	Target
message.attachments.{o}imageData.previewUrl mapping	.FBMediaURL
message.attachments.{o}videoData.previewUrl mapping	.FBMediaURL2
message.shares.{o}.link	.FBMediaURL
message.attachments.{o}videoData.Url	.VideoURL

10. Click **Save**.

11. On the **Post** tab, in the **Facebook post query** field, enter your values (for example, `attachments, source`).

12. Click **Retrieve metadata**.

    The Generate post query field shows the post query generated from metadata.

13. In the **Metadata mapping** section, follow these steps.

    a) Click **Add mapping**.

    b) In the **Source field** column, enter your source (for example, `message.attachments. (0).imageData.previewUrl mapping`), and then in the **Target field** column, enter your target (for example, `.FBMediaURL`).

14. Click **Save**.

15. On the **Comment** tab, in the **Facebook comment query** field, enter your values (for example, `attachments`).

16. Click **Retrieve metadata**.

    The Generate comment query field shows the comment query generated from metadata.

17. In the **Metadata mapping** section, follow these steps.

    a) Click **Add mapping**.

    b) In the **Source field** column, enter your source (for example, `attachment.media.image.src`), and then in the **Target field** column, enter your target (for example, `.FBMediaURL`).

18. Click **Save**.

Monitoring Pega Social

Monitoring Pega Social includes several tasks.

For more information about monitoring tasks for Pega Customer Service, see Production maintenance and monitoring.

- Monitoring connectors
- Monitoring agents
- Monitoring social channel operations performance

Monitoring connectors

A connector is a Pega Platform programmatic component that defines and implements an interface between a Pega Platform application that is acting as a client, and an external system that is acting as a server.

To display the in-progress status for a connector, follow these steps.

1. In Designer Studio, click **Designer Studio > Channel Services > Pega Social**.

2. On the **Connectors** tab, select a social stream from the **Select a social stream** list.

3. In the **Available Connectors** section, click **Start** on the connector that you want to monitor.

4. Expand the **Performance** section by clicking **>**.

Monitoring agents

An agent is an internal background process operating on the server that runs activities on a periodic basis.

To monitor the `Process Threaded Documents`, `Auto Create Cases`, and `Notify on DF Status Change` agents created in the implementation application, see [Enabling the social agents](#).

Monitoring social channel operations performance

You can monitor and measure the operational performance of Twitter and Facebook social channels.

Facebook SLA compliance metrics
This dashboard widget shows the number of open cases, number of cases that meet SLAs, and number of cases that have past goals and deadlines on Facebook channel.

Twitter SLA compliance metrics
This dashboard widget shows the number of open cases, number of cases that meet SLAs, and number of cases that have past goals and deadlines on Twitter channel.

Topic Social Topics
This dashboard widget shows the topics detected in incoming Tweets and Facebook posts and their corresponding sentiment split - positive, negative or neutral.

Social Language Volume
This dashboard widget shows count of Tweets and Facebook posts in different languages.

Complete the following steps to monitor social channels.

1. Log in to the **Customer Service Interaction Portal**.

2. Click the **Personalize home screen** icon ⚙.

3. In the **Edit Dashboard** layout, click **Switch template**.

4. Select any template, and then click **Add widgets**.

5. Go to the Social Interactions, select any number of widgets, and then click **Add selected**.

   📒 **Note:** Widgets are optimized to look better in particular slot sizes. They are not designed to be responsive in all slot sizes. Place them in slots where they render well.

6. In the **Edit Dashboard** layout, click **Publish**.