

System Architect Essentials

7.2

Exercise Guide

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COURSE INTRODUCTION

Before you begin

Completing the exercises

To learn software, we must use the software. This course includes hands-on exercises that allow you to practice what you learned.

Note: The exercises in this course were originally developed for the Pega Platform Foundation and Business Architect Essentials courses. You may notice slight discrepancies with the exercise environment provided with this course. These discrepancies do not affect the changes you make while completing the exercises, though they do affect the contents of the rules you update.

The exercises provide a business problem to be solved. To help you complete the exercises, two levels of support are provided:

- Approach - specifies the high level steps you need to perform to solve the business problem
- Procedure - shows the series of steps or instructions that are designed to help you understand how to complete the exercise

It is our goal that you can complete the exercises using the business need and approach. Use the procedure to check your work or as a last resort to complete the exercise.

PROTOTYPING AN APPLICATION WITH PEGA EXPRESS

Designing a case life cycle

Exercise: Adding a case type to your application

Scenario

TGB reimburses employees for necessary and reasonable business expenses incurred in the conduct of TGB's business. TGB wants to ensure business expenses are reported accurately, and reimbursed in a timely and consistent manner according to company policy.

TGB decided to add an Expense Report case type to the HR Apps application. The objective of the Expense Report case type is to provide an automated solution for managing expense reimbursements that will help resolve deficiencies found in the current manual expense reimbursement process.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

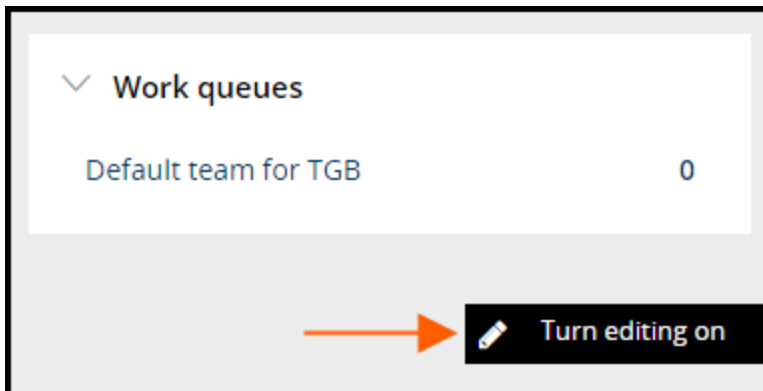
Your assignment

Create a new case type used to model the work accomplished in the expense reimbursement business process.

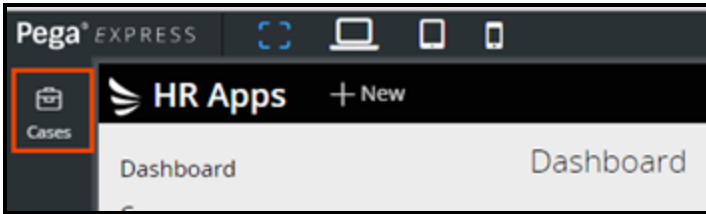
Detailed steps

Follow these steps to add a case type to your application.

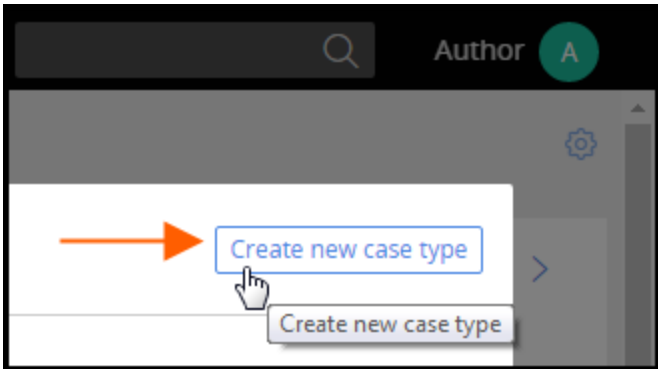
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



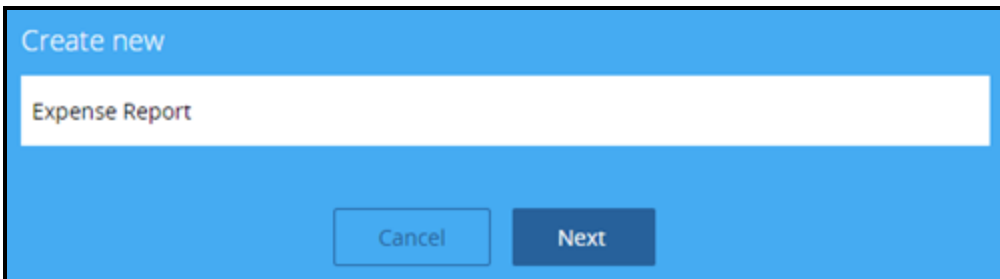
2. In the navigation panel, click **Cases** to view a list of current case types.



3. Click **Create new case type**.



4. In the **Create new** field, enter **Expense Report** as the name of the case type, and then click **Next**.



5. Click **Done** to add the case type to the application. You are returned to the Pega Express Dashboard.

Exercise: Adding stages to a case type

Scenario

TGB reimburses employees for necessary and reasonable business expenses incurred in the conduct of TGB's business. TGB wants to ensure business expenses are reported accurately, and reimbursed in a timely and consistent manner according to company policy.

The first goal when defining the life cycle of a case is to summarize the business process by defining the stages of the case.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your assignment

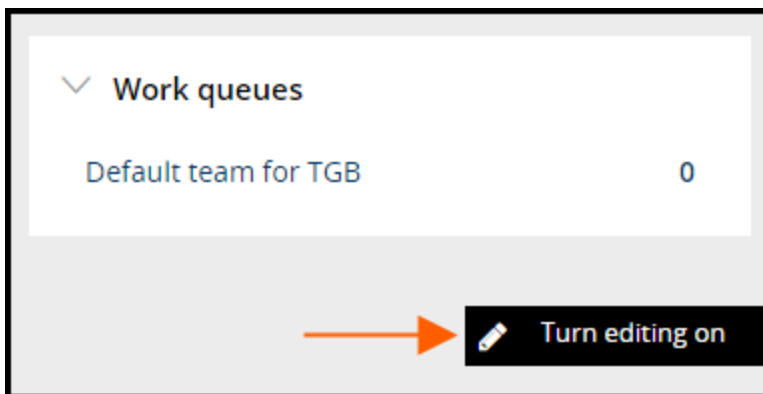
Define the case life cycle by describing the stages of the expense report business process.

Employees submit an expense reimbursement request using the Expense Report case type. The expense reimbursement request is routed to the appropriate reviewers for approval, and then goes to the accounting office for payment processing.

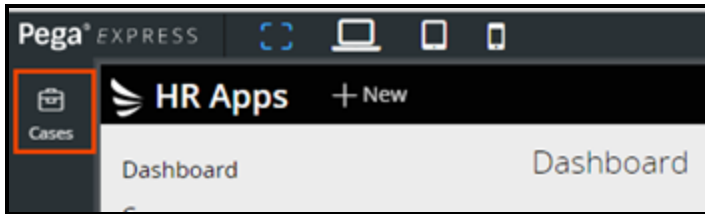
Detailed steps

Follow these steps to add stages to a case type.



1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



2. In the navigation panel, click **Cases** to view a list of current case types.



3. From the list of available case types, click **Expense Report**.

Case type	Description
 Candidate	Candidate
 Expense Report	Expense Report

4. Click **Life cycle** to edit the case life cycle design.



5. Click **Add stages**.

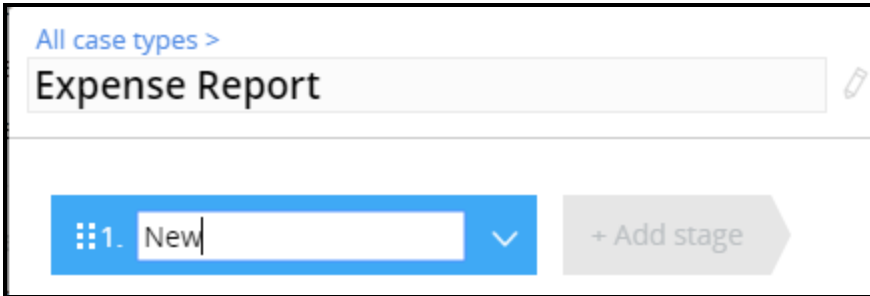
Stages

Stages are a powerful way to split the overall life cycle of the case into milestones and manageable sections.

[Learn more](#)

Add stages

6. In the text box of the first stage, enter **New**.

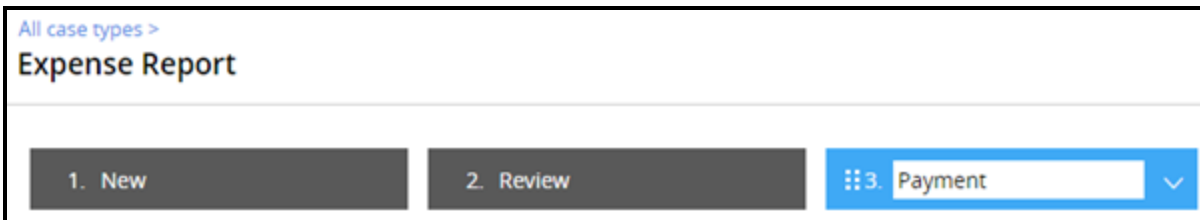


The screenshot shows the configuration interface for the 'Expense Report' case type. At the top, there is a link 'All case types >' and the case type name 'Expense Report'. Below this, there is a list of stages. The first stage is highlighted in blue and contains the text '1. New'. To the right of the stage list is a grey button labeled '+ Add stage'.

7. Click **+ Add stage**.

8. In the text box of the second stage, enter **Review**.

9. Click **+ Add stage** again, and then enter **Payment** as the name of the third stage.



The screenshot shows the configuration interface for the 'Expense Report' case type. At the top, there is a link 'All case types >' and the case type name 'Expense Report'. Below this, there is a list of three stages: '1. New', '2. Review', and '3. Payment'. The third stage is highlighted in blue. To the right of the stage list is a grey button labeled '+ Add stage'.

10. Click **Done** to save your changes. You are returned to the Pega Express Dashboard.

Exercise: Adding process steps to a stage

Scenario

TGB reimburses employees for necessary and reasonable business expenses incurred in the conduct of TGB's business. TGB wants to ensure business expenses are reported accurately, and reimbursed in a timely and consistent manner according to company policy.

The goal for this iteration is to identify the key process steps that users accomplish as they work on a case.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your assignment

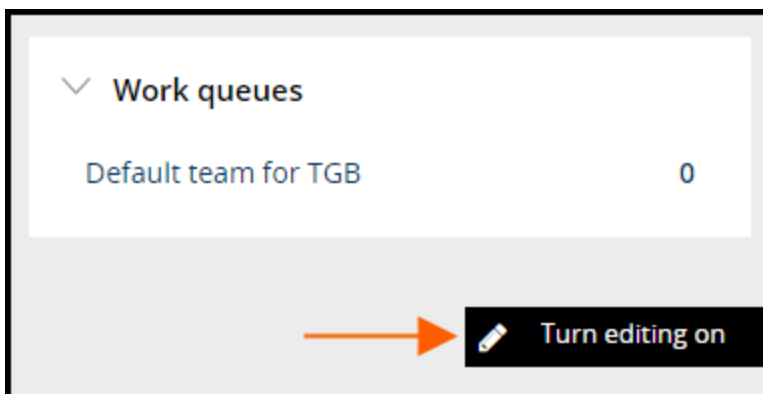
Add process steps to the appropriate stages in the Expense Report case type to define the set of tasks that must be accomplished to resolve an expense reimbursement request.

Employees must provide their employee information and an itemized list of expenses. The expense reimbursement request is routed to the employee's department manager for review. If necessary, the expense reimbursement request may be routed to the department head for additional review. Approved expense reimbursement requests are routed to the accounting office for payment processing.

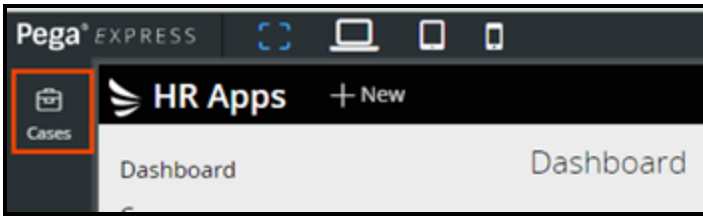
Detailed steps

Follow these steps to add process steps to stages in a case type.

1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



2. In the navigation panel, click **Cases** to view a list of current case types.



3. From the list of available case types, click **Expense Report**.

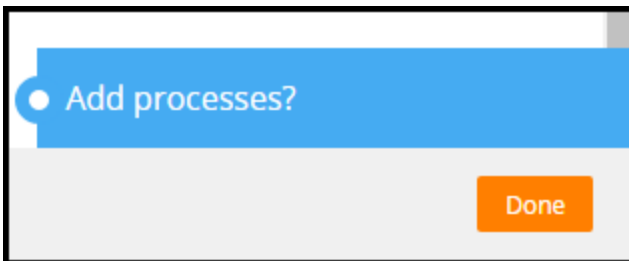
Case type	Description
Candidate	Candidate
Expense Report	Expense Report

A screenshot of a 'Case types' table. The table has two columns: 'Case type' and 'Description'. There are two rows. The first row shows 'Candidate' with a briefcase icon. The second row shows 'Expense Report' with a briefcase icon. The 'Expense Report' row is highlighted with a red box.

2. Click **Life cycle** to edit the case life cycle design.



4. In the lower right corner, click **Add processes?**.



5. Click **Add processes**.

Processes

Processes can be added to a stage in order to help guide the work and activity needed to progress to the next stage. Processes consist of a series of steps that define how work is performed.

[Learn more](#)

Approval ✓ Reimbursement Resolve Complete stage ✓

Next: Attach supporting documents

Upload invoice*

Airfare invoice PDF 52KB

Notes

CANCEL SUBMIT

Next: Attach supporting documents

Upload invoice*

Airfare invoice PDF 52KB

Notes

CANCEL SUBMIT

NOV035 10/1/2016 Buenos Aires, Argentina

Submitted by Dean Hansen

Total \$1,050

Not now Add processes

6. In the first stage of the Expense Report case type, click **+ Add process**.

[All case types >](#)

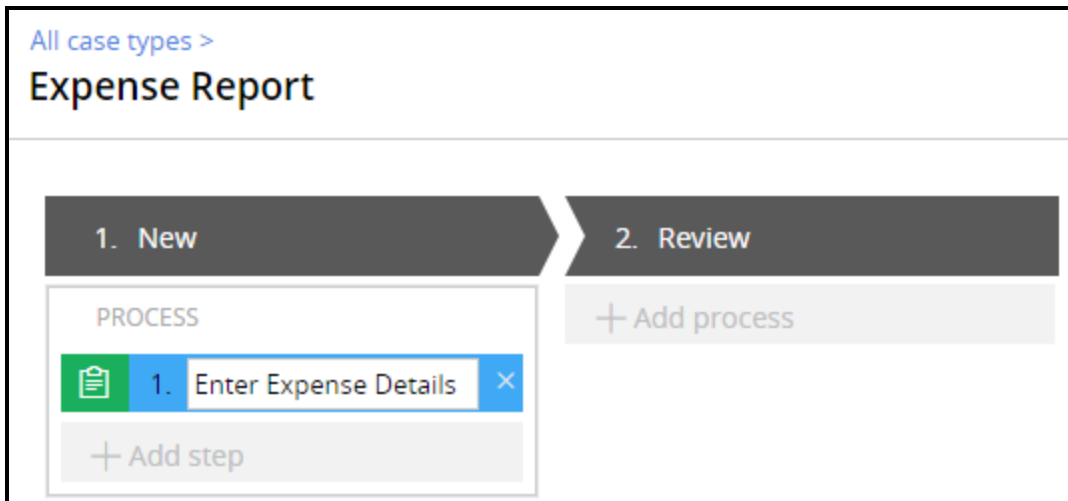
Expense Report

1. New 2. Review

+ Add process + Add process

Add process to the stage

7. In the first step of the new process, click the name of the step, and then change the name to **Enter Expense Details**.

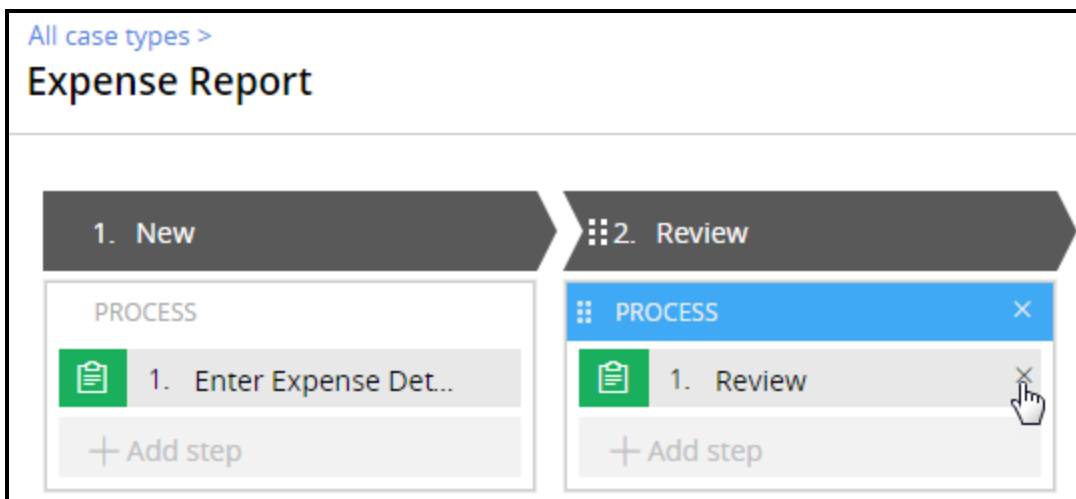


8. In the second stage of the Expense Report case type, click **+ Add Process**.

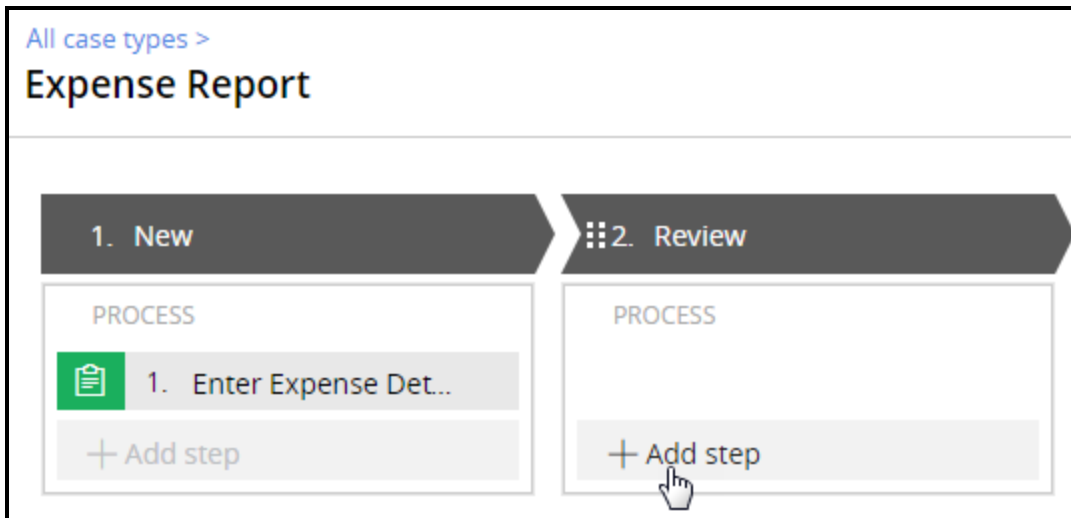
Note: Adding a Process in Pega 7.2 automatically creates a **Collect Information** step by default.

9. Hover over the first step in the process, and click the **X** to remove the step.

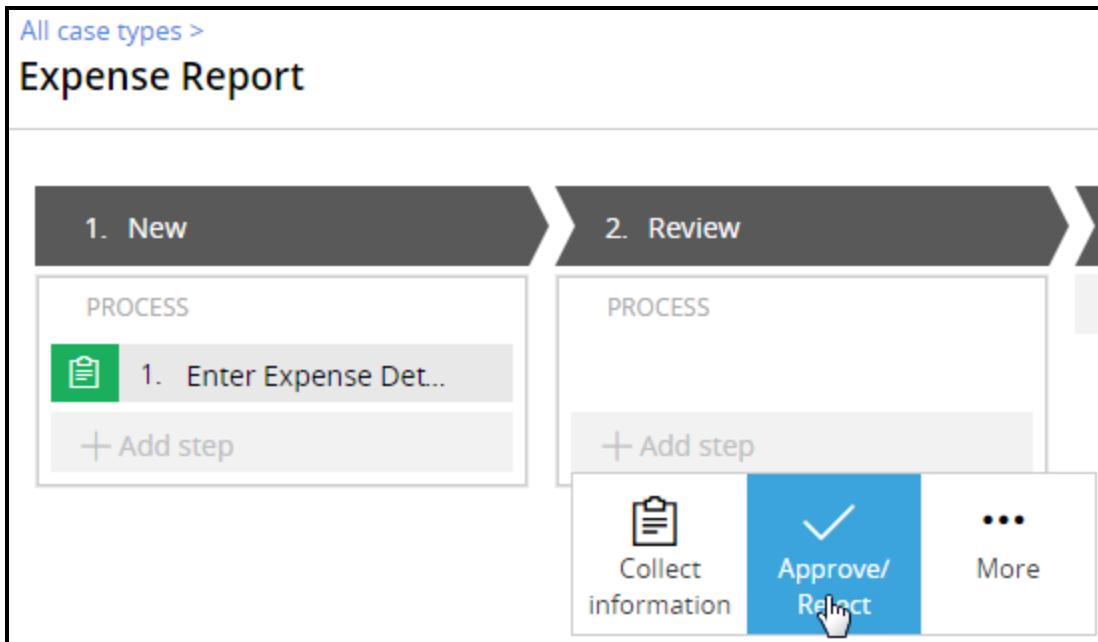
Note: Remove the default **Collect Information** step when a different type of step is required.



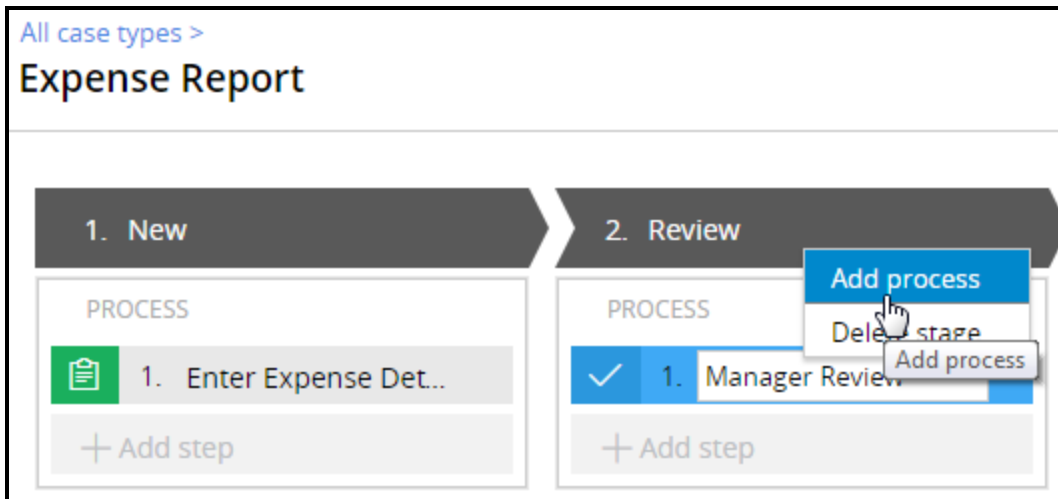
10. In the second stage of the Expense Report case type, click **+ Add step**.



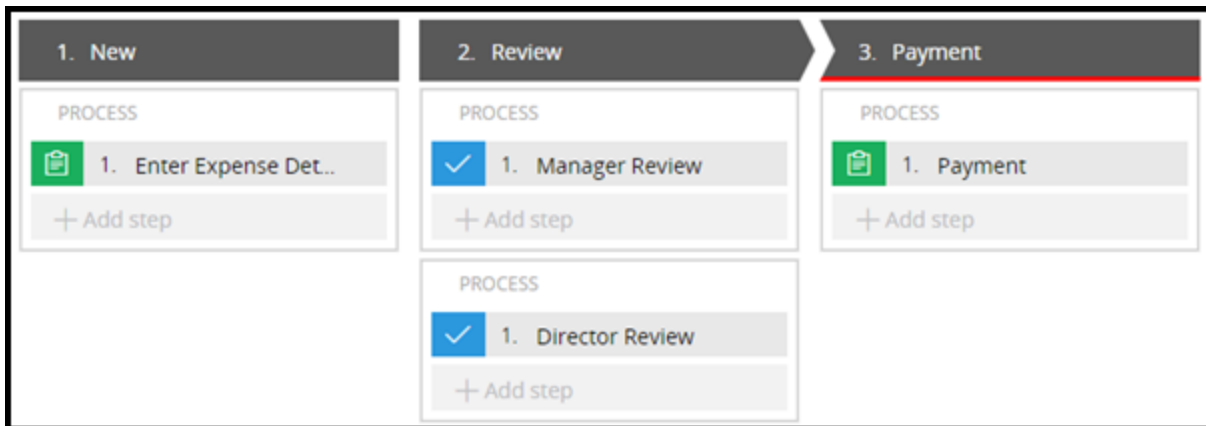
11. Select the **Approve/Reject** step.



12. In the text field of the new step, enter **Manager Review**.
13. Hover over the second stage, and click the down arrow.
14. From the drop-down menu, select **Add process**.



15. Delete the first step in the second process, and then add a new Approve/Reject step.
16. In the Approve/Reject step, enter **Director Review**.
17. Add a process to the third stage. Accept the default name for the first step in the new process.



18. Click **Done** to save your changes. You are returned to the Pega Express dashboard.

Assigning work

Exercise: Routing work to case participants

Scenario

Now that you have defined the process steps of the Expense Report case, you can configure the assignments so that each request can be approved by the correct party.

To ensure expenses are reported accurately, all expense reimbursement requests must be reviewed by the department manager. If approved, some expense reimbursement requests may require director review. All approved expense reimbursement requests are sent to the accounting department for final validation and processing.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your assignment

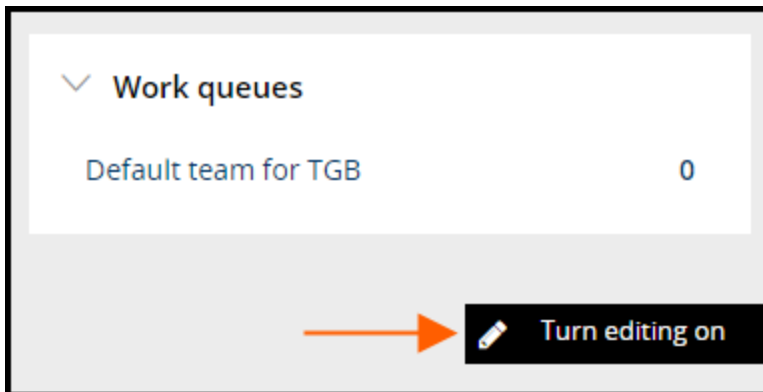
Configure the **Manager Review** step so the request for expense reimbursement is routed to the employee's manager.

Configure the **Director Review** step so the request for expense reimbursement is routed to the director.

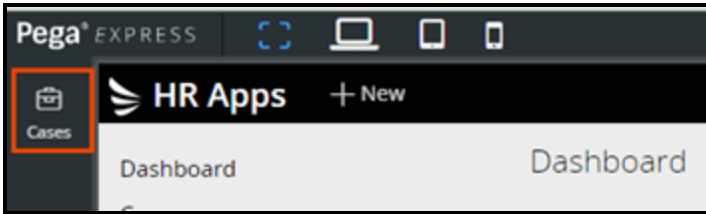
Detailed steps

Follow these steps to assign work to case participants.

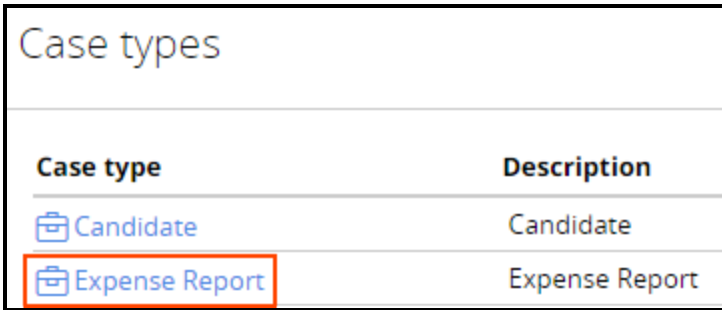
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



2. In the navigation panel, click **Cases** to view a list of current case types.



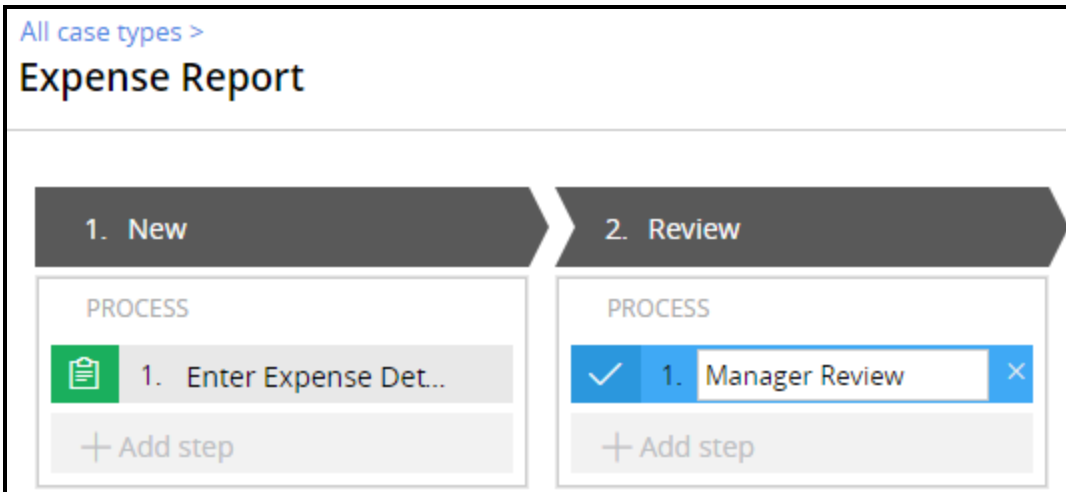
3. From the list of available case types, click **Expense Report**.



4. Click **Life cycle** to edit the case life cycle design.



5. Select the **Manager Review** step.



6. On the **General** tab of the contextual property panel, click **Specific user**.

7. From the second drop-down list, select **Manager** to route the work to the employee's manager.

General Flow Goal & deadline

Route to

Current user

Specific user

Work queue

User Name ▼

Author ▼

Author

Case Designer

Director

Manager

User

8. Select the **Director Review** step.

1. New 2. Review

PROCESS

1. Enter Expense Det...

+ Add step

PROCESS

1. Manager Review

+ Add step

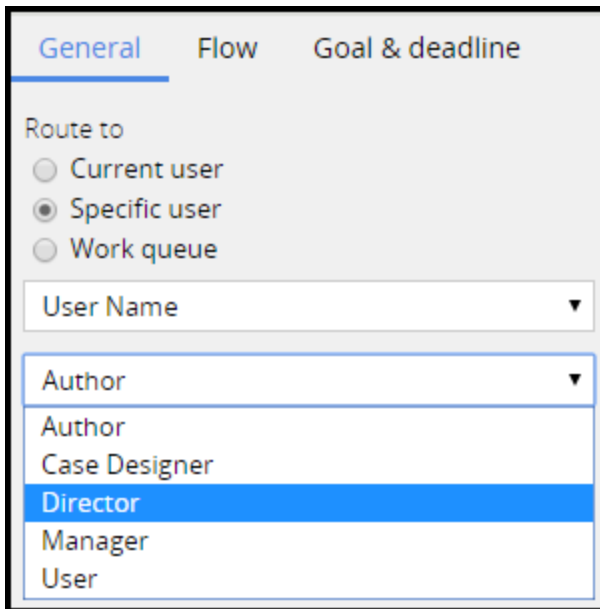
PROCESS

1. Director Review

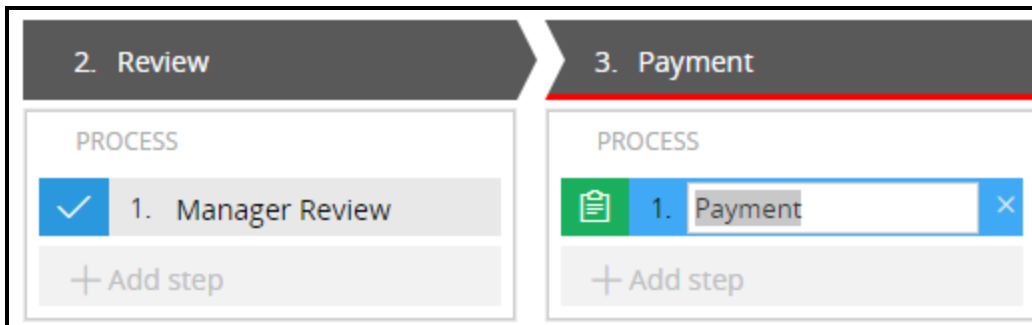
+ Add step

9. On the **General** tab of the contextual property panel, click **Specific user**.

10. From the second drop-down list, select **Director**.

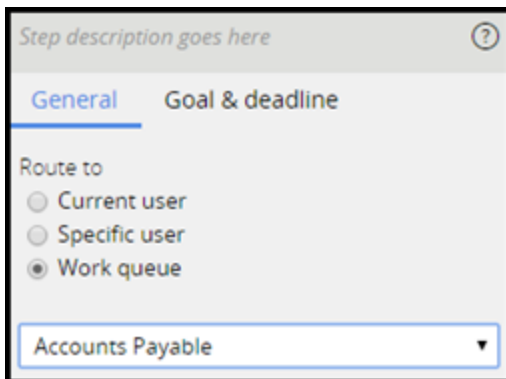


11. Select the **Payment** step.



12. On the **General** tab of the contextual property panel, click **Work Queue**.

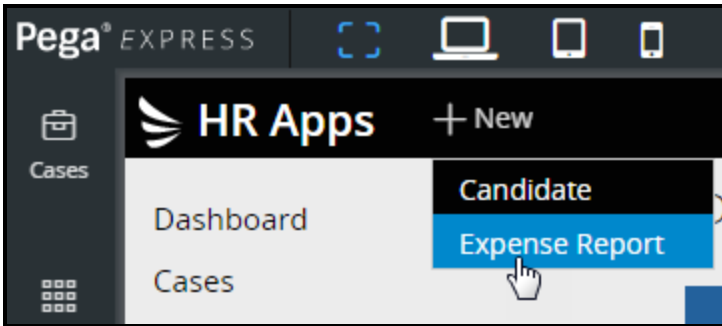
13. From the drop-down list, select **Accounts Payable**.



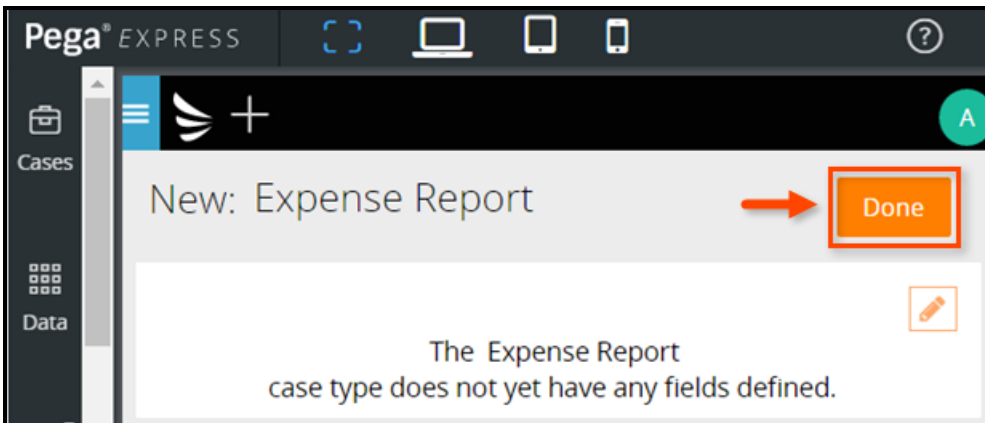
14. Click **Done** to save your changes. You are returned to the Pega Express Dashboard.

Verify your work

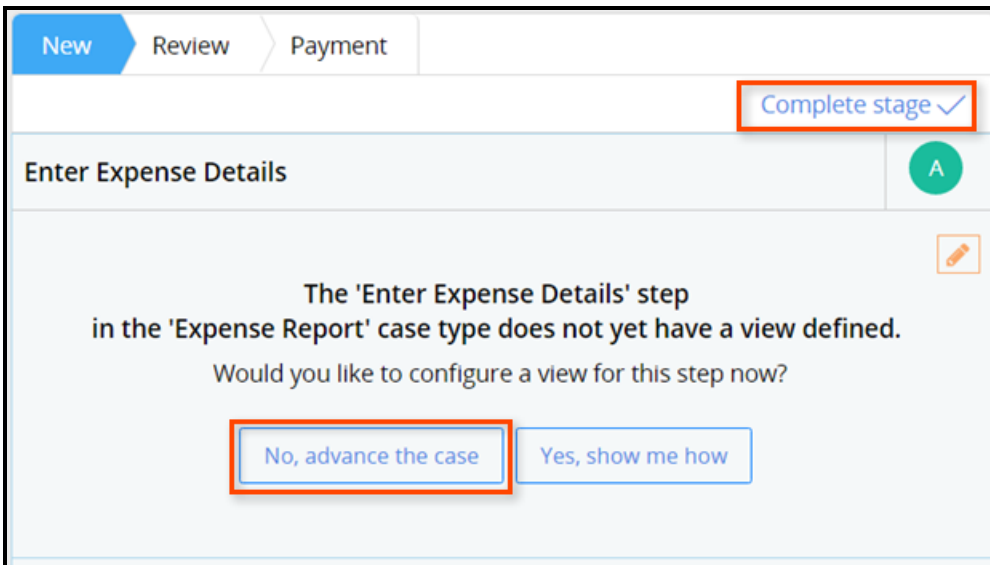
1. On the Pega Express dashboard, click **New**.



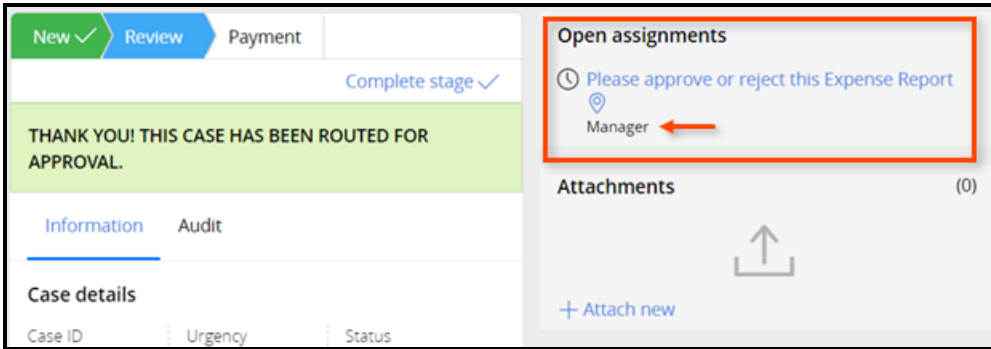
2. Click **Expense Report**.
3. The Expense Report case type does not yet have any fields defined. Click **Done** to advance to the Enter Expense Details user view.



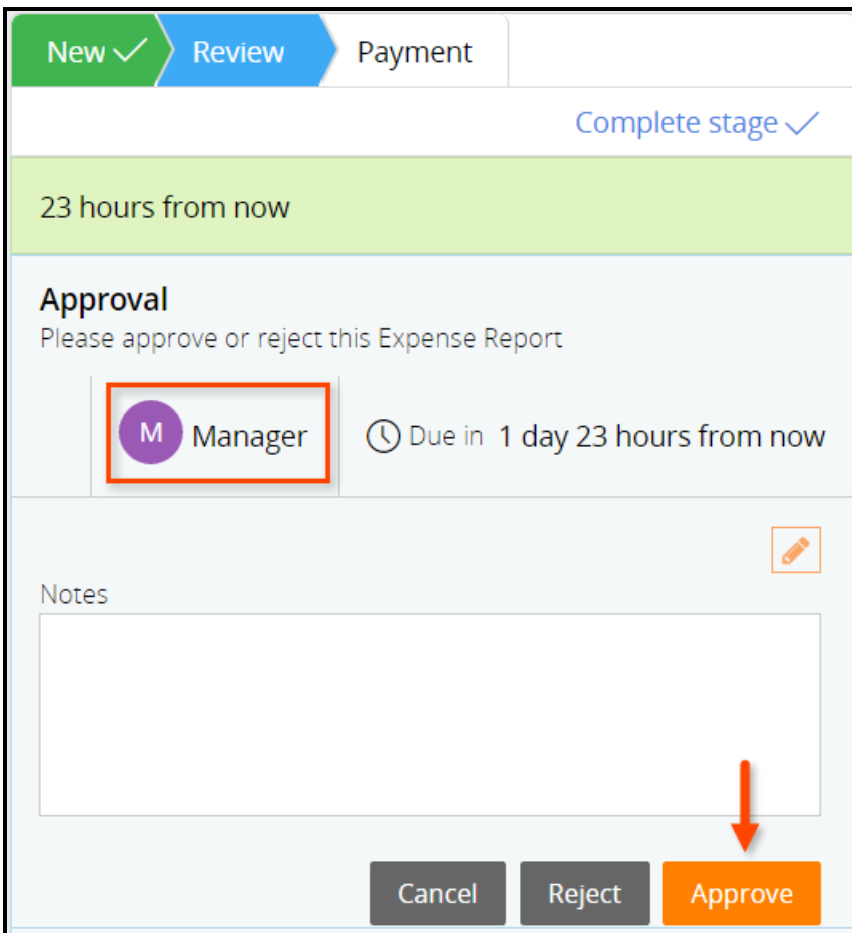
4. Click **Advance the case** or **Complete Stage** to move the case to the Review stage.



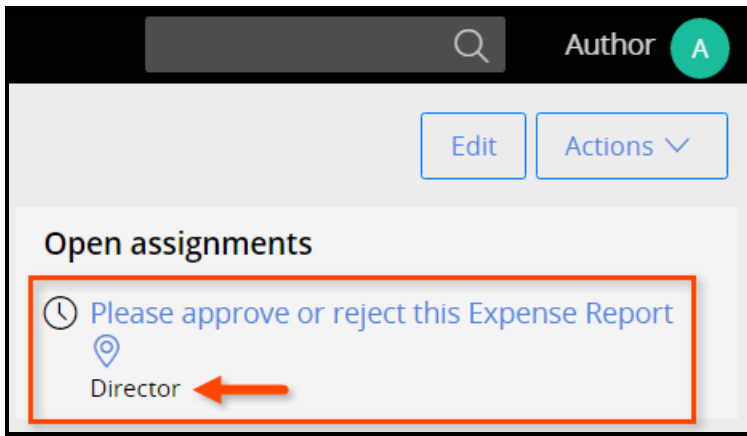
5. In the upper right corner of the Work Area, under **Open assignments**, verify the case has been assigned to the Manager.



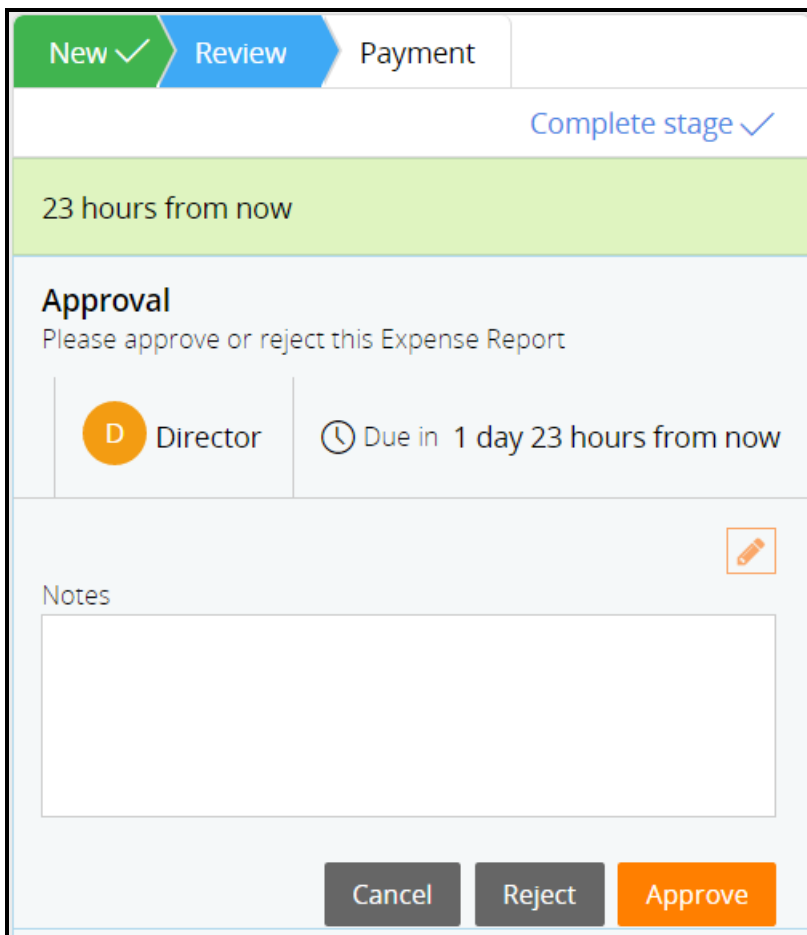
6. To open and complete the assignment as the Manager, click **Please approve or reject this Expense Report**.



7. Click **Approve** to advance the case to the next step.
8. Again, in the upper right corner of the Work Area, under **Open assignments**, verify the case has been assigned to the Director.





9. To open and complete the assignment as the Director, click **Please approve or reject this Expense Report**.



10. Click **Approve** to advance the case to the next step.
11. Under **Open assignments**, verify the case has been assigned to the Accounts Payable Work queue (AP@TGB).

Open assignments

 Payment (Payment) 
AP@TGB

Enforcing service levels

Exercise: Adding a service level agreement (SLA) to a case

Scenario

TGB's business policies indicate requests for expense reimbursement must be completed within five business days.

To meet this requirement, TGB has established a goal of four business days for processing requests for expense reimbursement. However, all requests for expense reimbursement must be completed within five business days.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your assignment

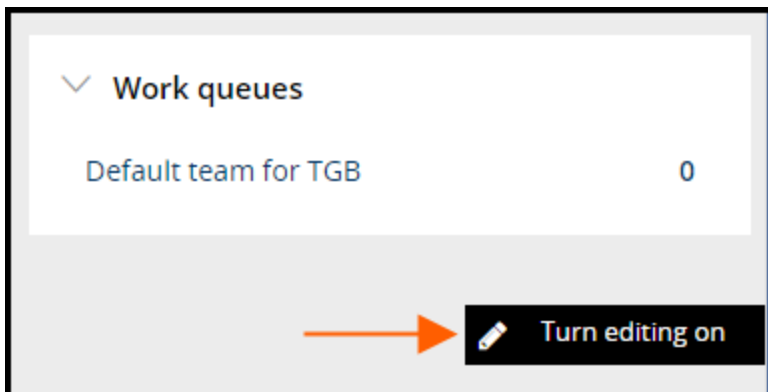
Configure the Expense Report case type with a goal and a deadline.

If a request for expense reimbursement is not completed by the goal of four days, the urgency of the case shall be increased by a value of 10, and a notification shall be sent to the department manager. If a request for expense reimbursement is not completed by the deadline of five days, the urgency of the case shall be increased by a value of 20, and a notification shall be sent to the department manager.

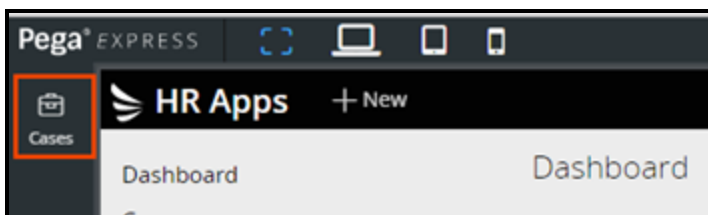
Detailed steps

Follow these steps to add a service level to a case.

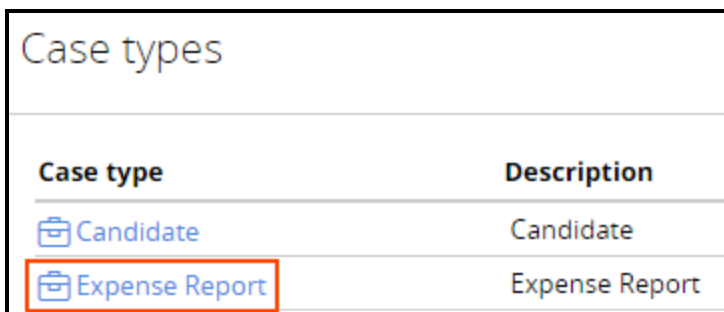
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



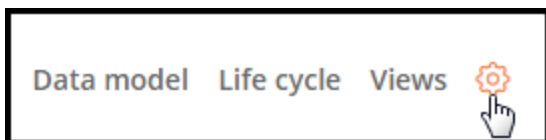
2. In the navigation panel, click **Cases** to view a list of current case types.



3. From the list of available case types, click **Expense Report**.







4. In the upper right corner, click the **Gear** icon.



5. Click **Goal & deadline** to edit the goal and deadline settings.

[All case types >](#)

Expense Report

- General
Properties with basic configuration 
- User actions
Actions a user can take throughout a case 
- Attachment categories
Categories and security for attachments 
- Goal & deadline
Suggested and required resolution times 

6. Select the **Consider goal and deadline** check box.

Goal & deadline

Define the suggested and required resolution times for a case. Times are calculated from the start of the case.

Consider goal and deadline


- 7. In the **Days** field for the **Goal**, enter **4**. This is the preferred time frame in which a request for expense reimbursement should be completed.
- 8. In the **Increase urgency by** field, enter **10**.
- 9. From the **Perform actions** drop-down list, select **Notify Manager**.

Goal

Days hh:mm

Increase urgency by

Perform actions




[+ Add escalation action](#)

- 10. In the **Days** field for the **Deadline**, enter **5**. This is the time frame in which the case must be completed.
- 11. In the **Increase urgency by** field, enter **20**.
- 12. From the **Perform actions** drop-down list, select **Notify Manager**.

Deadline

Days hh:mm

Increase urgency by

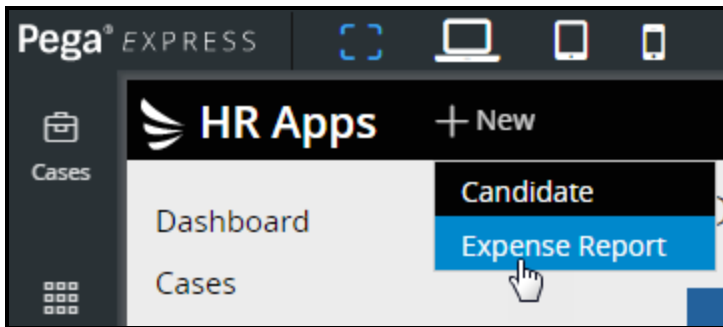
Perform actions
 

[+ Add escalation action](#)

13. Click **Done** to save your changes. You are returned to the Pega Express Dashboard.

Verify your work

1. On the Pega Express dashboard, click **New**.



2. Click **Expense Report**.

3. The Expense Report case type does not yet have any fields defined. Click **Done** to advance to the Enter Expense Details user view.

4. Verify the **Goal, Deadline,** and **Urgency** entered in the exercise.

The screenshot displays a case management interface. At the top, there are navigation tabs for 'New', 'Review', and 'Payment'. A 'Complete stage' button with a checkmark is visible on the right. Below the navigation, the current step is 'Enter Expense Details', with the author 'Author' and a clock icon indicating 'Due in 5 days from now'. A central message states: 'The 'Enter Expense Details' step in the 'Expense Report' case type does not yet have a view defined. Would you like to configure a view for this step now?' with two buttons: 'No, advance the case' and 'Yes, show me how'. Below this, there are tabs for 'Information' and 'Audit'. The 'Information' tab is active, showing 'Case details' with the following information:

Case ID	E-8	Urgency	10	Status	New
Created	less than a minute ago	Goal	4 days from now	Last Update	less than a minute ago
Created by	Author	Deadline	5 days from now	Last Updated By	Author

Exercise: Adding a service level agreement (SLA) to an assignment

Scenario

TGB's business policies indicate requests for expense reimbursement must be completed within five business days. To meet this requirement, TGB has established a goal of one business day for managers to complete reviews of request for expense reimbursements. However, managers must complete reviews of requests for expense reimbursements no later than two business days after receiving the assignment.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your assignment

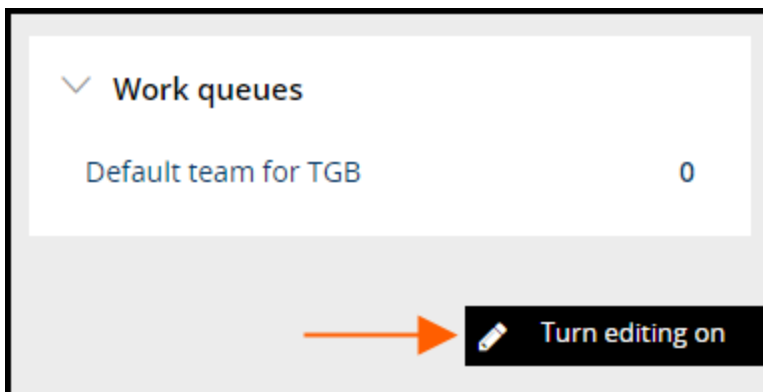
Configure the Manager Review assignment with a goal and deadline. Define the goal as one day, increase the urgency of the assignment by a value of 10, and notify the manager if the goal is missed. Define the deadline as two days, increase the urgency of the assignment by a value of 25, and notify the manager if the deadline is missed.

If a manager does not complete the review by the goal, the urgency of the case shall be increased by a value of 10, and a reminder to complete the review before deadline shall be sent to the department manager. If the manager does not complete the review by the deadline, the urgency of the case shall be increased by a value of 25, and a notification shall be sent to the department manager indicating that the deadline was missed and a review must be completed immediately.

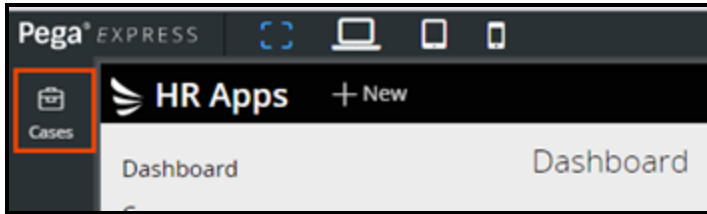
Detailed steps

Follow these steps to add a service level to an assignment.

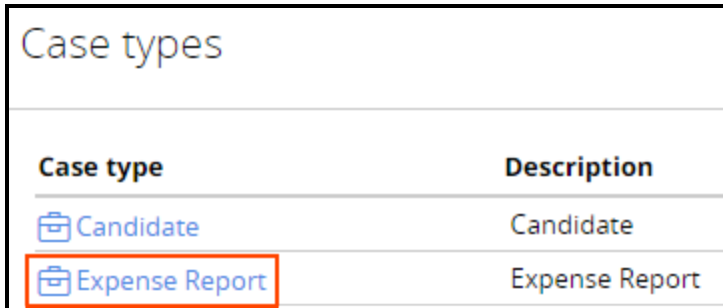
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



2. In the navigation panel, click **Cases** to view a list of current case types.



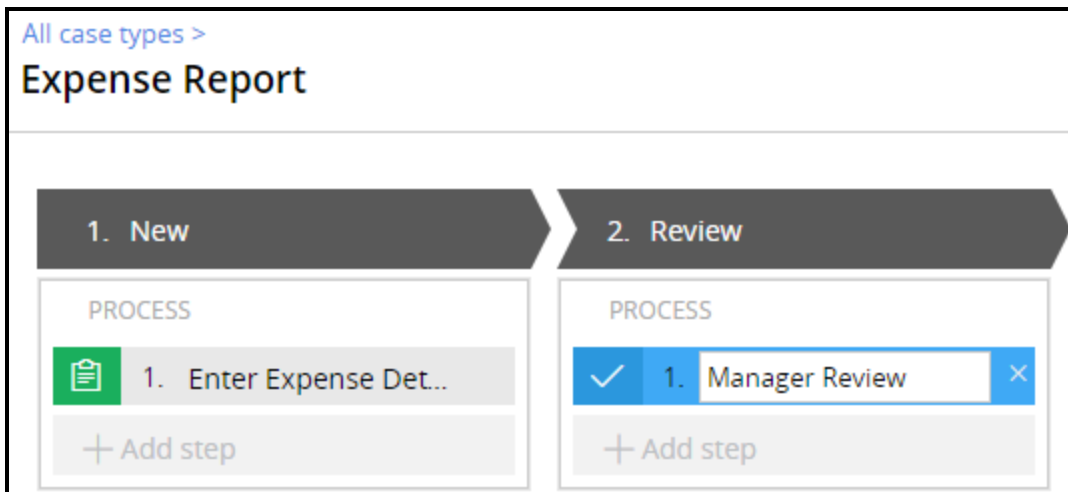
3. From the list of available case types, click **Expense Report**.



4. Click **Life cycle** to edit the case life cycle design.



5. Select the **Manager Review** step.



6. On the **Goal & Deadline** tab of the contextual property panel, select the **Consider goal and deadline** check box.

Step description goes here ?

General Flow Goal & deadline

Define the suggested and required completion times for this step. Times are calculated from the start of the step.

Consider goal and deadline

7. In the **Days** field for the **Goal**, enter **1**.
8. In the **Increase urgency by** field, enter **10**.
9. From the **Perform actions** drop-down list, select **Notify Manager**.

Goal

Days hh:mm

Increase urgency by

Perform actions

▼ 🗑️

10. In the **Days** field for the **Deadline**, enter **2**.
11. In the **Increase urgency by** field, enter **25**.
12. From the **Perform actions** drop-down list, select **Notify Manager**.

Deadline

Days hh:mm

Increase urgency by

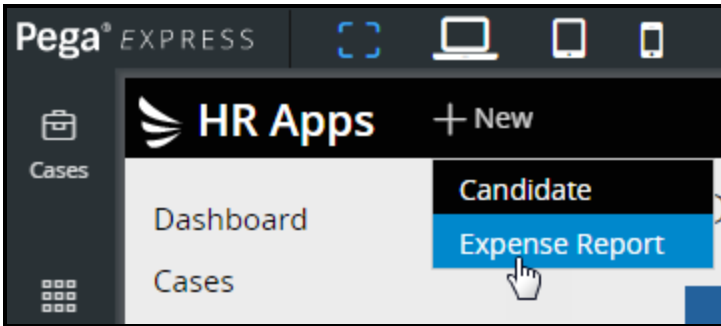
Perform actions

▼ 🗑️

13. Click **Done** to save your changes. You are returned to the Pega Express Dashboard.

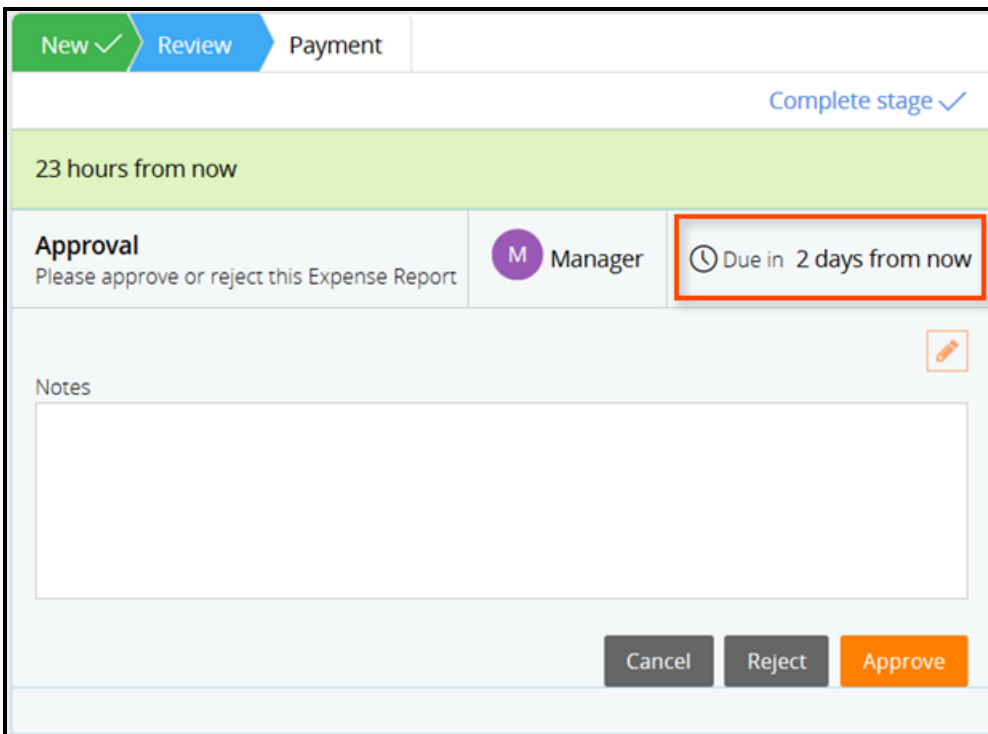
Verify your work

1. On the Pega Express dashboard, click **New**.



2. Click **Expense Report**.
3. The Expense Report case type does not yet have any fields defined. Click **Done** to advance to the Enter Expense Details user view.
4. Verify the **Deadline** entered in the exercise.

Note: When an SLA is added to an assignment, the **Deadline** is the only visible service level. The **Goal** is not visible to the end user.



Creating user views

Exercise: Configuring a standard user view

Scenario

The initial case life cycle design for the Expense Report case type is complete. Now you can configure user views to collect and display the information needed to process a request for expense reimbursement.

One of the requirements for the Expense Voucher case type is: *Employees must be able to submit an itemized list of expenses for reimbursement.* To satisfy this requirement, you must configure a user view to collect the employee's personal details (such as name and ID) and the date the expense reimbursement request is submitted.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your Assignment

Configure the default **Create** user view with the following form elements:

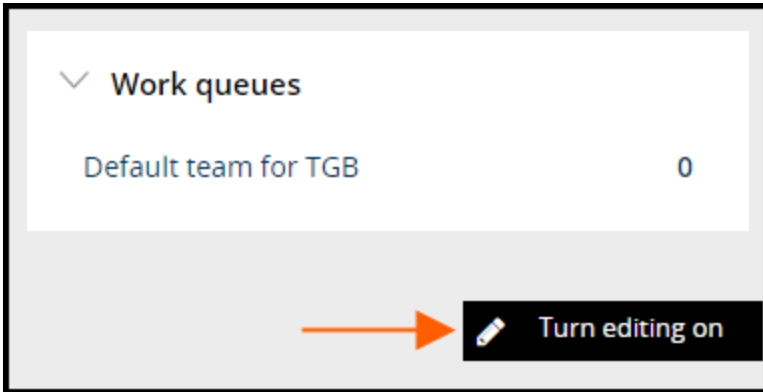
Name of Form Element	How to Display the Form Element	Can the Form Element be Edited?
Date Submitted	Date only	Optional
Employee Details	Field group	NA
Employee ID	Text (single line)	Optional
First Name	Text (single line)	Optional
Last Name	Text (single line)	Optional
Department	Picklist	Optional

Detailed Steps

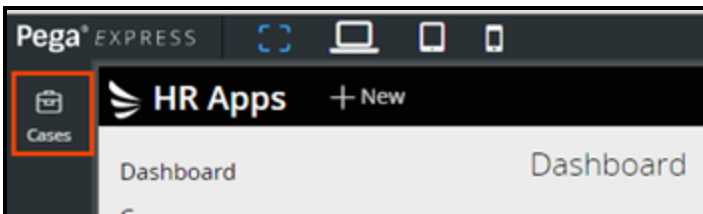
Configure the standard user view

Follow these steps to configure a standard user view.

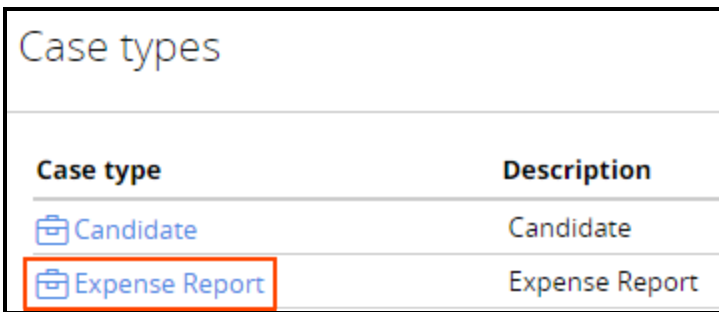
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



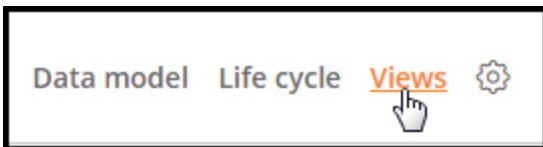
2. In the navigation panel, click **Cases** to view a list of current case types.



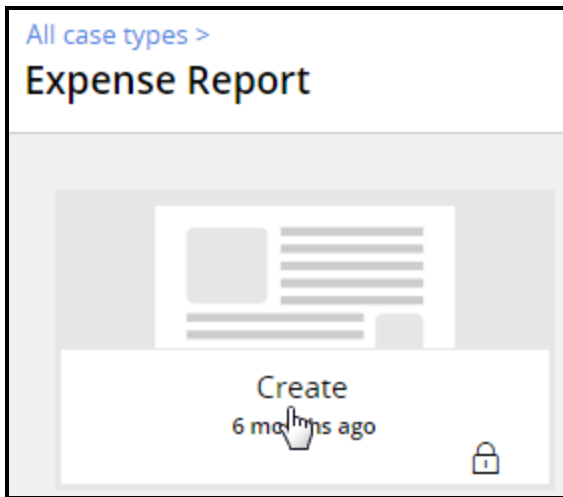
3. From the list of available case types, click **Expense Report**.



4. Click **Views** to configure user views for the Expense Report case type.



5. Select the standard **Create** view.

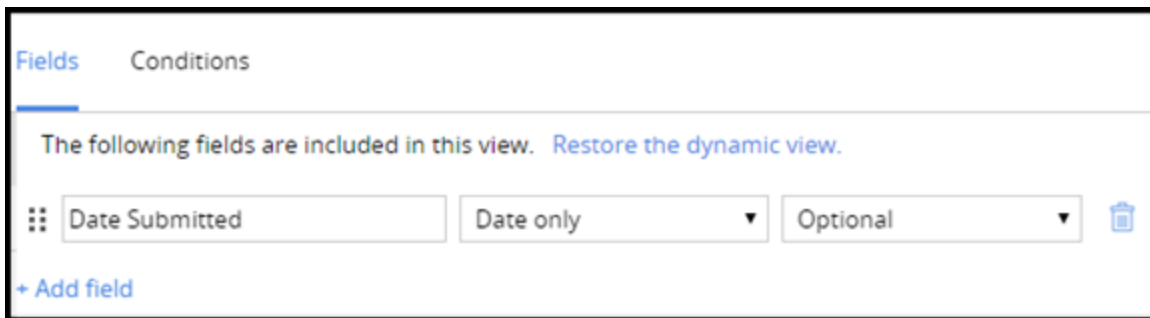


6. Click **Edit this view** to open the form for editing.



7. In the first column, enter **Date Submitted** as the name of the field.

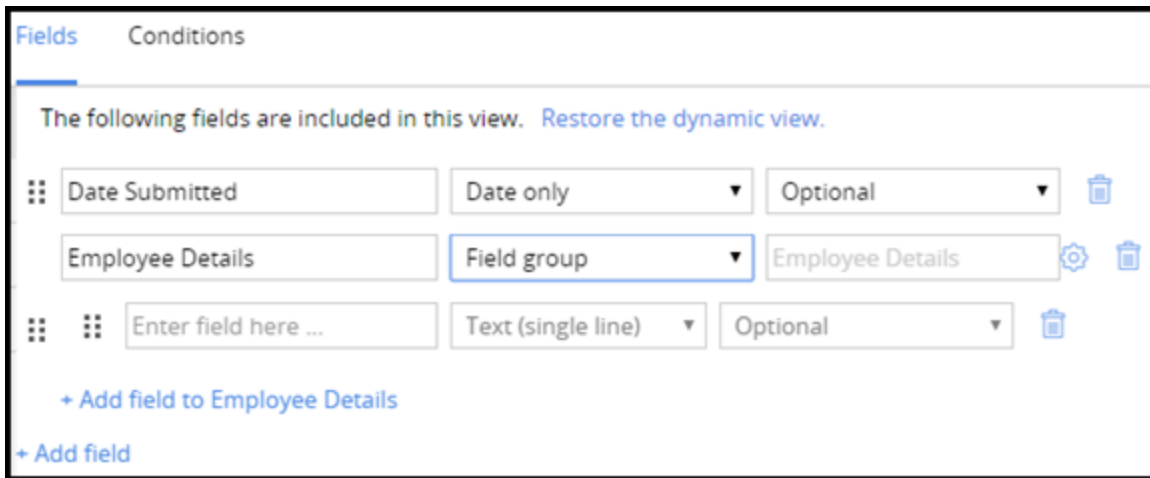
8. In the second column, select **Date only** as the field display type.



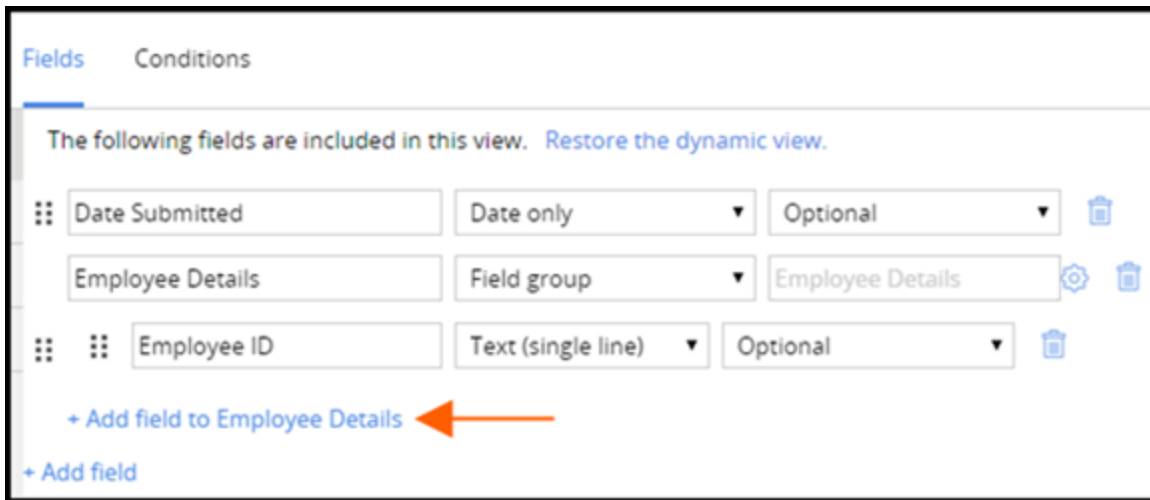
9. Click **+ Add field** to add another field.

10. In the first column in the second row, enter **Employee Details**.

11. In the second column in the second row, select **Field group** as the field display type. Pega adds a nested field element automatically.



12. In the third row, enter **Employee ID**.
13. Click **+ Add field to Employee Details** to add a second row of fields to the Employee Details field group.



14. In the blank field, enter **First Name**.
15. Click **+ Add field to Employee Details** to add a third row of fields to the Employee Details field group.
16. In the blank field, enter **Last Name**.
17. Click **+ Add field to Employee Details** to add a fourth row of fields to the Employee Details field group.
18. In the blank field, enter **Department**.

The following fields are included in this view. [Restore the dynamic view.](#)

Field Name	Data Type	Optional
Date Submitted	Date only	Optional
Employee Details	Field group	Employee Details
Employee ID	Text (single line)	Optional
First Name	Text (single line)	Optional
Last Name	Text (single line)	Optional
Department	Text (single line)	Optional

[+ Add field to Employee Details](#)

Configure a Picklist for the Department field

Your assignment states the Department field must be a Picklist. Follow these steps to configure a local list of values for the Picklist:

1. In the **Department** field, change the display mode type to **Picklist**.
2. Click the **Gear** icon at the end of the Department form element row.

Department Picklist Optional

[+ Add field to Employee Details](#)

[+ Add field](#)

DISPLAY AS
Drop-down list

LIST CHOICES
[Input field] [+ Add choice](#)

Cancel Submit

3. In the **DISPLAY AS** field, use the default **Drop-down list** option.
4. In the first field under **LIST CHOICES**, enter **Global Services** for the first department name.
5. Click **+ Add choice** twice, and then enter **Sales** and **Customer Support** as the other department names.

DISPLAY AS
Drop-down list

LIST CHOICES

Global Services

Sales

Customer Support

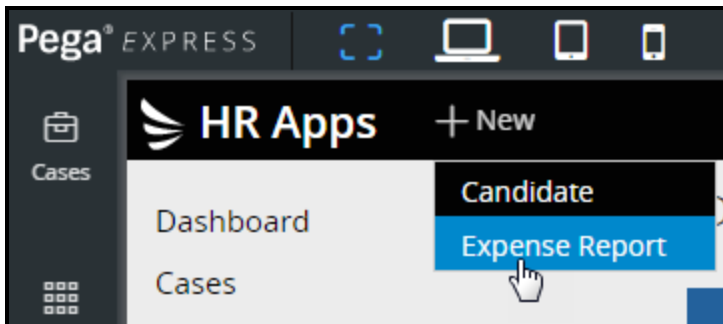
+ Add choice

Cancel Submit

6. Click **Submit** to save the Picklist.
7. Click **Done** to save your changes to the user view.
8. Click **Done** to save your changes to the case type. You are returned to the Pega Express dashboard.

Verify your work

1. On the Pega Express dashboard, click **New**.



2. Click **Expense Report**.

New: Expense Report

Date Submitted

Employee Details

Employee ID

First Name

Last Name

Department

- Select...
- Global Services
- Sales
- Customer Support

The fields you added to the standard Create view are displayed.

Exercise: Configuring a custom user view

Scenario

After the initial case life cycle design for the Expense Report case type is complete, you can configure user views to collect and display the information needed to process a request for expense reimbursement.

One of the requirements for the Expense Report case type is: *Employees must be able to submit an itemized list of expenses for reimbursement.*

To satisfy this requirement, you must configure a user view to collect the details related to the itemized list of expenses.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your Assignment

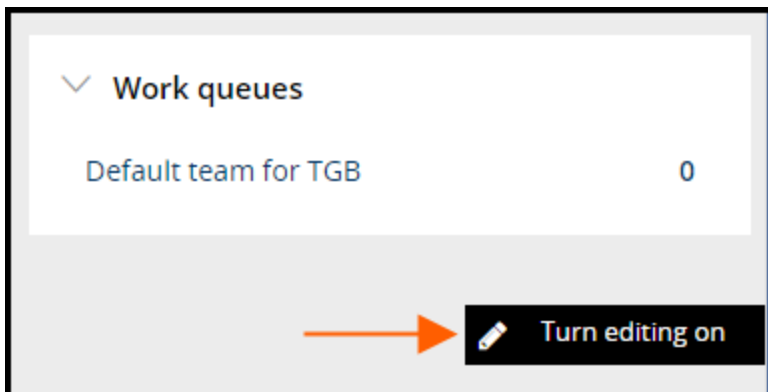
For the *Enter Expense Details* step, configure a user view with a repeating field group that allows the employee to enter a list of itemized expenses. The user view must contain the following items:

Name of Form Element	How to Display the Form Element	Can the Form Element be Edited?
Expenses	Field group list	Optional
Expense Item	Text (single line)	Optional
Expense Amount	Currency	Optional
Date of Purchase	Date only	Optional

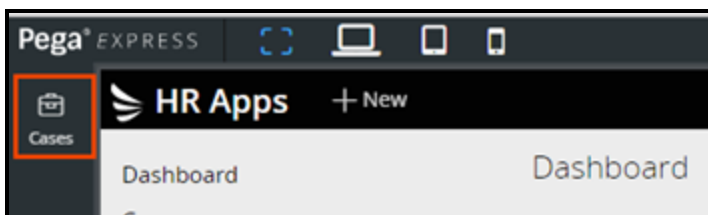
Detailed Steps

Follow these steps to configure a user view with a repeating group of fields.

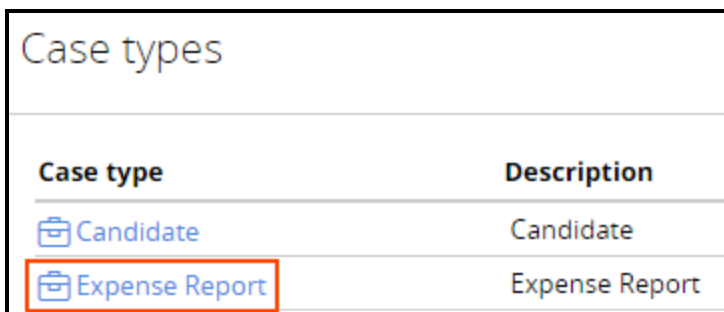
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



2. In the navigation panel, click **Cases** to view a list of current case types.



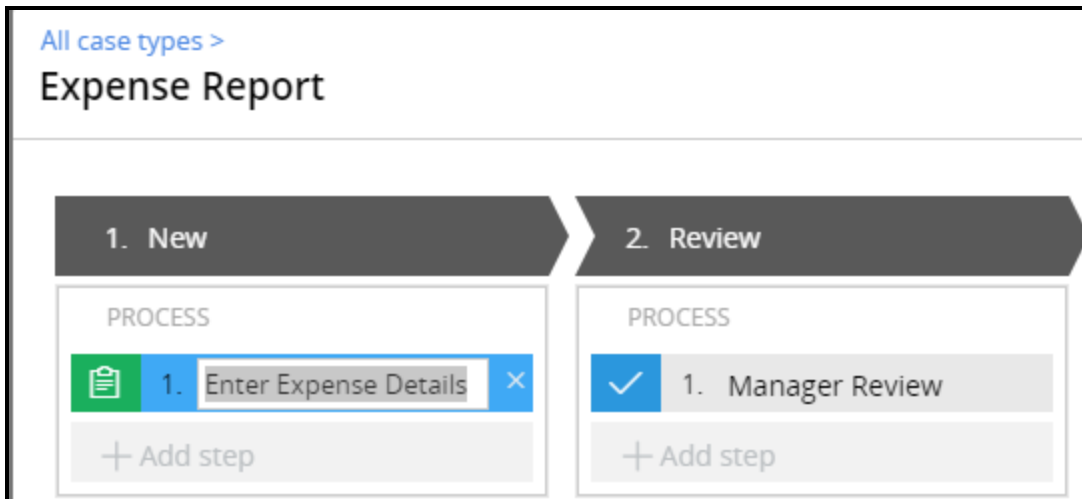
3. From the list of available case types, click **Expense Report**.



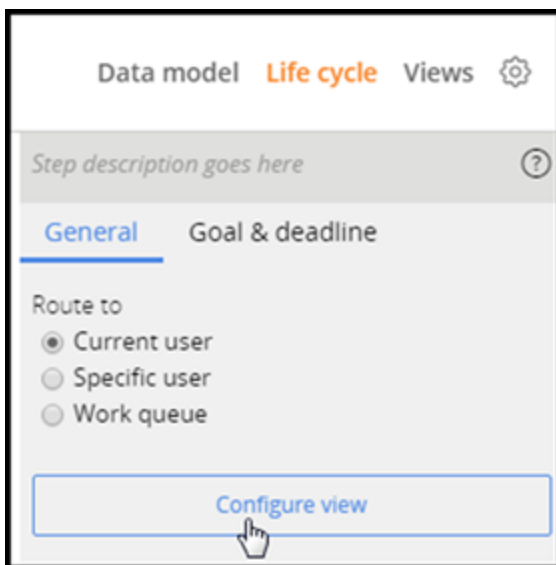
4. Click **Lifecycle** to edit the case life cycle design.



5. In the **New** stage, select the **Enter Expense Details** step.



6. Click Lifecycle to edit the Case Lifecycle Design.
7. In the contextual properties panel, click **Configure view**.



8. In the first column, enter **Expenses**.
9. In the second column, select **Field group (list)** as the display mode type.

Fields Conditions

Expenses	Field group (list)	Expenses		
Enter field here ...	Text (single line)	Optional		

+ Add field to Expenses

+ Add field

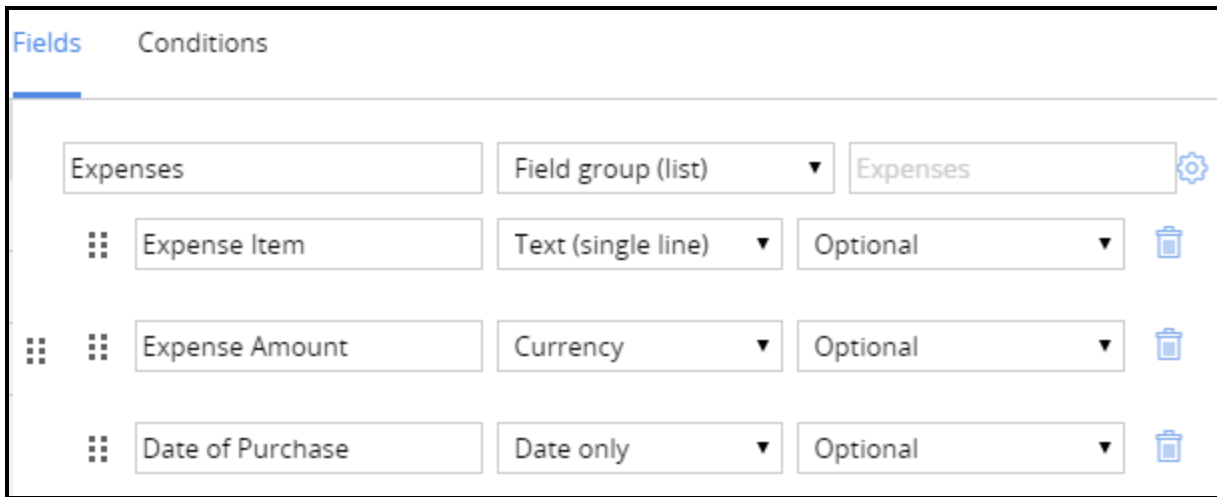
10. In the first field in the second row, enter **Expense Item**.
11. In the second column, use the default **Text (single line)** as the display mode type.
12. Click **+ Add field to Expenses** twice.

Fields Conditions

Expenses	Field group (list)	Expenses		
Expense Item	Text (single line)	Optional		
Enter field here ...	Text (single line)	Optional		
Enter field here ...	Text (single line)	Optional		

+ Add field to Expenses

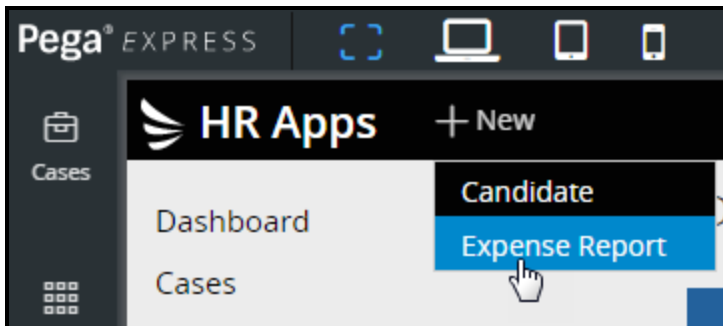
13. In the first field in the third row, enter **Expense Amount**, and then select **Currency** as the display mode type.
14. In the first field in the fourth row, enter **Date of Purchase**, and then select **Date only** as the display mode type.



15. Click **Done** to save your changes to the user view.
16. Click **Done** to close the case type. You are returned to the Pega Express dashboard.

Verify your work

1. On the Pega Express dashboard, click **New**.



2. Click **Expense Report**.
3. The Employee Details user view is displayed.

Note: Entering sample values in the fields for this screen is not required. Enter values at your own discretion.

4. Click **Done** to advance to the Enter Expense Details user view.

Enter Expense Details

A Author

Due in 5 days from now

Expenses

+ Add Item - Delete

	Expense Item	Expense Amount	Date of Purchase
1	<input type="text"/>	<input type="text"/>	<input type="text"/>

Cancel Save Submit

The fields you added to the custom user view are displayed.

Exercise: Configuring the standard Review form

Scenario

After the initial case life cycle design for the Expense Report case type is complete, you can configure user views to collect and display the information needed to process a request for expense reimbursement.

One of the requirements for the Expense Report case type is: *Managers must be able to review all requests for reimbursement of expenses.* To satisfy this requirement, you must configure a user view to display the date the expense reimbursement request was submitted, the employee's details, and the itemized list of expenses.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	author@tgb	rules

Your Assignment

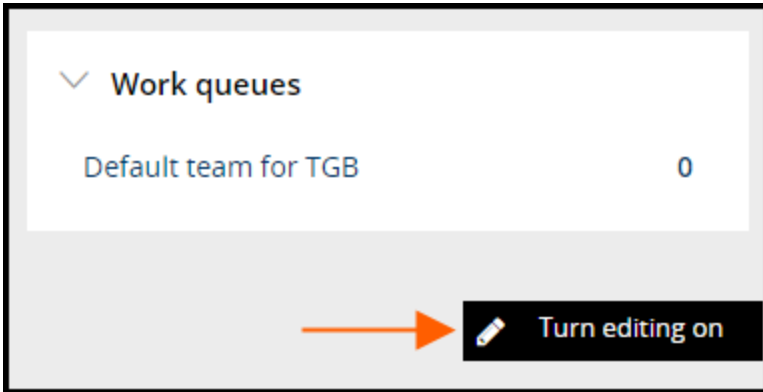
Configure the default **Review** user view with the following form elements:

Name of Form Element	How to Display the Form Element	Can the Form Element be Edited?
Date Submitted	Date only	Set to Read-only by default
Employee Details	Field group	Set to Read-only by default
Expense Details	Field Group (list)	Set to Read-only by default

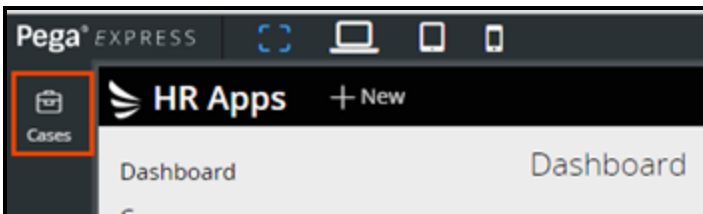
Detailed Steps

Follow these steps to configure a standard user view and reuse existing fields.

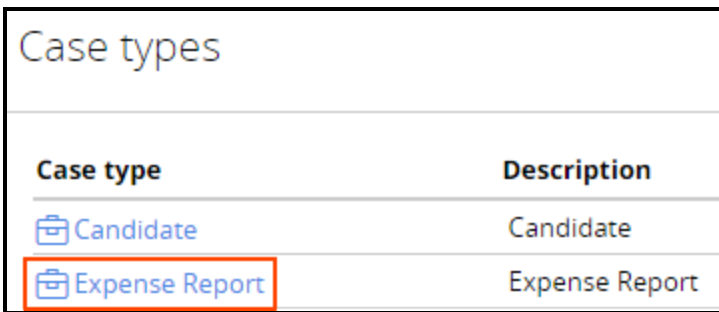
1. In the lower right corner of the Pega Express dashboard, click **Turn editing on**.



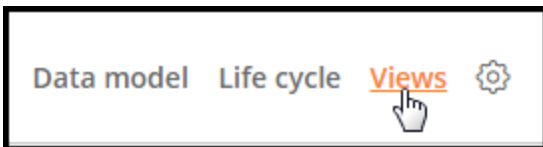
2. In the navigation panel, click **Cases** to view a list of current case types.



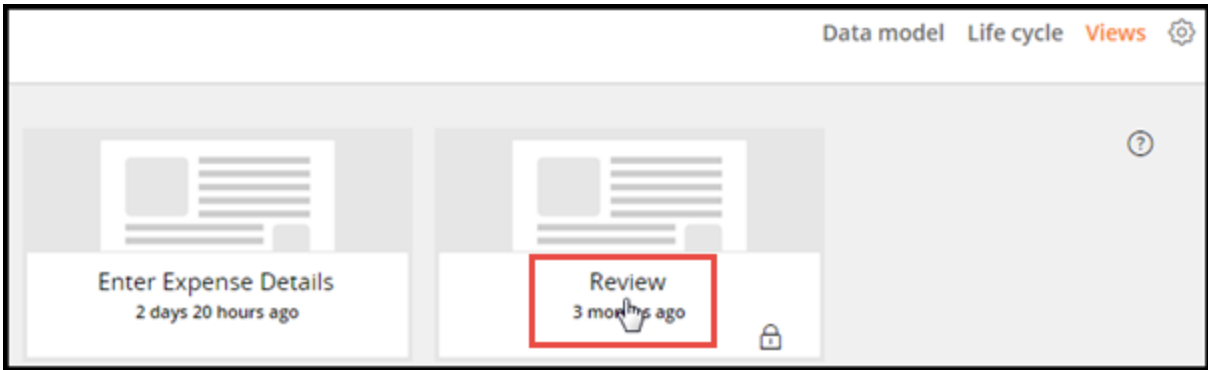
3. From the list of available case types, click **Expense Report**.



4. Click **Views** to configure user views for the Expense Report case type.



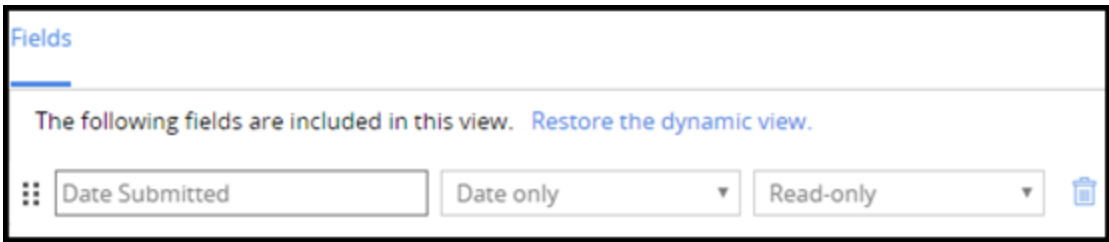
5. Select the standard **Review** user view.



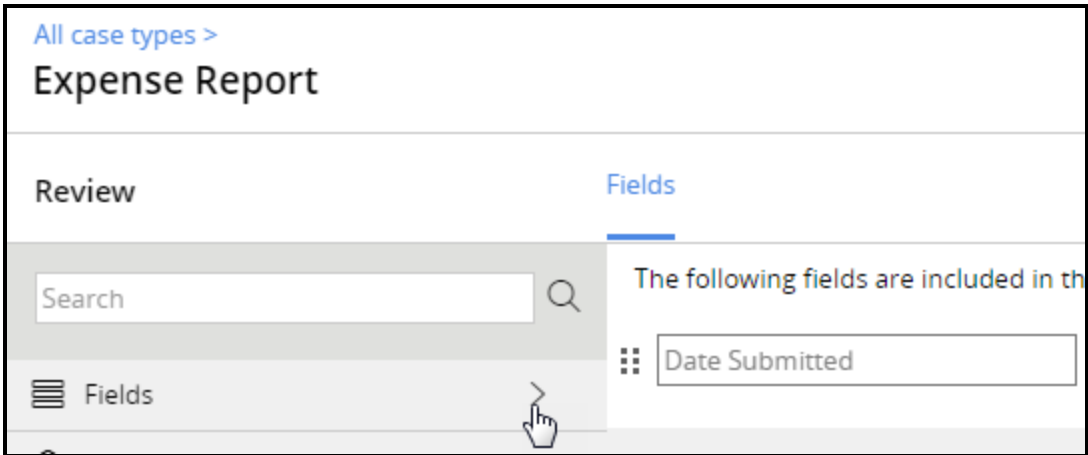
6. Click **Edit this view** to open the form for editing.



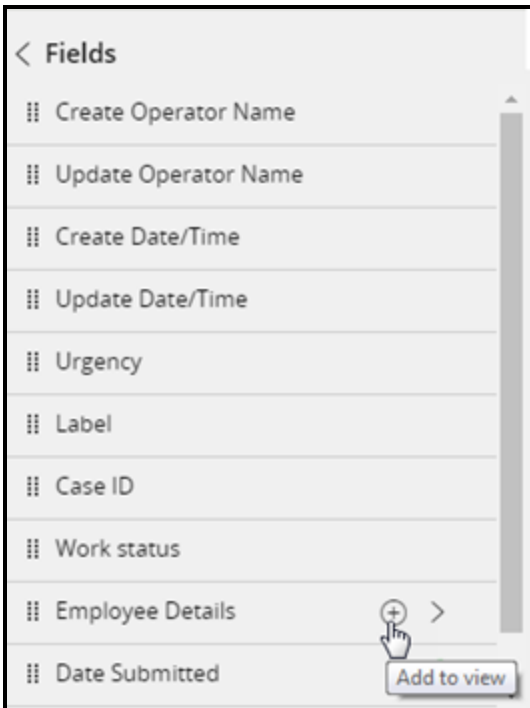
In the first row, the **Date Submitted** field is available.



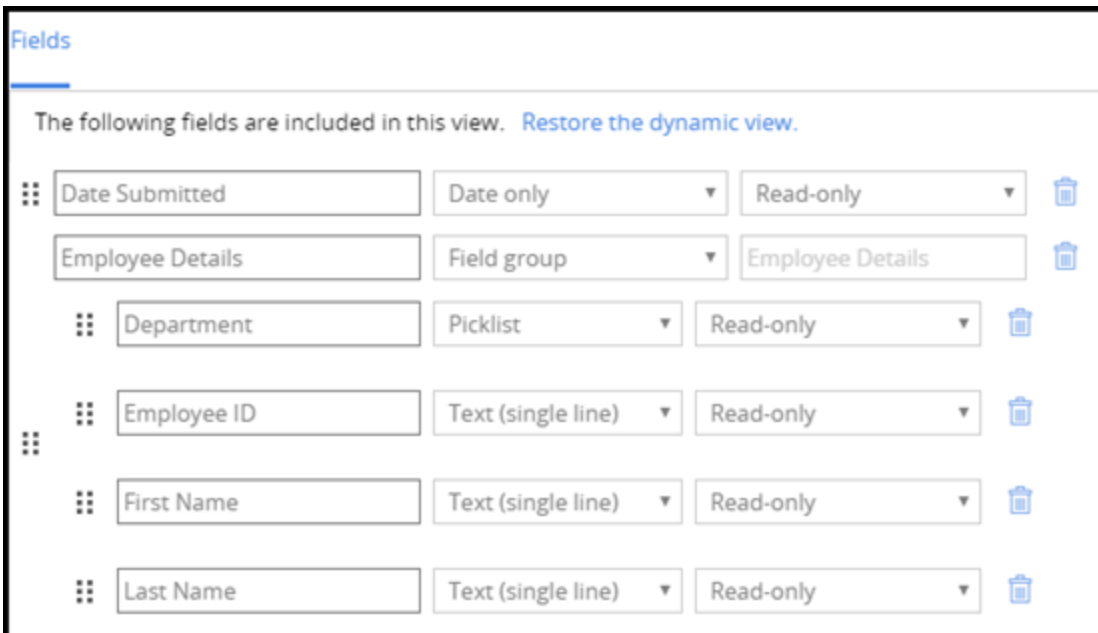
7. Click **Fields** to view a list of available fields to add to the user view.



8. From the list of available fields, hover over **Employee Details** and click the **Plus sign** icon to add the field group to the user view.

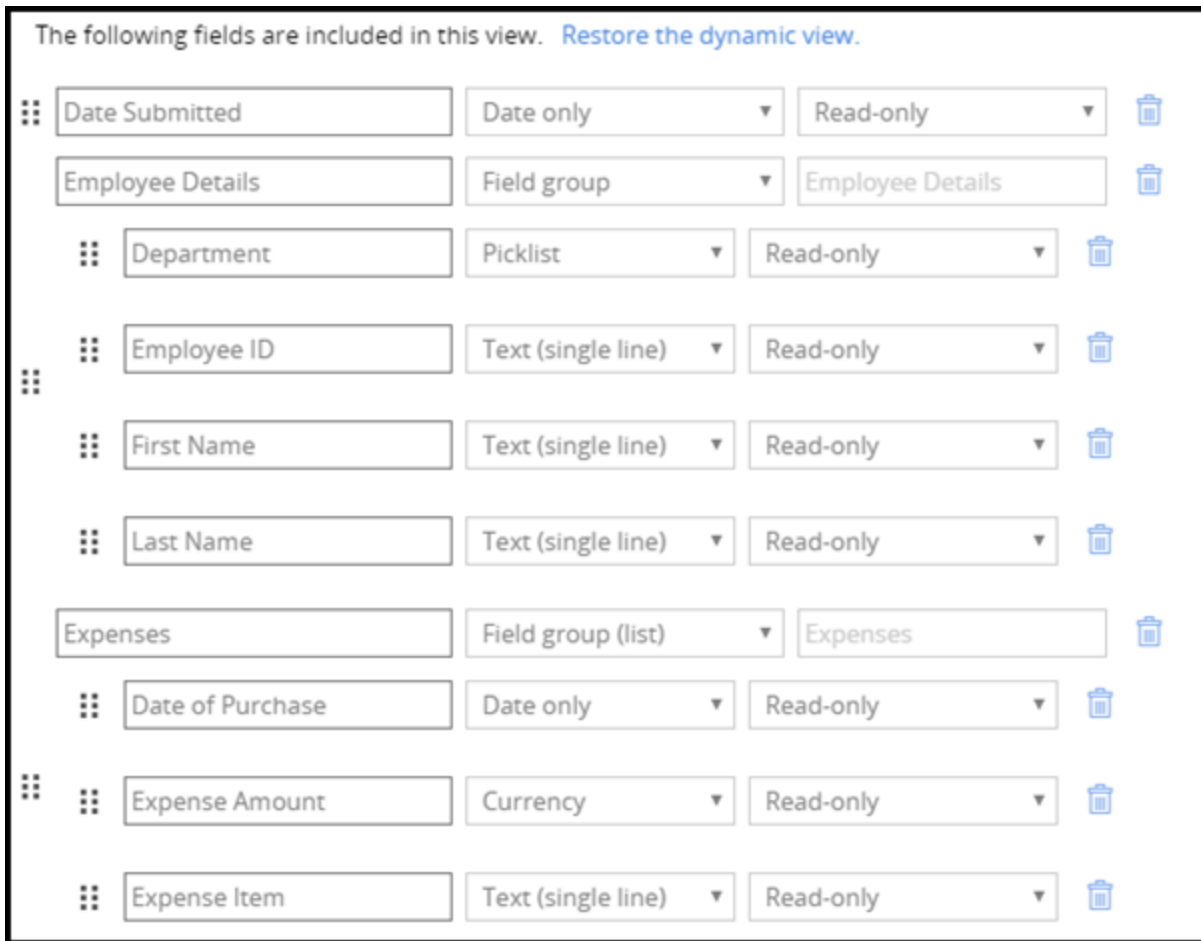


The **Employee Details** field group is displayed on the form.



9. From the list of available fields, hover over **Expenses** and click the **Plus sign** icon to add the field group to the user view.

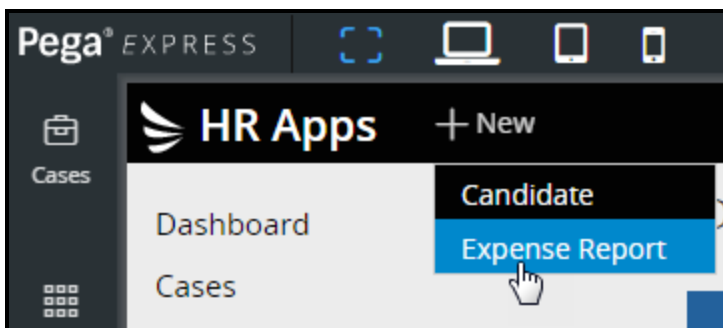
The **Expenses** field group list is displayed on the form.



10. Click **Done** to save your changes to the user view.
11. Click **Done** to save your changes to the case type. You are returned to the Pega Express dashboard.

Verify your work

1. On the Pega Express dashboard, click **New**.



2. Click **Expense Report**.
3. In the **Employee Details** form, enter sample data, and then click **Done**.

New: Expense Report

Date Submitted
6/20/1954

Employee Details

Employee ID
rayd

First Name
Ray

Last Name
d'Ator

Department
Select...

4. In the **Enter Expense Details** form, enter at least one row of sample data, and then click **Submit**.

New Review Payment

Complete stage ✓

Enter Expense Details A Author 🕒 Due in 5 days from now

Expenses ✎

+ Add Item × Delete

	Expense Item	Expense Amount	Date of Purchase
1	Dinner	123.45	6/12/1947 📅

Cancel Save Submit

The case advances to the **Review** stage, and the expense report details are displayed in the standard **Review** form.

Note: You may have to scroll down the page to see the results.

Date Submitted
7/21/16

Employee Details

Department
Sales

Employee ID
rayd

First Name
Ray

Last Name
d'Ator

Expenses

	Date of Purchase	Expense Amount	Expense Item
1	6/12/47	\$123.45	Dinner

CASE DESIGN USING DESIGNER STUDIO

Managing case life cycle exceptions

Exercise: Adding alternate stages to the case life cycle

Scenario

TGB's business policies indicate all expense reimbursement requests are routed to the appropriate reviewers for approval. Then, the requests go to the accounting office for payment processing. If a request for expense reimbursement is rejected by the department manager or the director, the employee must be provided an opportunity to reconcile the request. Also, if any expense items are billable to a customer, or the expense items meet certain criteria, the request for expense reimbursement must be audited.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

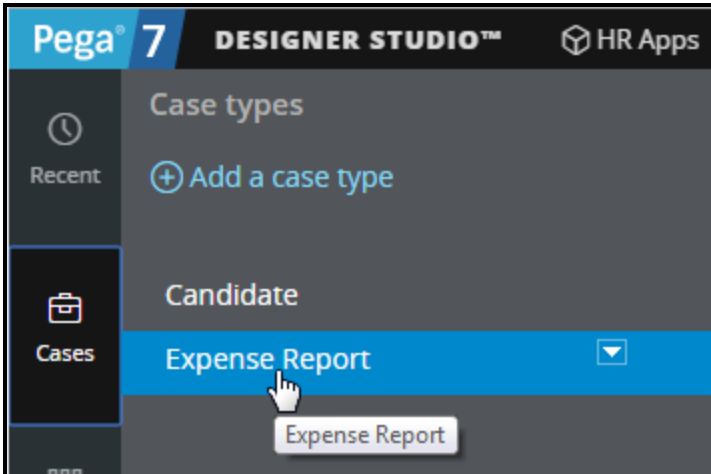
Your assignment

Add alternate stages to the Expense Report case life cycle to model the exceptions for a rejected request for expense reimbursement, or a required audit of a request for expense reimbursement.

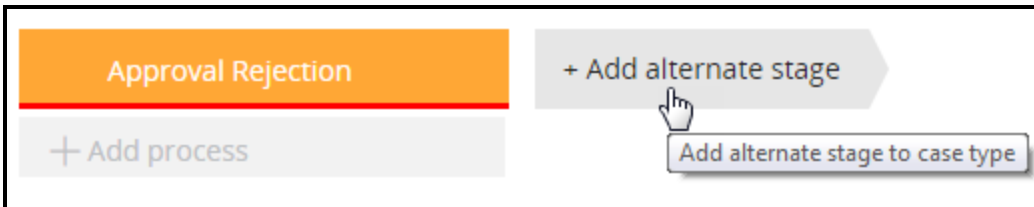
Detailed steps

Follow these steps to add alternate stages to a case type.

1. In Designer Studio, click **Cases** to view a list of available case types.



2. In the **Case types** panel, click **Expense Report** to edit the case type.
3. In the Alternate stages section, click **+ Add alternate stage** to add an alternate stage to the case type.



4. In the text field of the second stage, enter **Auditing**.



5. Select the **Approval Rejection** stage, and change the name to **Rejection**.
6. Click **Save** to save your changes. The alternate stages are displayed as part of the Expense Voucher case life cycle.

Exercise: Controlling stage transitions using the Approve/Reject step

Scenario

TGB's business policies indicate all expense reimbursement requests are routed to the appropriate reviewers for approval. If a request for expense reimbursement is rejected by the department manager or the director, the employee must be provided an opportunity to reconcile the request. After the employee reconciles the request for expense reimbursement, the request should be automatically routed back to the Review stage.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

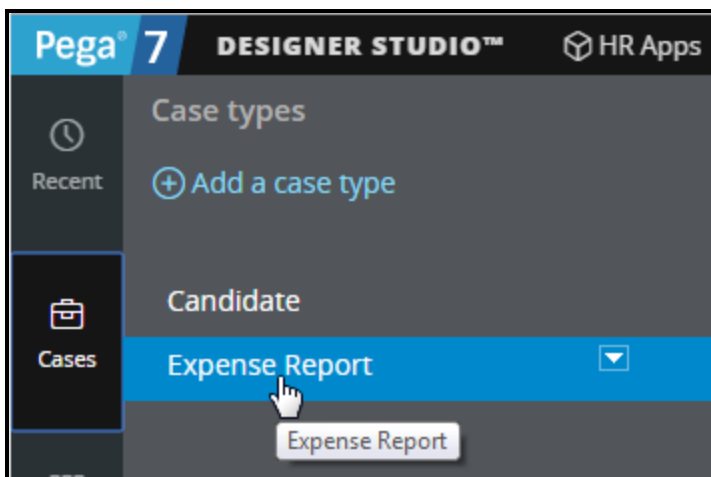
Your assignment

Configure the Approve/Reject steps for the Manger Review and the Director Review process steps so that the case flow transitions to the Reject stage when a request for expense reimbursement is rejected by either the manager or the director.

Detailed steps

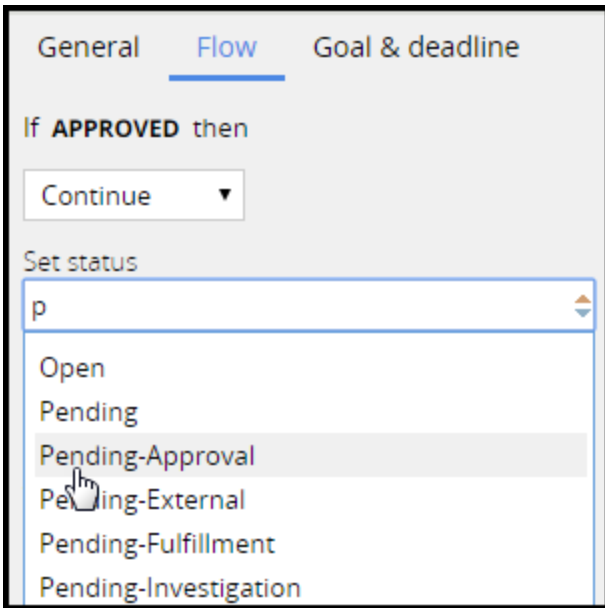
Follow these steps to control stage transitions in a case life cycle using the Approve/Reject step.

1. In Designer Studio, click **Cases** to view a list of available case types.

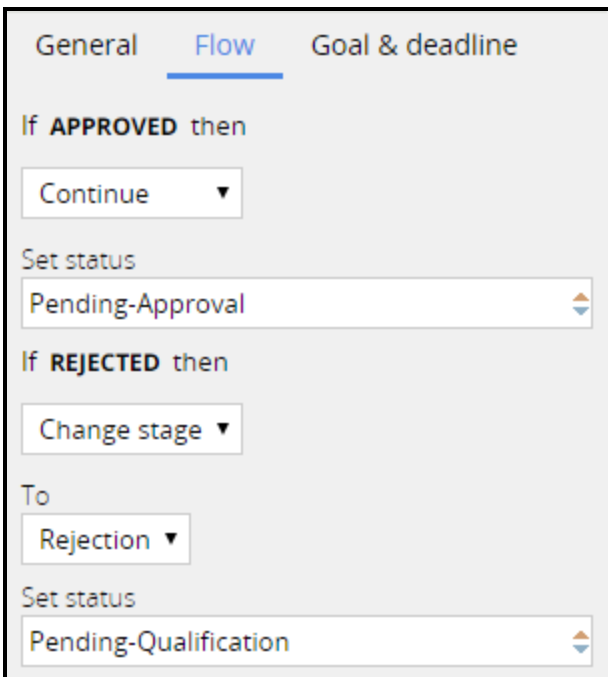


2. In the **Case types** panel, click **Expense Report** to edit the case type.
3. In the Review stage, select the **Manager Review** step.

- On the **Flow** tab of the contextual property panel, confirm the option for **If APPROVED then** is set to **Continue**.
- In the **Set status** list, enter the character **p** to invoke a list of available options and select **Pending-Approval**.



- Set the option for **If REJECTED then** to **Change Stage**.
- In the **To** drop-down list, select the **Rejection** stage.
- In the **Set status** list, select **Pending-Qualification**.



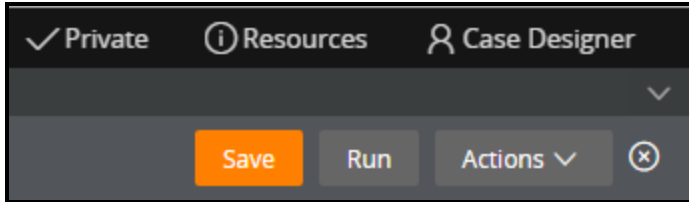
- Select the **Director Review** step and confirm the **If APPROVED then** option is set to **Continue**.
- In the **Set status** list, select **Pending-Fulfillment**.
- Set the option for **If REJECTED then** to **Change stage**.

12. In the **To** drop-down list, select the **Rejection** stage.
13. In the **Set status** list, select **Pending-Qualification**.
14. Click **Save** to save your changes.

Verify your work

Create a new expense report case to test your changes.

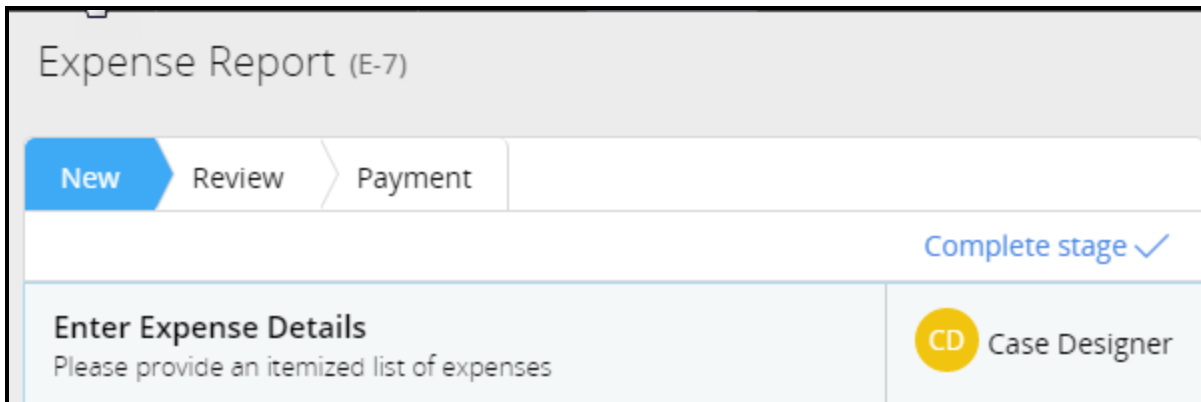
1. In the upper right corner of the Case Designer work space, click **Run** to create a new instance of the Expense Report case type.



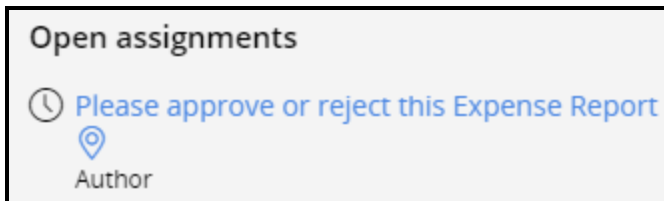
2. On the **New: Expense Report** screen, click **Done** to advance to the Enter Expense Details step.

Note: Entering data on this screen is optional.

3. Click **Complete stage** to advance the case to the Review stage.



4. In the **Open assignments** section, click **Please approve or reject this Expense Report** to open the assignment.



Notice the case is in the Review stage.

Expense Report (E-7)

New ✓ Review Payment

Complete stage ✓

- 5. Click **Reject**. The case transitions to the Rejection stage and the status is set to Pending-Qualification.

Information Audit

Case details

Case ID	Urgency	Status
E-8	10	🚩 Pending-Qualification
Created	Goal	Last Update

Exercise: Using the Change Stage smart shape

Scenario

TGB's business policies indicate all expense reimbursement requests are routed to the appropriate reviewers for approval. If a request for expense reimbursement is rejected by the department manager or the director, the employee must be provided an opportunity to reconcile the request. After the employee reconciles the request for expense reimbursement, the request should be automatically routed back to the Review stage.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

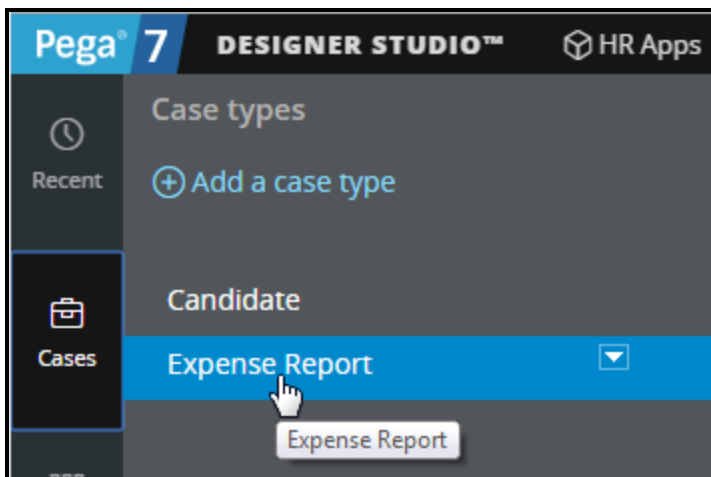
Your assignment

Add process steps to the Rejection stage to allow the employee to reconcile the request for expense reimbursement, and then automatically route the request back to the Review stage.

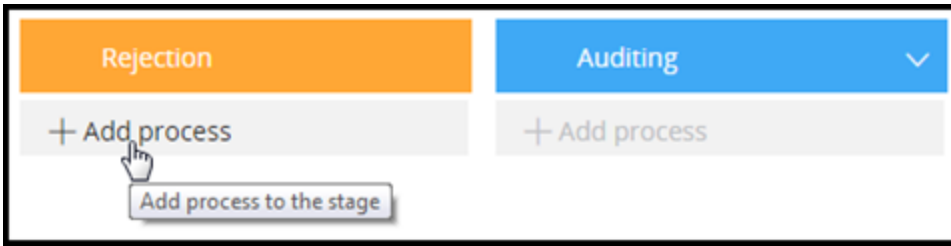
Detailed steps

Follow these steps to control stage transitions using the Change Stage smart shape.

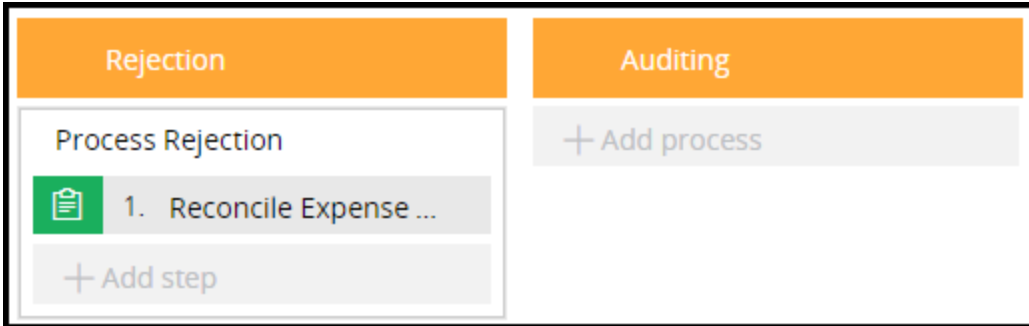
1. In Designer Studio, click **Cases** to view a list of available case types.



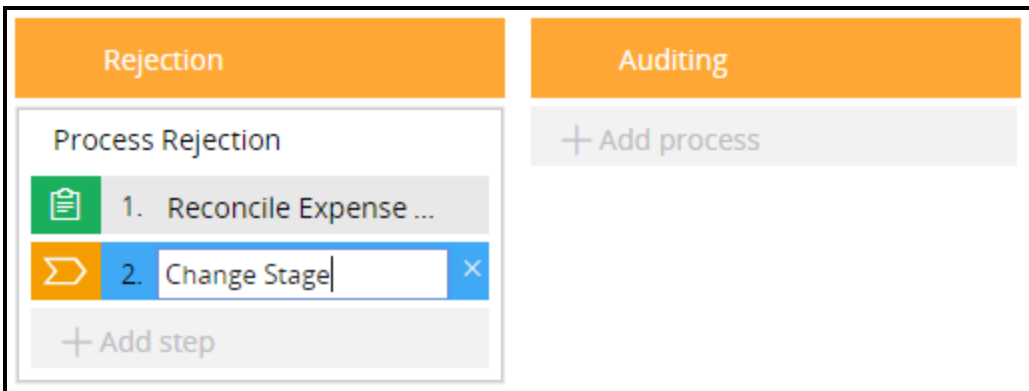
2. In the **Case types** panel, click **Expense Report** to edit the case type.
3. In the Rejection stage, click + **Add process**.



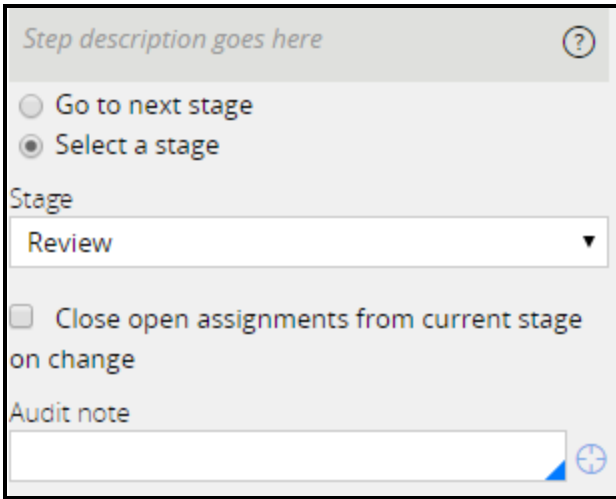
4. Enter **Process Rejection** as the name of the new process.
5. Select the default step in the **Process Rejection** process, and then enter **Reconcile Expense Report** as the name of the first step.



6. Click **+ Add step** to add another step to the process.
7. In the palette that is displayed, click **More**.
8. Click **Utilities** to display a list of available smart shapes.
9. Click **Change Stage**, and then click **Select** to add the smart shape to the process.



10. In the contextual property panel, select the **Select a stage** option.

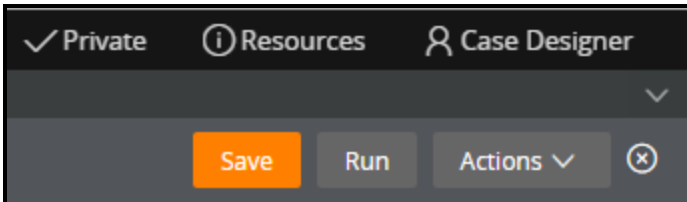


11. In the **Stage** drop-down list, select the **Review** stage.
12. Click **Save** to save your changes.

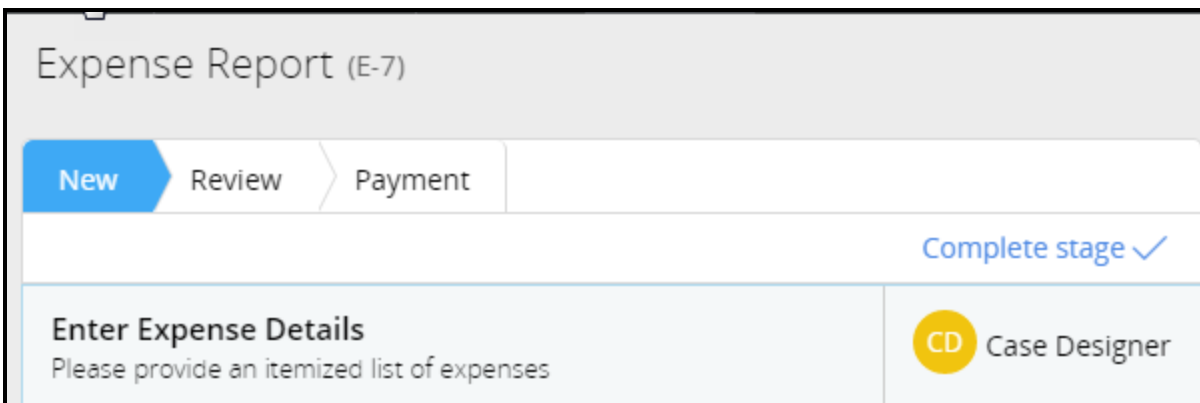
Verify your work

Create a new expense report case to test your changes.

1. In the upper right corner of the Case Designer work space, click **Run** to create a new instance of the Expense Report case type.

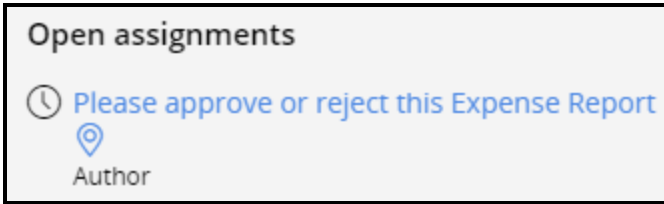


2. On the **New: Expense Report** screen, click **Done** to advance to the Enter Expense Details step.
- Note:** Entering data on this screen is optional.
3. On the **Enter Expense Details** step, click **Complete stage** to advance the case to the Review stage.



4. In the **Open assignments** section, click **Please approve or reject this Expense Report** to open

the assignment.



Open assignments

🕒 Please approve or reject this Expense Report
📍 Author

Notice the case is in the **Review** stage.

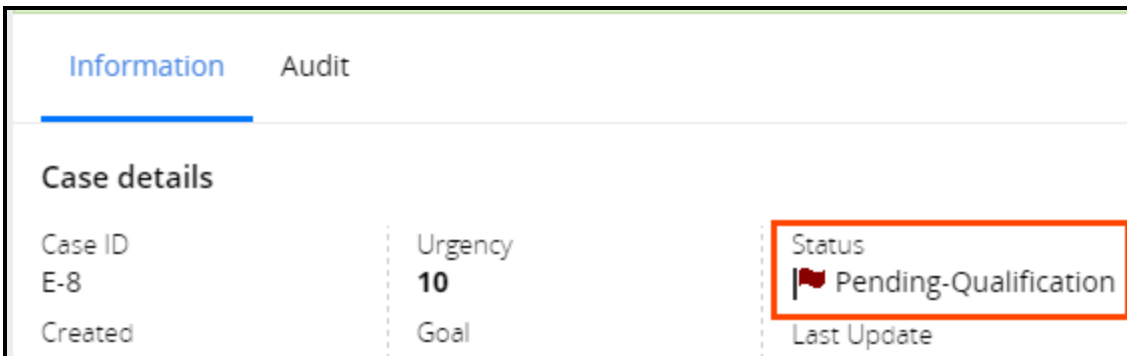


Expense Report (E-7)

New ✓ Review Payment

Complete stage ✓

5. Click **Reject**. The case transitions to the Rejection stage, and the status is set to Pending-Qualification.

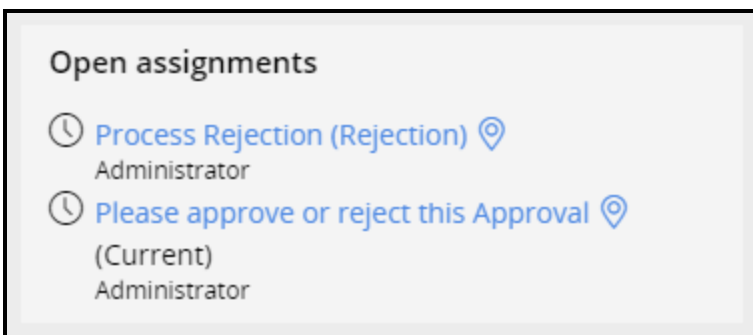


Information Audit

Case details

Case ID	Urgency	Status
E-8	10	🚩 Pending-Qualification
Created	Goal	Last Update

6. In the Open assignments panel, click the **Process Rejection (Rejection)** step.





Open assignments

🕒 Process Rejection (Rejection) 📍 Administrator

🕒 Please approve or reject this Approval 📍 (Current) Administrator

7. Click **Advance this case** to advance the case to the Change Stage step.

Reconcile Expense Report	 Case Designer	 Due in 4 days from now
<p>The 'Reconcile Expense Report' step in the 'Expense Report' case type does not yet have a view defined.</p> <p>Advance this case</p>		

The case is returned to the Review stage.

Expense Report (E-7)

New ✓ **Review** **Rejection** ✓ **Payment**

23 hours from now

Approval
Please approve or reject this Expense Voucher

Sending correspondence

Exercise: Sending correspondence during case processing

Scenario

TGB's business policies indicate employees must be notified of the status of their requests for expense reimbursement. Employees must be notified of the manager's decision, the director's decision, and the result of an audit, when necessary. They must also be notified when the request for expense reimbursement is received by the accounting department for payment processing, and when the payment is processed.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

Your assignment

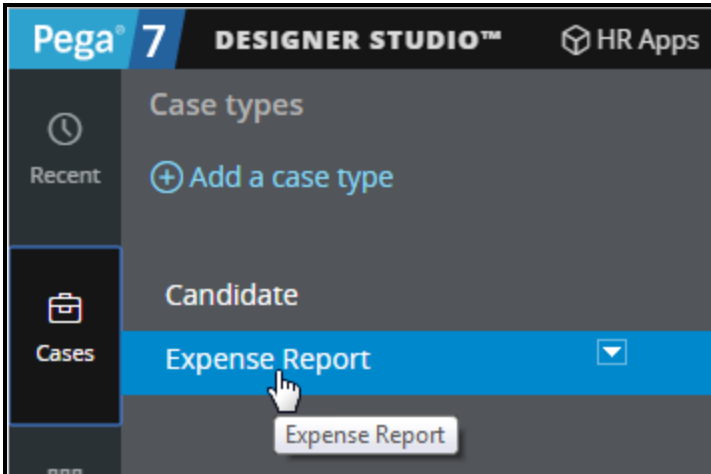
Add the necessary steps to the Expense Report case life cycle so that employees are notified as described in the scenario.

Note: The scenario specifies a total of five correspondences. Each step is configured the same, so you do not need to configure all five steps. Add at least one step for practice. Then add the other steps if you want more practice or want to experiment with different configurations.

Detailed steps

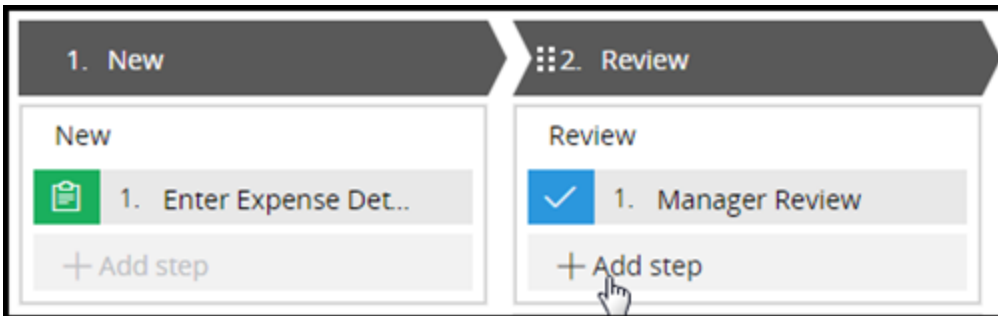
Follow these steps to send correspondence.

1. In Designer Studio, click **Cases** to view a list of available case types.

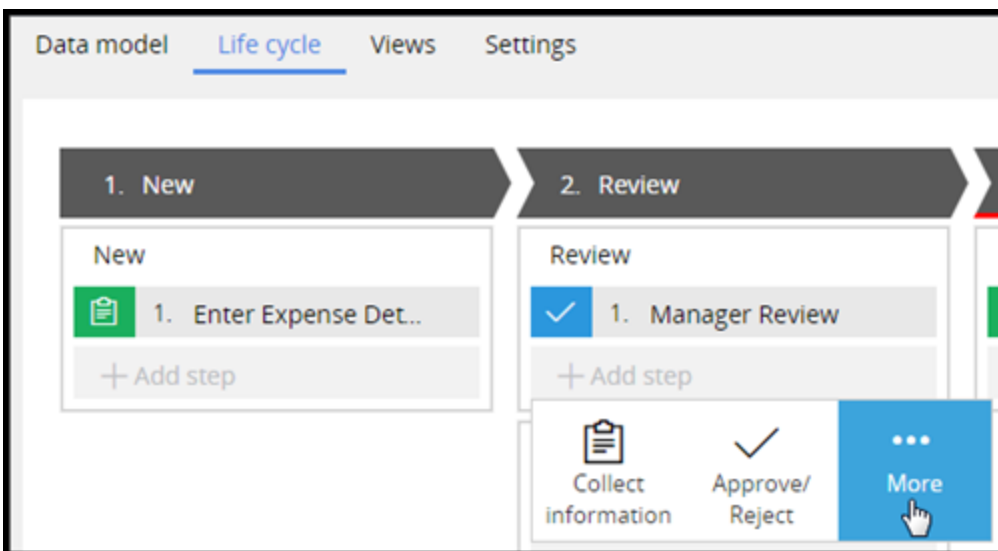


2. In the **Case types** panel, click **Expense Report** to edit the case type.

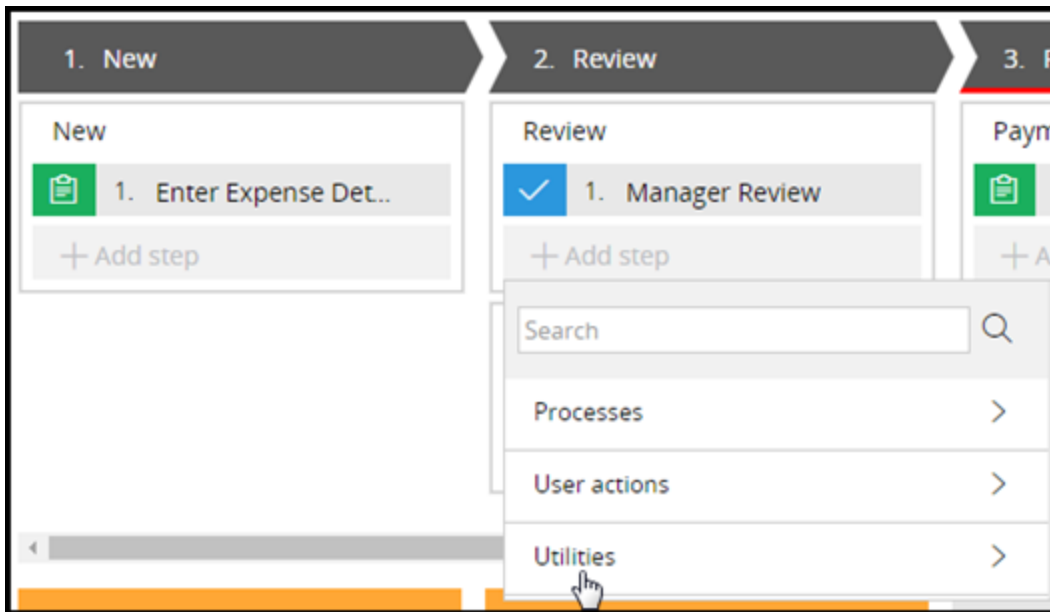
3. In the second stage of the Expense Report case type, click **+ Add step** to add a step to the Review process.



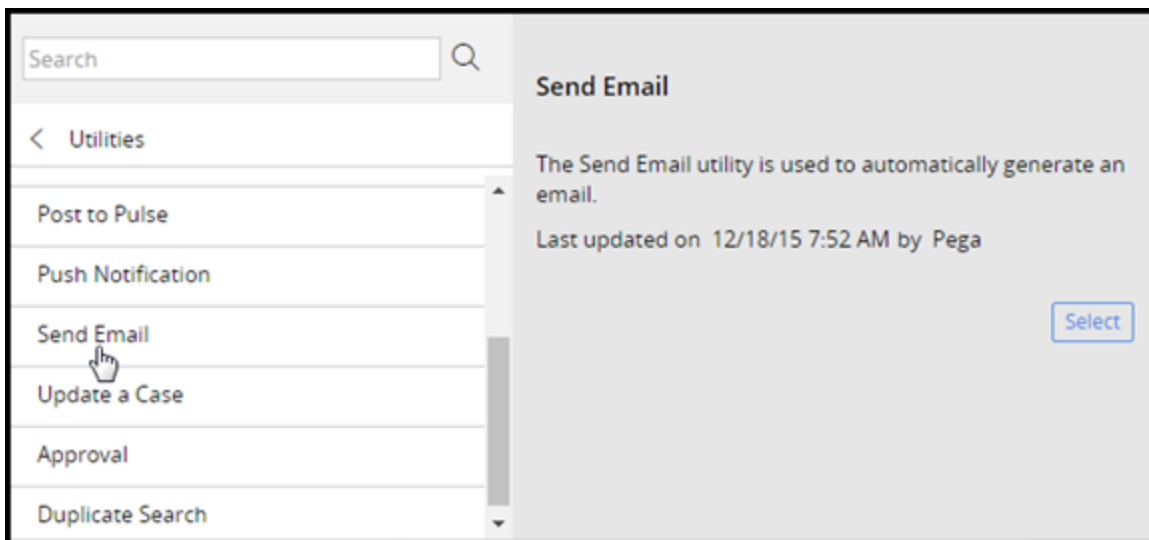
4. In the palette that is displayed, click **More**.



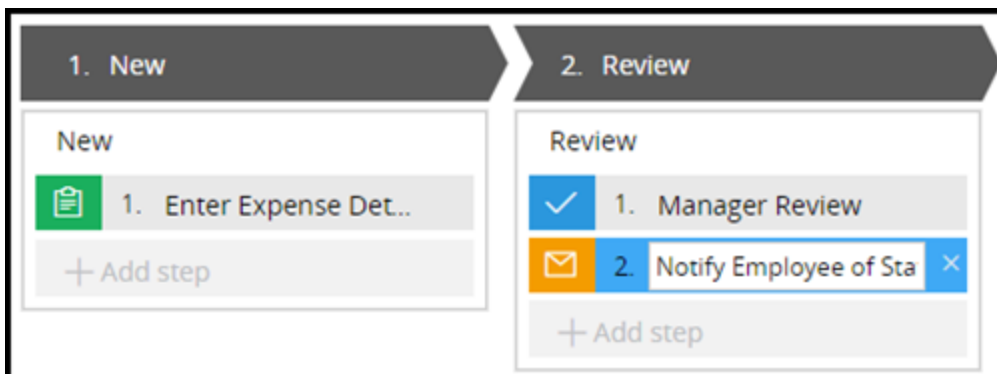
5. Click **Utilities** to display a list of available smart shapes.



6. In the list of available options, scroll down and click **Send Email**, and then click **Select**.

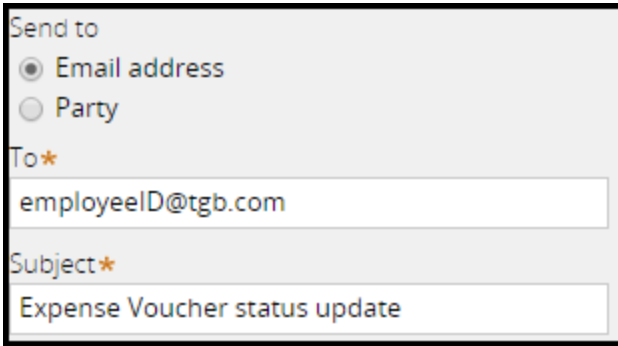


7. In the text field of the new step, enter **Notify Employee of Status**.



8. In the **To** field in the contextual property panel, enter **employeeID@tgb.com**.

9. In the **Subject** field, enter **Expense Voucher status update**.



Send to
 Email address
 Party

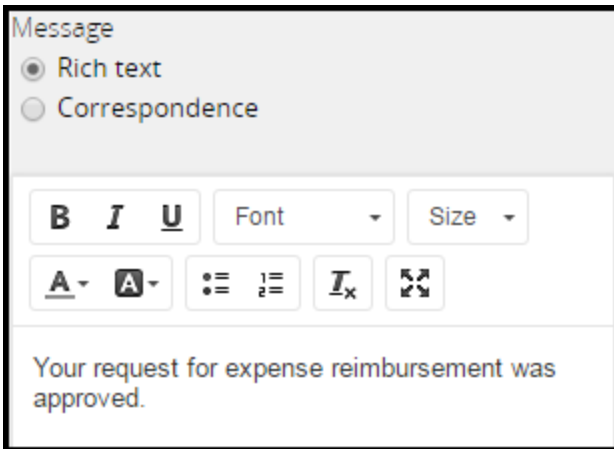
To*

employeeID@tgb.com

Subject*

Expense Voucher status update

10. In the body of the message, enter **Your request for expense reimbursement was approved**.



Message
 Rich text
 Correspondence

B *I* U Font Size

A **A**

-

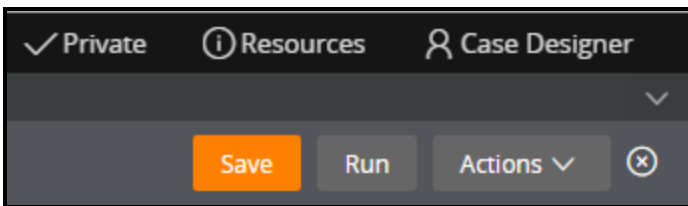
1= ~~I_x~~ [↗](#)

Your request for expense reimbursement was approved.

11. Click **Save** to save your changes.

Test your changes

1. In the upper right corner of the Case Designer work space, click **Run** to create a new instance of the Expense Report case type.



✓ Private Resources Case Designer

Save Run Actions

2. On the **New: Expense Report** screen, enter sample data, and then click **Done**.

Date Submitted	5/4/2016
Employee Details	
Employee ID	ator
First Name	Ray
Last Name	Dator
Department	Global Services

- On the **Enter Expense Details Screen**, enter sample data, and then click **Submit**.

New			Review	Payment
Enter Expense Details				A Administrator
Expenses				
+ Add Item - Delete				
	Expense Item	Expense Amount	Date of Purchase	
1	Box of Apples	14.95	5/2/1952	

- In the **Open assignments** section, click **Please approve or reject this expense report**.

Open assignments

🕒 Please approve or reject this Expense Report

📍 Manager

- Click **Approve**.
- The email appears as an attachment.

Attachments

(1)



Expense Report status upd...

E-11 | Correspondence | Case Designer



Guiding users through a business process

Exercise: Adding user guidance to a case type

Scenario

TGB reimburses employees for necessary and reasonable business expenses incurred in the conduct of TGB's business. TGB wants to ensure business expenses are reported accurately, and reimbursed in a timely and consistent manner according to company policy.

The goal for this iteration of the Expense Voucher case life cycle is to add directional cues, and set the relevant status of the case, to help case workers clearly understand the intent of an assignment.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

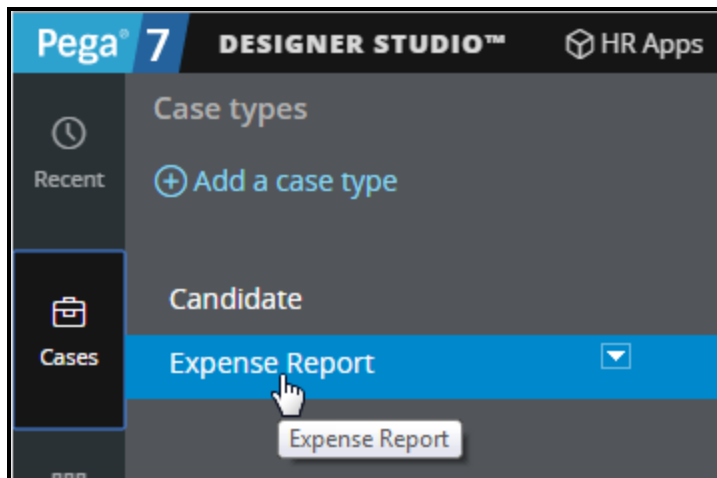
Your assignment

Add instructions for the **Enter Expense Details** assignment that reads **Please provide an itemized list of expenses**, and set the status to **New**.

Detailed steps

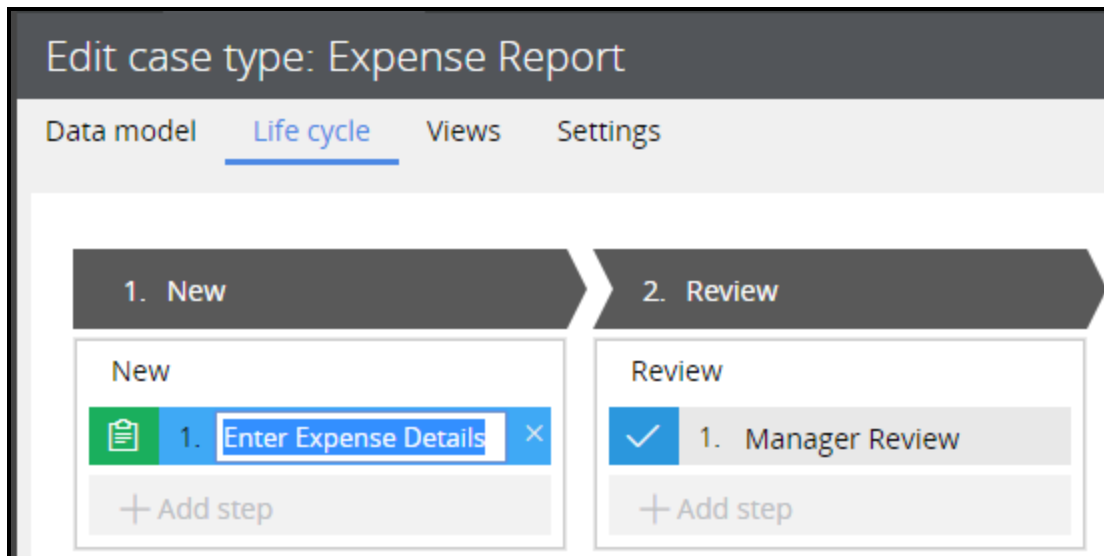
Follow these steps to add user guidance to a case type.

1. In Designer Studio, click **Cases** to view a list of available case types.

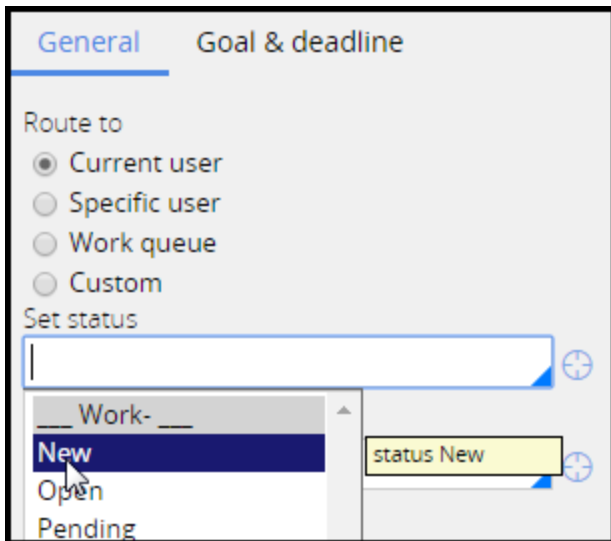


2. In the **Case types** panel, click **Expense Report** to edit the case type.

3. Select the **Enter Expense Details** step.

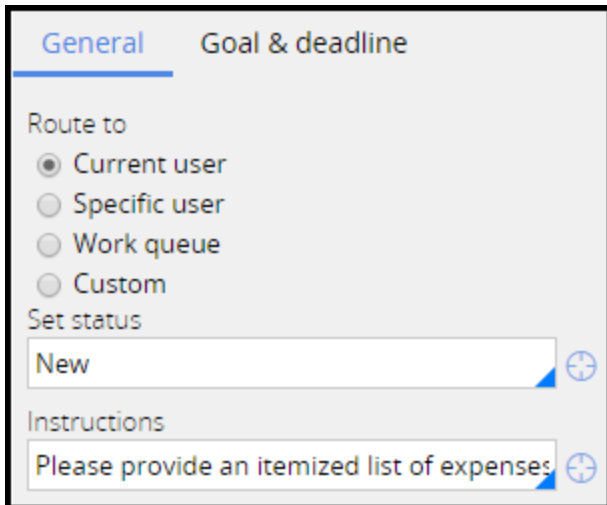


4. On the **General** tab of the contextual property panel, place your cursor in the **Set status** field, and then press the down arrow key.



5. Select **New** from the list of available options.
6. In the **Instructions** text field, enter **Please provide an itemized list of expense items** as the instructions for the assignment.

Important: DO NOT add a period to the end of the instruction.

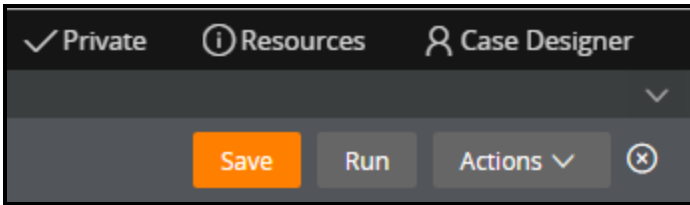


7. Click **Save**.

Test your changes

Create a new expense report case to test your changes.

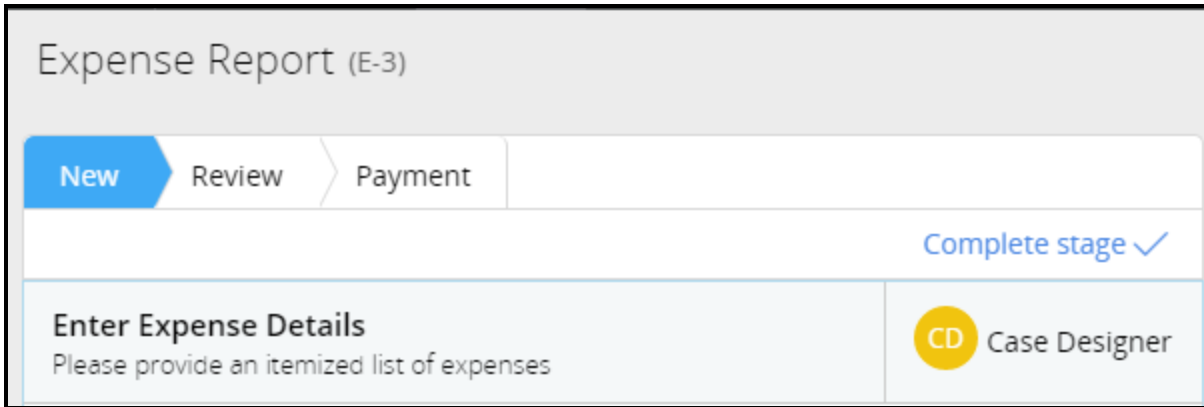
1. In the upper right corner of the Case Designer work space, click **Run** to create a new instance of the Expense Report case type.



2. On the **New: Expense Report** screen, click **Done**.

Note: Entering data on this screen is optional.

The instructions and status are displayed on the Enter Expense Details screen.



Modeling complex process flows

Exercise: Modeling a complex process flow

Scenario

To ensure expenses are reported accurately, all expense reimbursement requests go through a series of reviews.

The first review is conducted by the department manager, and is mandatory. If the department manager approves an expense reimbursement request, the request may require a review by the director. If a review by the director is required, the request advances to the *Director Review* process.

After the manager and director reviews are completed — and the request is approved — the request is evaluated to determine if an audit is required. If the request must be audited, the case is directed to the alternate *Auditing* stage. If the request does not require an audit, the case is directed to the primary *Payment* stage.

To help ensure reviews are conducted according to company policy, the *Manager Review* and *Director Review* processes should be updated to automate the evaluation of the company policies.

The following table provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	designer@tgb	rules

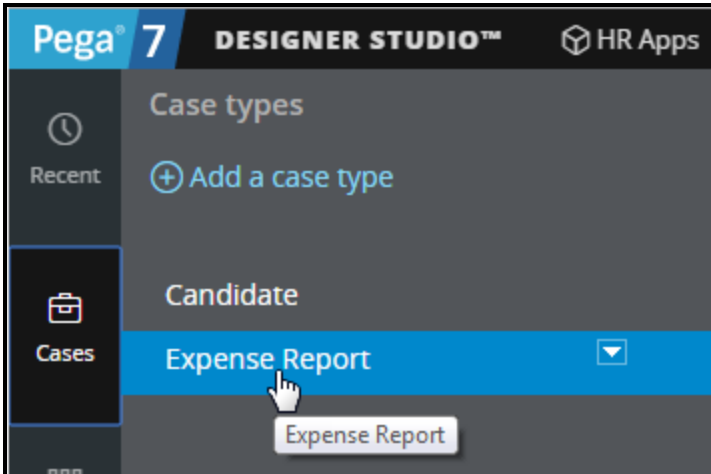
Your assignment

Update the *Manager Review* process to incorporate automated decisions for directing the process flow according to company policies.

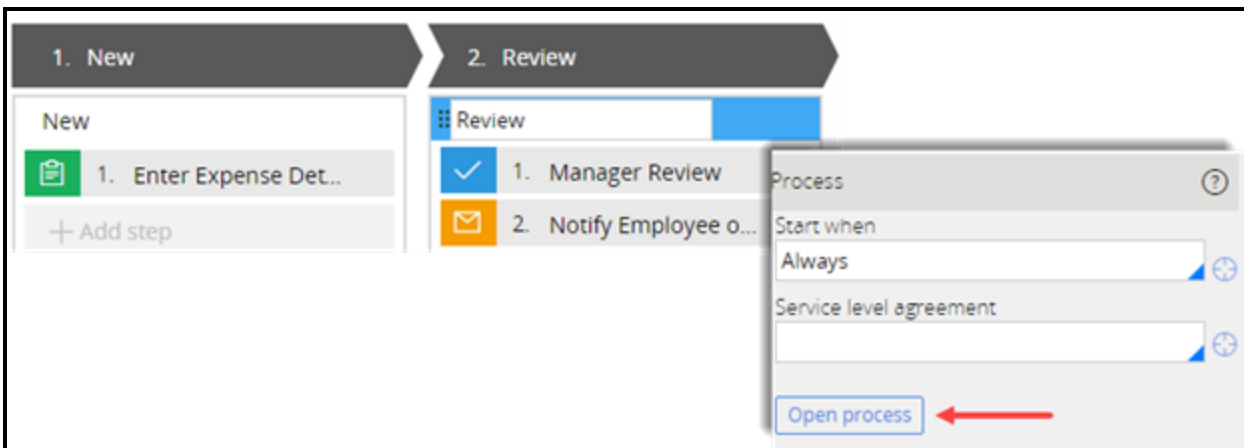
Detailed steps

Follow these steps to add automated decision steps to a process flow rule.

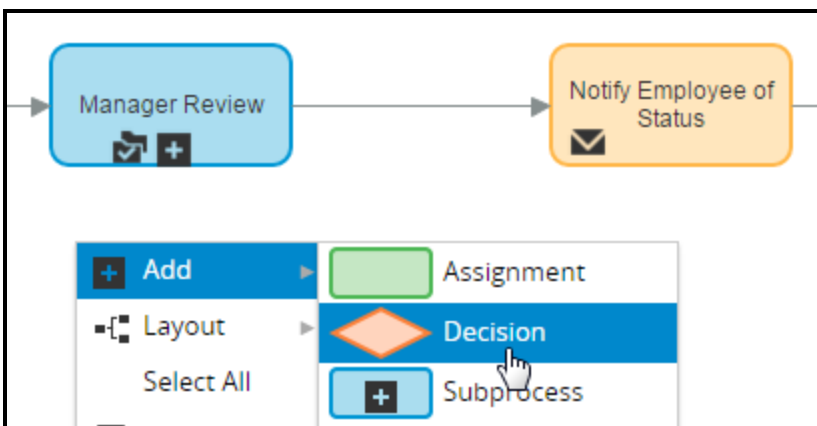
1. In Designer Studio, click **Cases** to view a list of available case types.



2. In the **Case types** panel, click **Expense Report** to edit the case type.
3. In the Review stage, select the first **Review** process.
4. From the contextual property panel, click **Open process**.

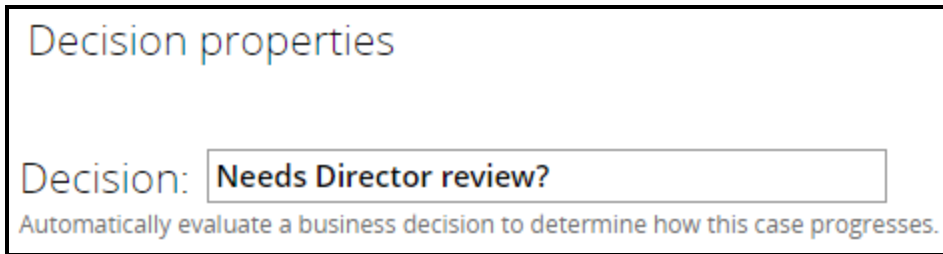


5. Right-click on the design canvas and select **Add > Decision**.



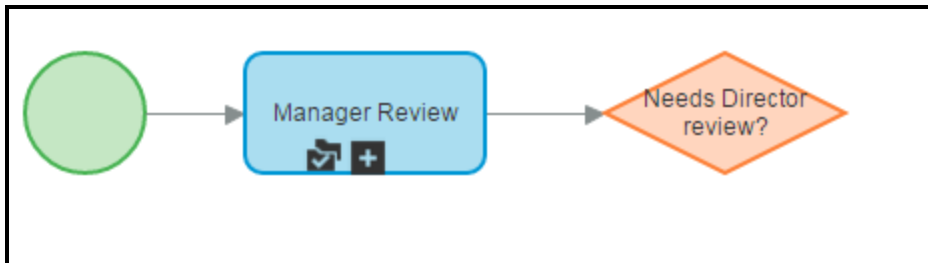
6. On the design canvas, double-click the decision shape to open the properties panel.

7. In the **Decision:** field, enter **Needs Director review?** as the label.



8. Click **Submit** to close the decision shape's properties panel.

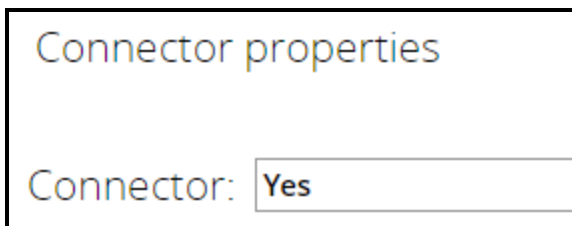
9. Connect the outgoing connector from the *Manager Review* step the Decision shape.



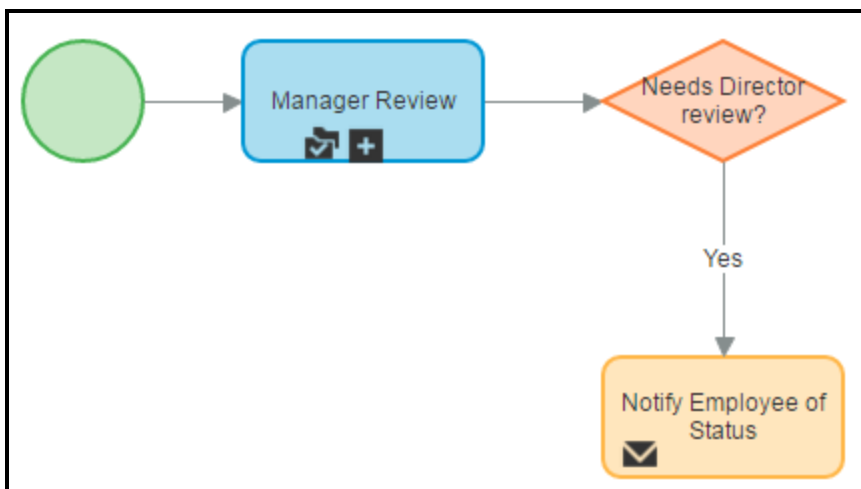
10. Connect the decision shape to the *Notify Employee of status* step.

11. Double-click the connector to open the properties panel.

12. In the **Connector:** field, enter **Yes** as the label.

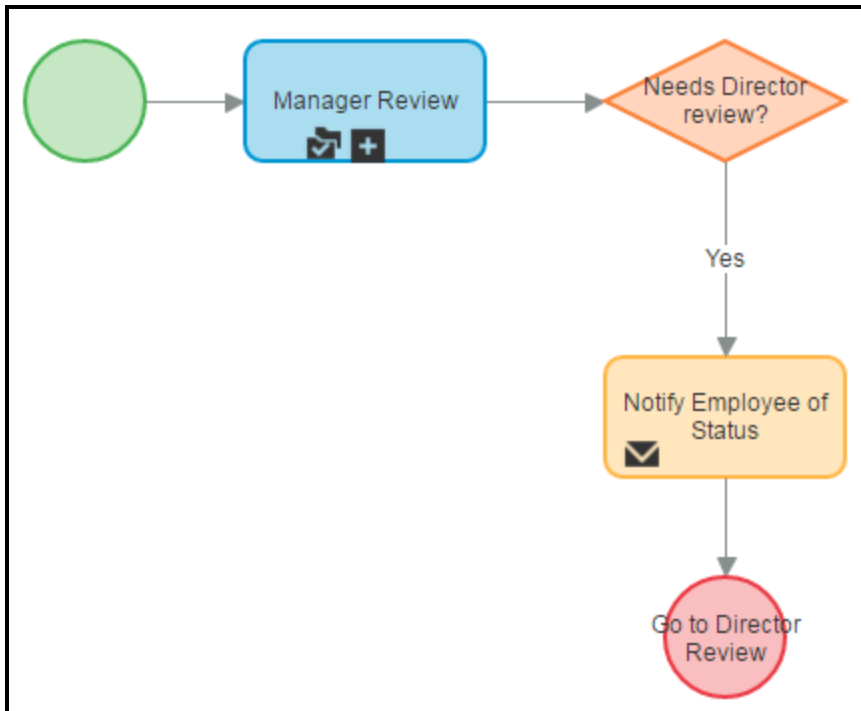


13. Click **Submit** to close the connector's properties panel.



14. Connect the *Notify Employee of Status* shape to the *End* shape.

15. Edit the properties of the End shape and enter **Go to Director Review** as the label.



16. Add a second decision shape to the design canvas and enter *Requires audit?* as the label.

17. Connect the *Needs Director review?* decision shape to the *Requires audit?* decision shape.

18. Edit the connector properties and enter **No** as the label.

19. Right-click on the design canvas and select **Add > Smart Shapes > Send Email**.

20. Edit the properties of the *Send Email* smart shape and enter **Notify Employee of Status** as the label.

21. Connect the *Requires audit?* decision shape to the *Notify Employee of Status* smart shape.

22. Edit the connector properties and enter **Yes** as the label.

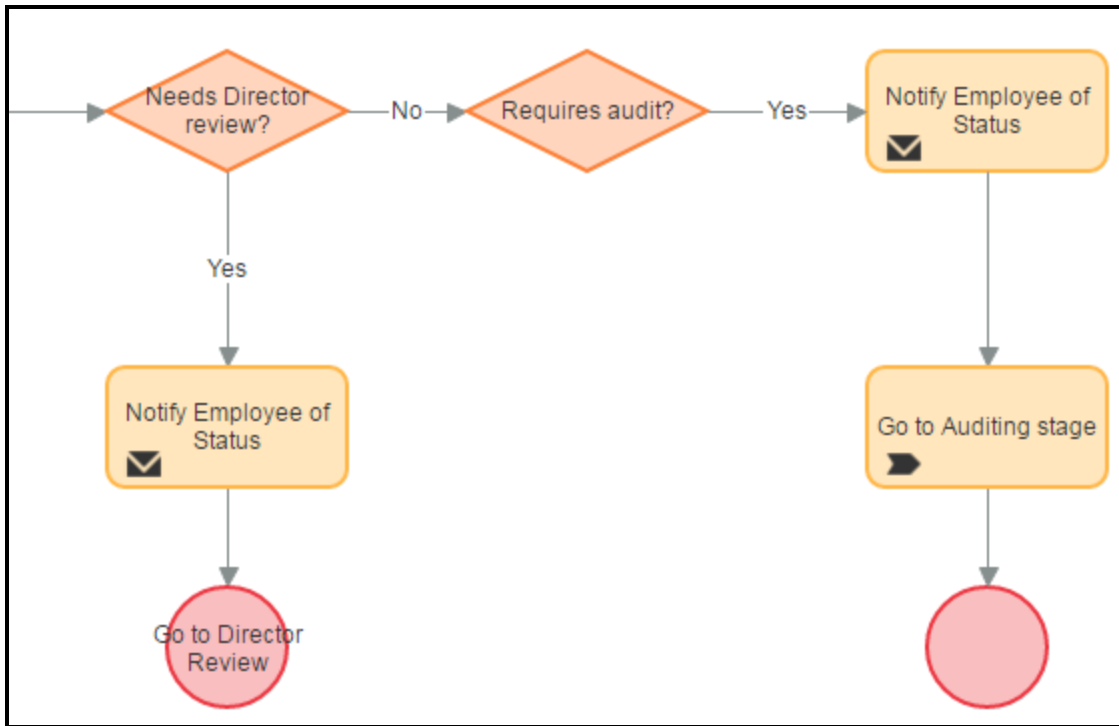
23. Add a *Change Stage* smart shape to the design canvass.

24. Edit the properties of the *Change Stage* smart shape and enter **Go to Auditing stage** as the label.

25. Connect the *Notify Employee of Status* smart shape to the *Go to Auditing stage* smart shape.

26. Add an *End* shape to the design canvas.

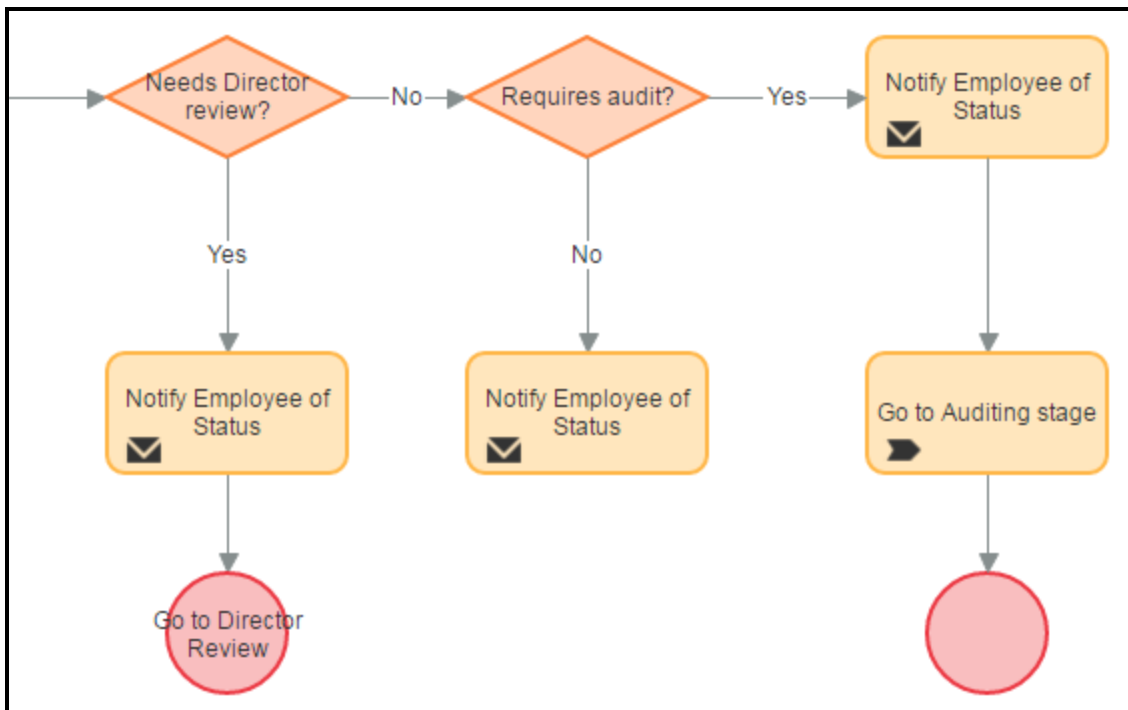
27. Connect the *Go to Auditing stage* smart shape to the *End* shape.



28. Add a *Send Email* smart shape to the design canvas, and enter **Notify Employee of Status** as the label.

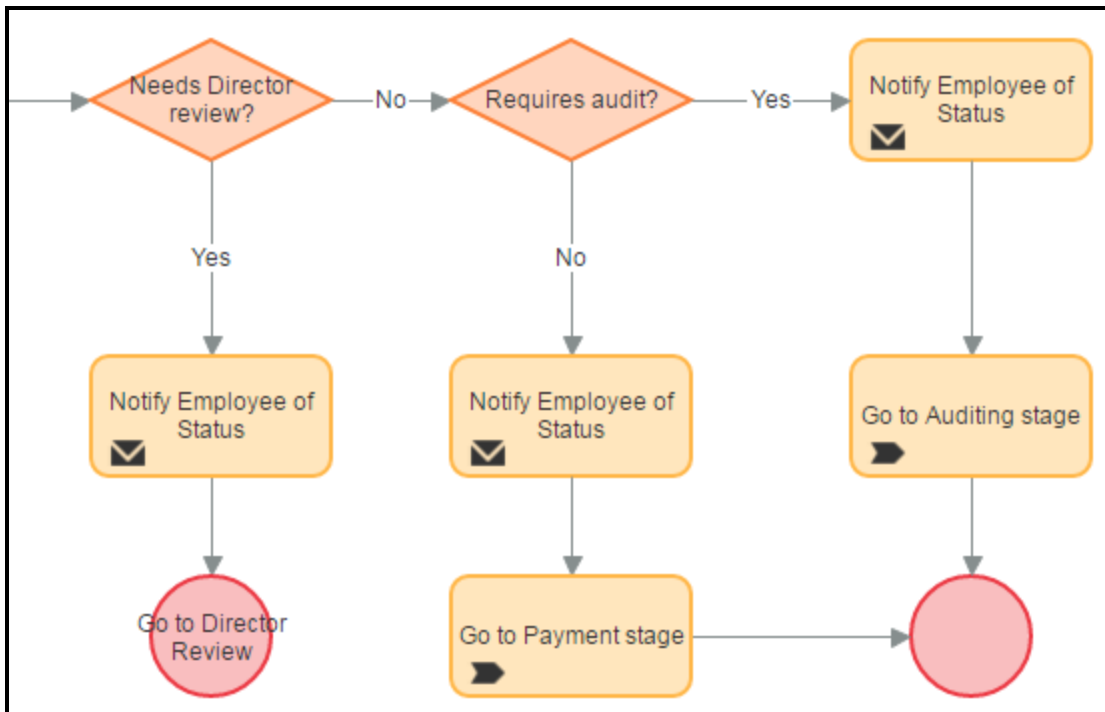
29. Connect the *Requires audit?* decision shape to the *Notify Employee of Status* smart shape.

30. Edit the connector properties and enter **No** as the label.



31. Add a *Change Stage* smart shape to the design canvas, and enter **Go to Payment stage** as the label.

32. Connect the *Notify Employee of Status* smart shape to the *Go to Payment stage* smart shape.
33. Connect the *Go to Payment stage* smart shape to the *End* shape.

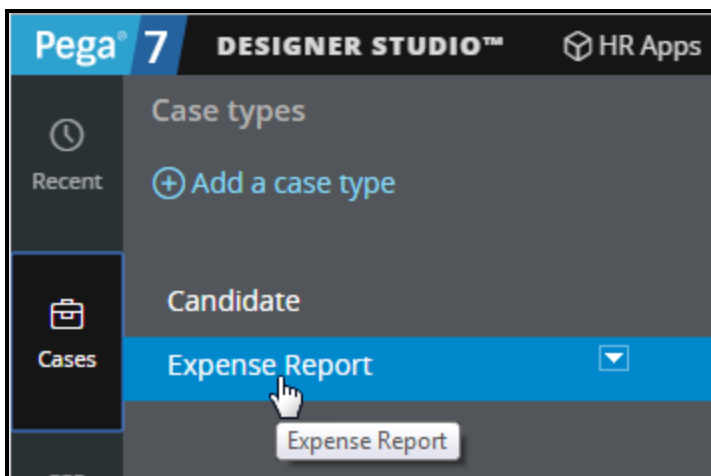


34. Click **Save**.

Verify your work

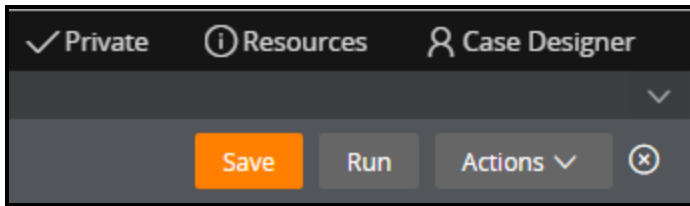
Create a new Expense Report case to test your changes.

1. In Designer Studio, click **Cases** to view a list of available case types.



2. In the **Case types** panel, click **Expense Report** to open the case type.

3. In the upper right corner of the Case Designer work space, click **Run** to create a new instance of the Expense Report case type.



4. On the **New: Expense Report** screen, click **Done**.

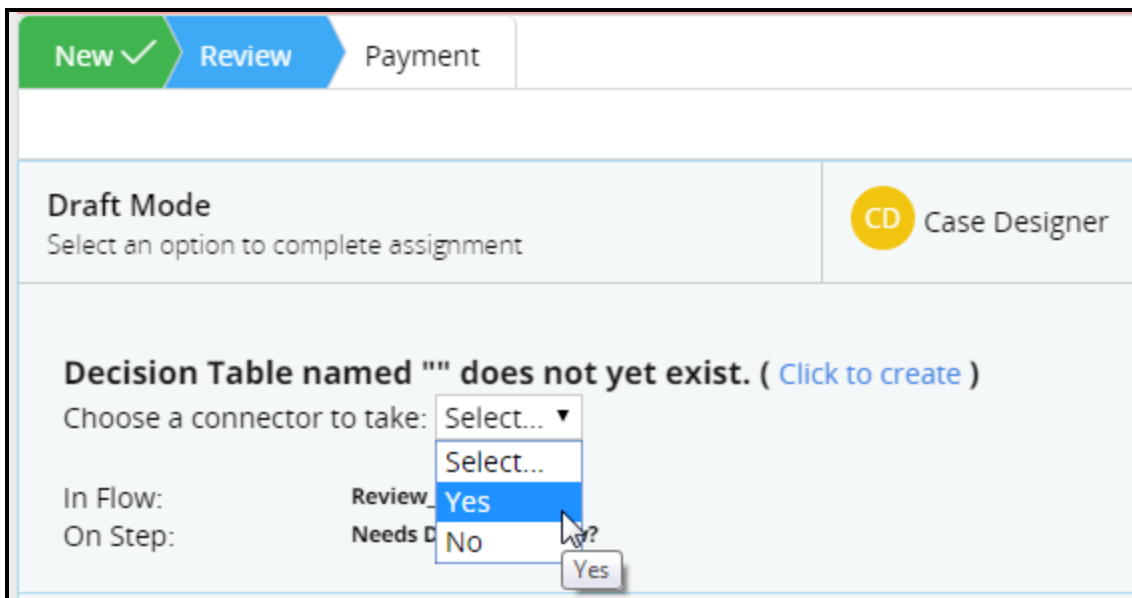
Note: Entering data on this screen is optional.

5. On the **Enter Expense Details** assignment screen, click **Submit**.

Note: Entering data on this screen is optional

6. On the **Expense Report Approval** assignment screen, click **Approve**.

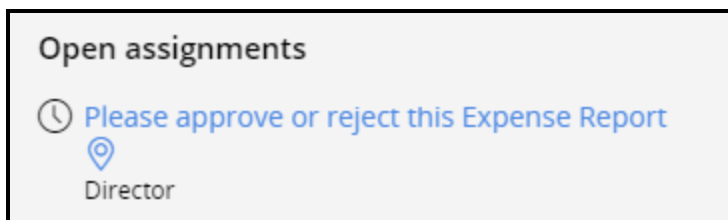
7. From the **Choose a connector to take:** drop-down list, select **Yes**.



Note: The flow is running in draft mode, and the decision shapes are not implemented. To continue advancing a flow that is in draft mode, Pega enables you to manually choose which connector to take.

8. Click **Submit**.

The case advances to the *Director review* process.



Run the Expense Report case type again. Advance the case and select **No** from the connector drop-down list.

The case advances to the *Requires audit?* decision step.

Draft Mode
Select an option to complete assignment

Decision Table named "" does not yet exist.
Choose a connector to take:

In Flow: **Review_Flow_0**
On Step: **Requires audit?**

Optional: Continue testing multiple scenarios.

REPORT PLANNING AND DESIGN

Process visibility through business reporting

Exercise: Modifying a standard report

Scenario

The HR department manager at TGB wants to be able to ensure the application satisfies business objectives. The business manager wants to create a new report category named **HR Reports** in which to organize standard reports customized for their reporting needs. The business manager also wants to customize the *Timeliness by operator and work type for my work group* standard report to remove the workgroup filter.

The following table provides the credentials you need to complete the exercise.

Role	Operator ID	Password
Case Designer	manager@tgb	rules

Your assignment

Create a new public report category named *HR Reports*.

Customize the *Timeliness by operator and work type for my work group* report so that the report does not filter on a specific work group, and save the modified report to the *HR Reports* category.

Detailed steps

Add a new report category

1. In the upper-right corner of the Case Manager portal, click **Add category**.
2. In the **Category name** field, enter **HR Reports**.
3. In the **Category description** field, enter a custom description, or accept the default entry.
4. Click **Submit**. The *HR Reports* category is displayed in the *Public categories* section.

Modify a standard report and save it to a new category

1. In the *Public categories* section, click **Monitor assignments**.
2. In the list of standard reports, click the *Timeliness by operator and work type for my workgroup* standard report.
3. From the Actions menu, select **Save as**. The *Save report as* modal dialog window displays.

4. In the **Title** field, change the title to **Timeliness by operator and work types**.
5. From the Category drop-down list, select **HR Reports**.
6. Click **Submit**. The report is copied to the *HR Reports* category and is available for editing.
7. In the Filtered by: section, click the **Work group = default@TGB** filter condition.
8. From the drop-down list, select **is not null**.
9. Click **Apply Changes**.
10. Click **Done editing** to save your changes to the report.

The report automatically displays available results.

APPLICATION DESIGN

Assessing Guardrail compliance

Exercise: Assessing guardrails compliance

Scenario

The Lead System Architect on your project has requested that you review the current state of the HR application, before beginning development of the Onboarding and Benefits enrollment cases.

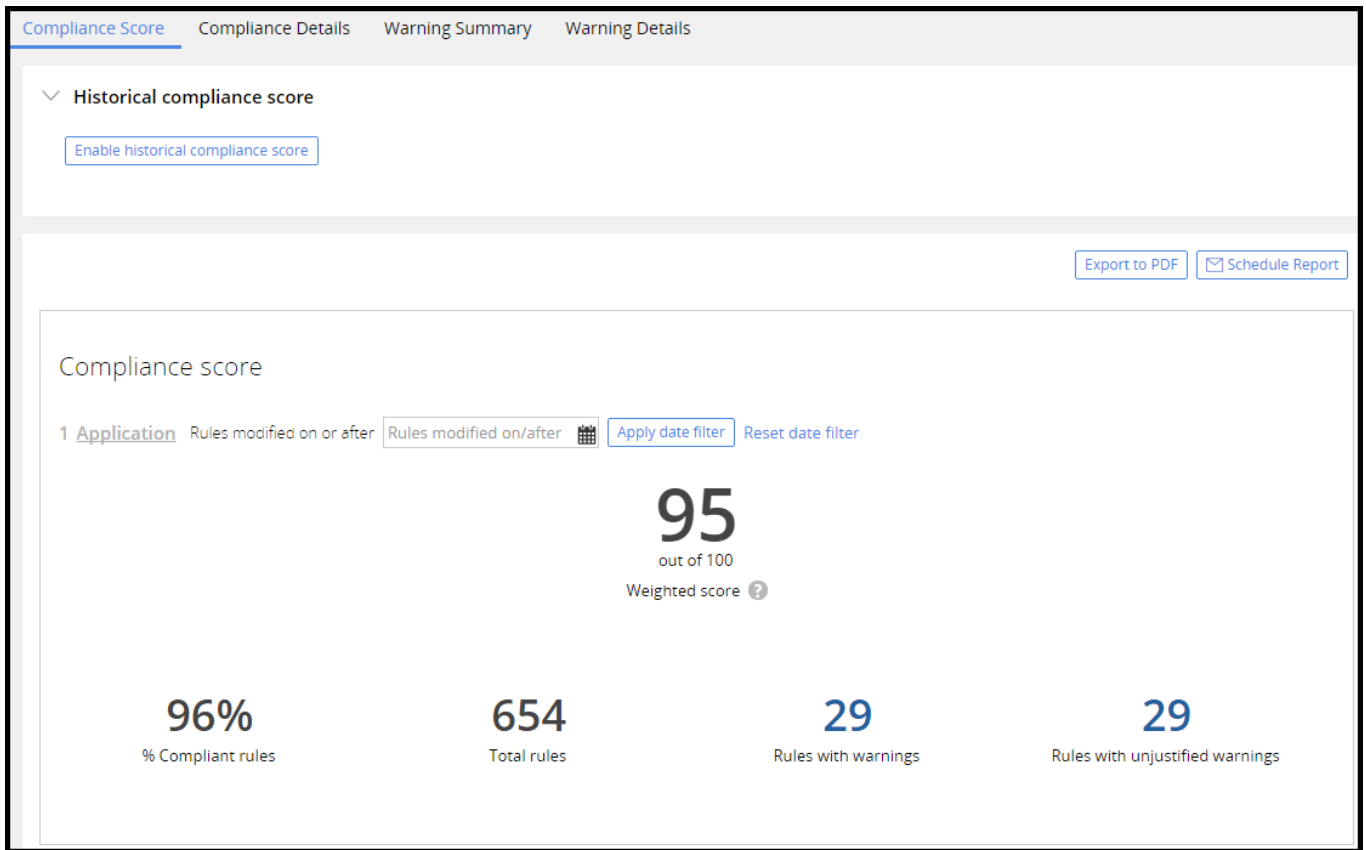
Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Review the compliance score for the HR application to establish a base for comparison during application development. As you develop the Onboarding and Benefits Enrollment case types in the application, return to the Guardrails landing page to review the readiness of the HR application for release and compare the readings to the set .

Detailed steps

1. From the **Designer Studio** menu, select **Application > Guardrails**. The Guardrails landing page opens on the Compliance Score tab.



2. Using the information on the Compliance Score tab, answer the following questions.
 - a. What is the current compliance score for the HR application?
 - b. How many rules currently have warnings? Of those rules, how many have unjustified warnings?
 - c. How many of the rules in the HR application are compliant?
3. Click the **Compliance Details** tab. The Guardrails landing page switches to the Compliance Details tab.
4. Using the information on the Compliance Details tab, answer the following questions.
 - a. How many performance warnings have been introduced into the application?
 - b. What is the severity of each performance warning?
 - c. How many maintainability warnings have been generated into the application?
 - d. What is the severity of each maintainability warning?

CASE DESIGN

Creating cases and child cases

Exercise: Creating the Onboarding and Benefit Enrollment case types

Scenario

TGB wants to extend its human resources (HR) application to process onboarding cases for new employees. These cases guide HR business partners through the onboarding process. This process includes:

- Collecting basic information about the employee to add to the HR database
- Preparing and emailing a welcome packet to the new employee
- Requesting that the Facilities department prepare a cubicle or office
- Requesting that the IT department prepare a computer with the appropriate software installed
- Allowing the employee to sign up for benefits, including company-sponsored health care

HR requests that you implement the benefits enrollment portion of the onboarding process as a separate case.

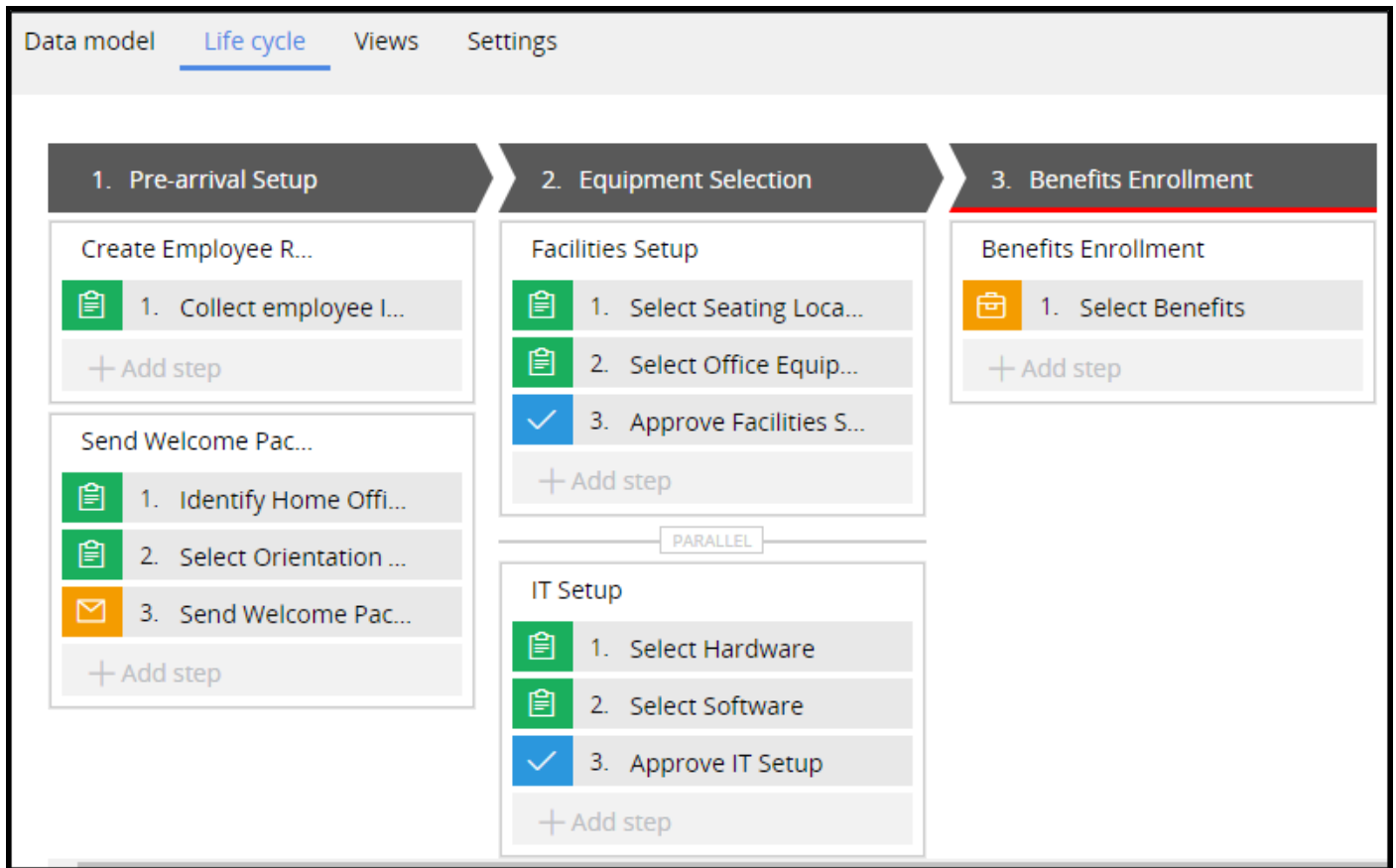
The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

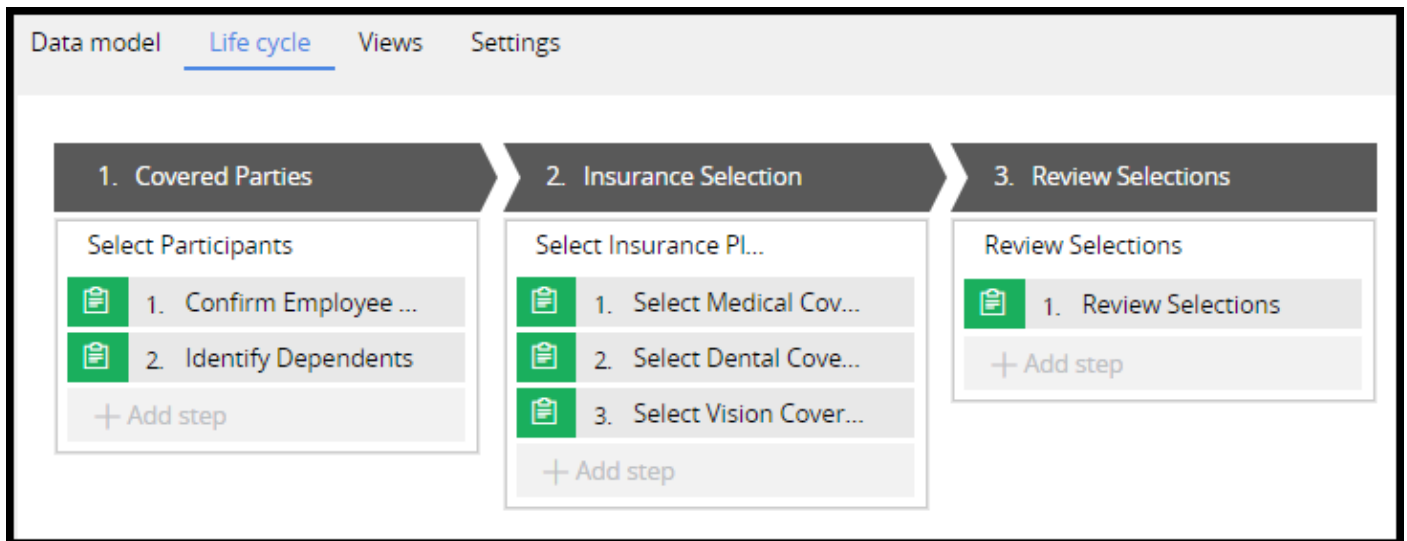
Your assignment

Create two new case types: one for onboarding cases, and the other for benefits enrollment cases. Configure the life cycle of each case to complete the processes that HR must perform. In addition, configure the Onboarding case type to automatically create a benefits enrollment child case as part of the onboarding process.

Onboarding



Benefits Enrollment



Detailed steps

Create the Onboarding case type

Create a case type to describe the onboarding process.

1. In Designer Studio, open the **Cases Explorer**.
2. Click **Add a case type**. The Add case type dialog opens.
3. In the **Name** field, enter **Onboarding**.



4. Click **Submit**. The Add case type dialog closes, and the Onboarding case type now appears in the Cases Explorer.

Create the Benefits Enrollment case type as a child case for Onboarding

Create a case type to describe the benefits enrollment process. Create the case type as a child case of the onboarding process, to make completion of an onboarding case dependent upon completing a benefits enrollment case.

1. In the Cases Explorer, right-click **Onboarding** and select **Add a child case type**. The Add case type dialog opens.
2. Select **New case type**.
3. In the **Name** field **Benefits Enrollment**.

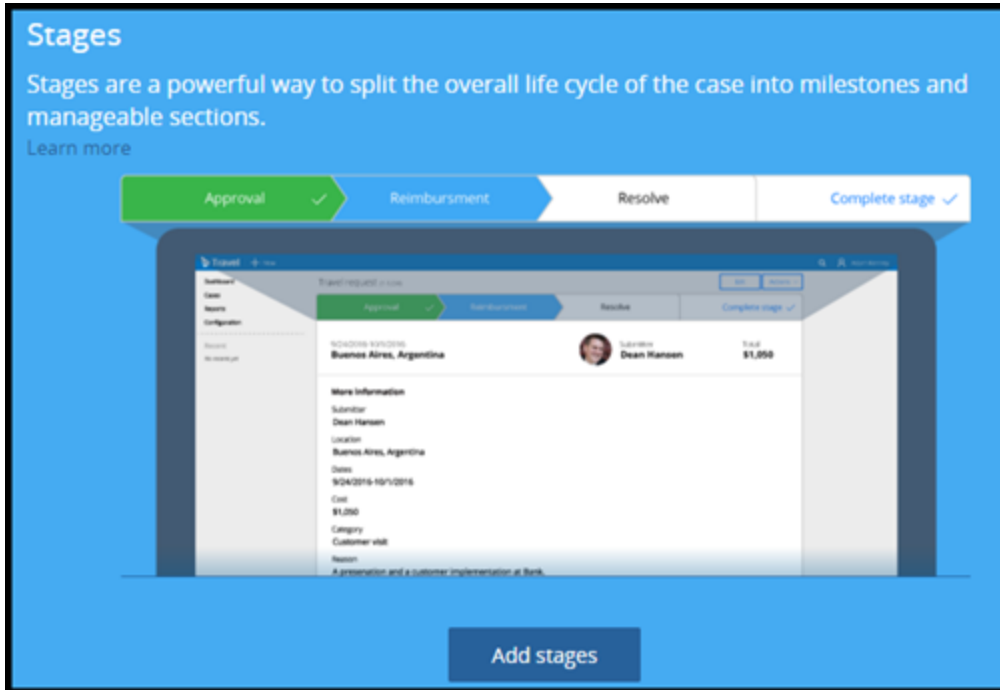


4. Click **Submit**. The Add case type dialog closes and the Benefits Enrollment case type now appears under the Onboarding case type in the Cases Explorer.

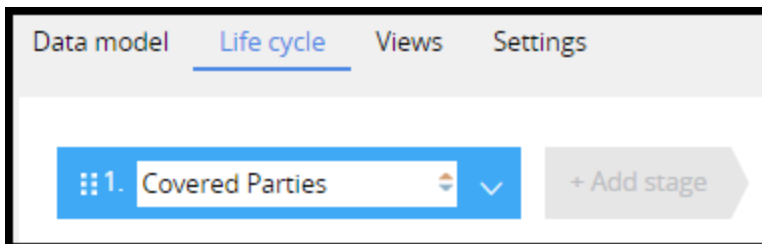
Add stages to the life cycle of the Benefits Enrollment case type

Add stages to describe the life cycle of a benefits enrollment case.

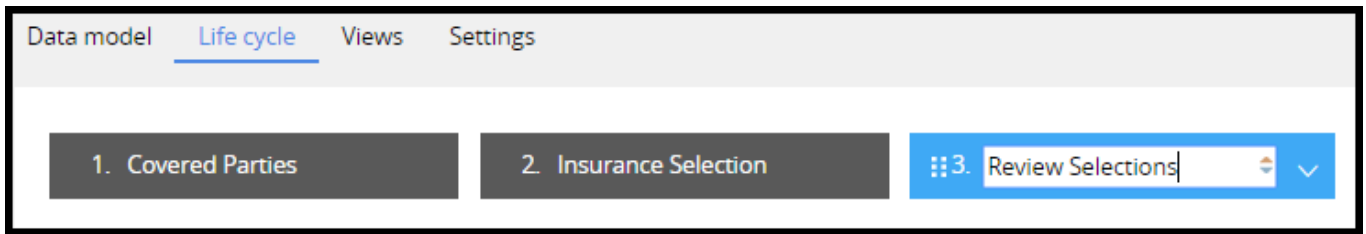
1. In the Case Designer, click **Life cycle**.



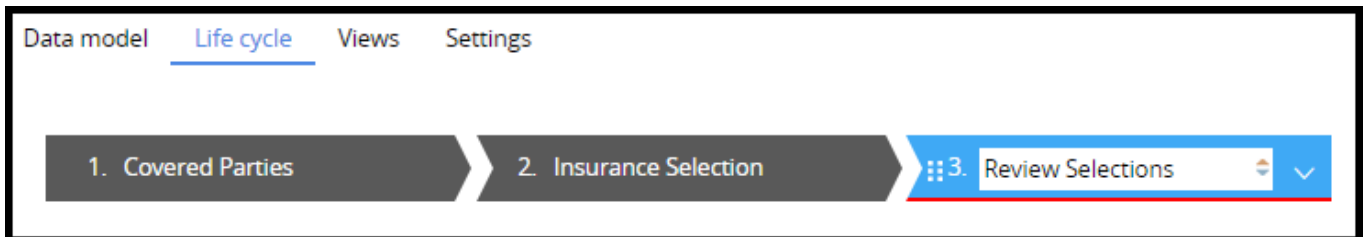
2. Click **Add stages**. A case life cycle with one stage opens.
3. In the field on the default stage, enter **Covered Parties**.



4. Click **+Add stage**. A second stage appears to the right of the first stage.
5. In the field on the second stage, enter **Insurance Selection**.
6. Click **+Add stage**. A third stage appears to the right of the second stage.
7. In the field on the third stage, enter **Review Selections**.



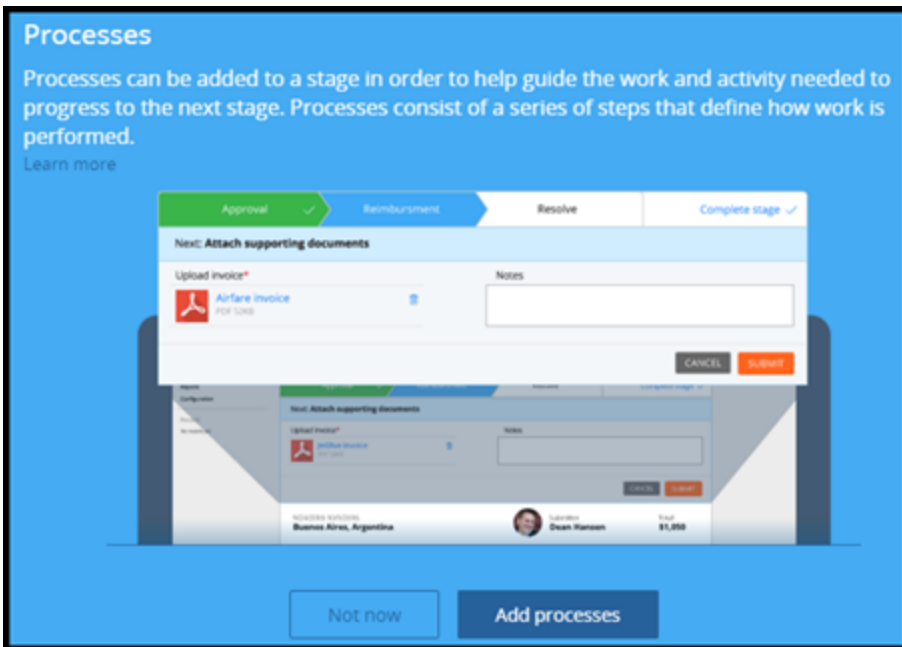
8. Click **Got it**. The Stage Properties panel opens.
9. Select the **Covered Parties** stage.
10. In the properties panel, select **Automatically move to the next stage**.
11. Select the **Insurance Selection** stage.
12. In the properties panel, select **Automatically move to the next stage**.
13. Select the **Review Selections** stage.
14. In the properties panel, select **Resolve the case**.
15. Click **Save**. The case life cycle updates to reflect the current stage configuration.



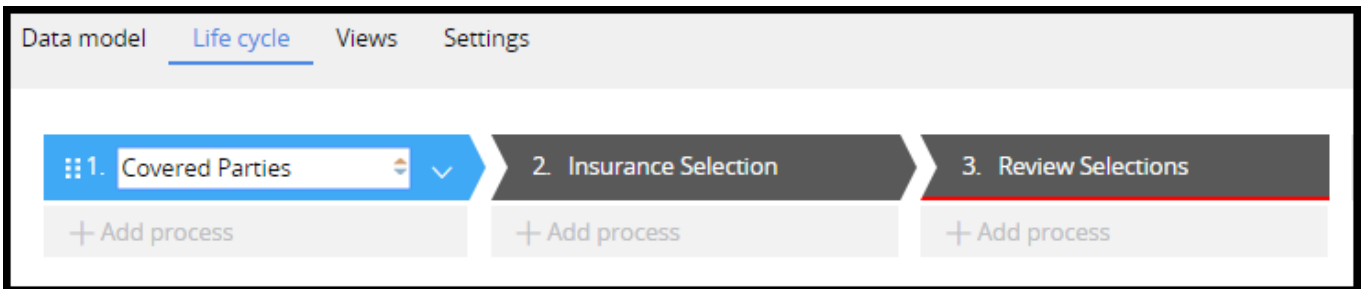
Add steps to the life cycle for the Benefits Enrollment case type

Add steps to the Benefits Enrollment case type, to represent the tasks and actions performed to process a benefits enrollment case.

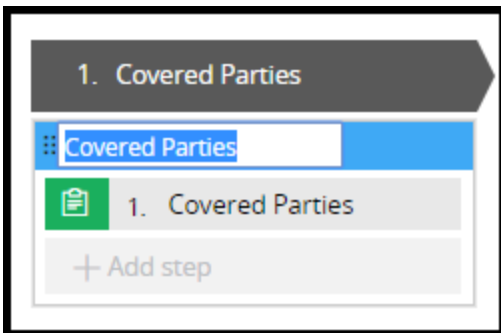
1. In the Case Designer, in the lower right corner, click **Add processes?**. The Case Designer displays an image explaining the use of processes in an application.



2. Click **Add processes**. The case life cycle appears, with links in each stage to add processes.

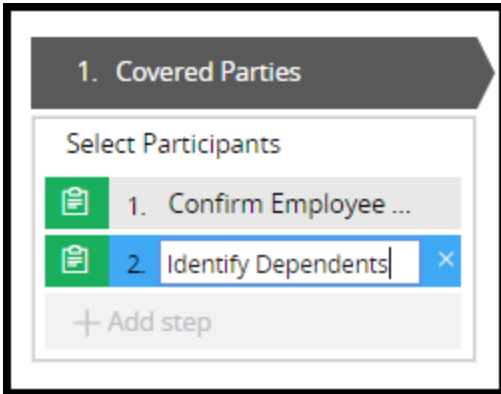


3. Under the Covered Parties stage, click **+ Add process**. A process with one step appears under the Covered parties stage.



4. Click **Got it**.
5. In the highlighted field, enter **Select Participants**.
6. Select the first step in the process and enter **Confirm Employee Details**.
7. Under the Confirm Employee Details step, click **+ Add step**. A pop-up opens to select the type of step to add.
8. Select **Collect Information**. A second step with an empty field is added to the process.

9. In the empty field, enter **Identify Dependents**.

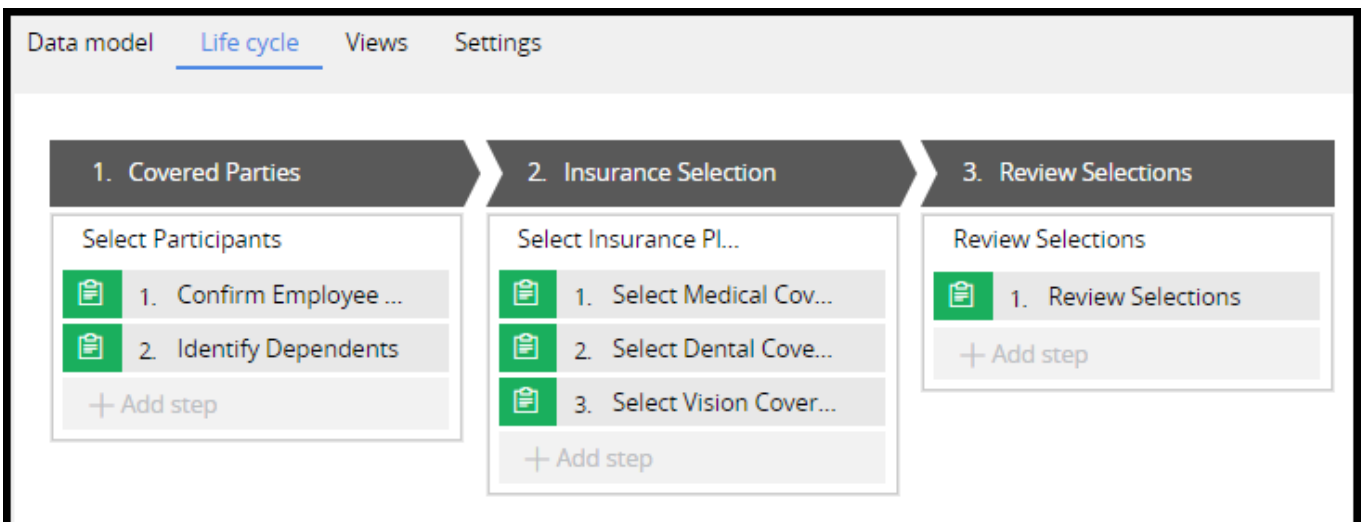


10. Under the Insurance Selection stage, click **+ Add process**.

11. Repeat steps 5-9 to create a process named **Select Insurance Plans** with three steps: **Select Medical Coverage**, **Select Dental Coverage**, and **Select Vision Coverage**.

12. Under the Review Selections stage, click **+ Add process**.

13. Click **Save**.

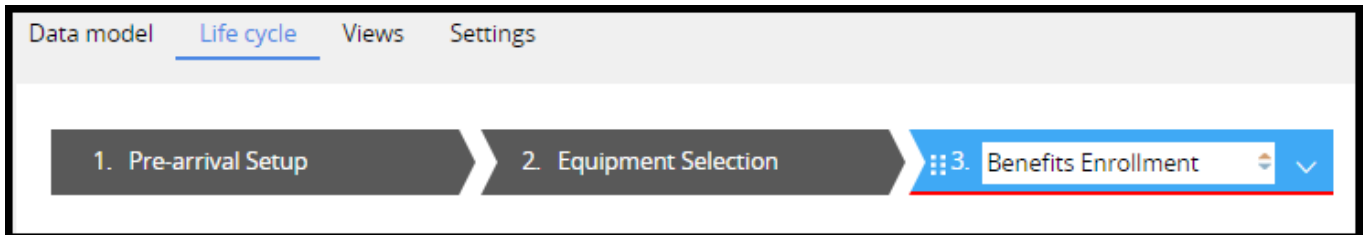


Add stages to the life cycle for the Onboarding case type

Add stages to describe the life cycle of an onboarding case.

1. In the Cases Explorer, click **Onboarding**. The Onboarding case opens in the Case Designer and displays the Life cycle tab.
2. Click **Add stages**. A case life cycle with one stage opens.
3. In the field on the default stage, enter **Pre-arrival Setup**.
4. Click **+Add stage**. A second stage appears to the right of the first stage.
5. In the field on the second stage, enter **Equipment Selection**.
6. Click **+Add stage**. A third stage appears to the right of the second stage.
7. In the field on the third stage, enter **Benefits Enrollment**.

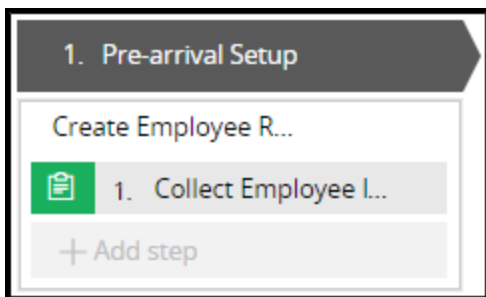
8. Click **Got it**. The Stage Properties panel opens.
9. Select the **Pre-arrival setup** stage.
10. In the properties panel, select **Automatically move to the next stage**.
11. Select the **Equipment Selection** stage.
12. In the properties panel, select **Automatically move to the next stage**.
13. Select the **Benefits Enrollment** stage.
14. In the properties panel, select **Resolve the case**.
15. In the Resolution status field, select **Resolved-Completed**.
16. Click **Save**. The case life cycle updates to reflect the current stage configuration.



Add steps to the life cycle for the Onboarding case type

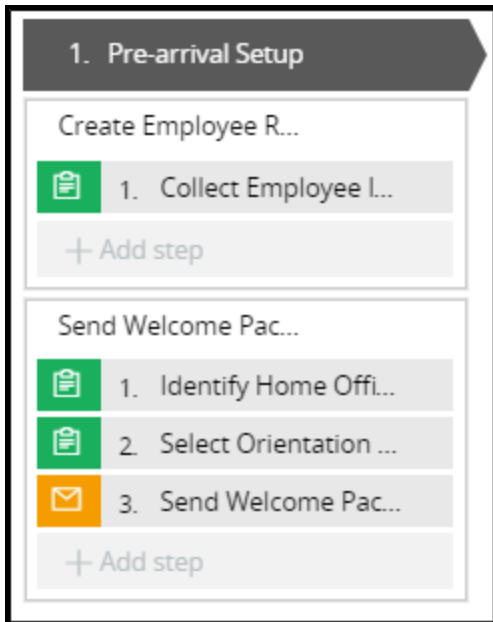
Add steps to the Onboarding case type, to represent the tasks and actions performed to process an onboarding case.

1. In the Case Designer, in the lower right corner, click **Add processes?..**
2. Click **Add processes**. The case life cycle appears, with links in each stage to add processes.
3. Under the Pre-arrival Setup stage, click **+ Add process**. A process with one step appears under the Pre-arrival Setup stage.
4. Click **Got it**.
5. In the highlighted field, enter **Create Employee Record**.
6. Select the first step in the process and enter **Collect Employee Info**.

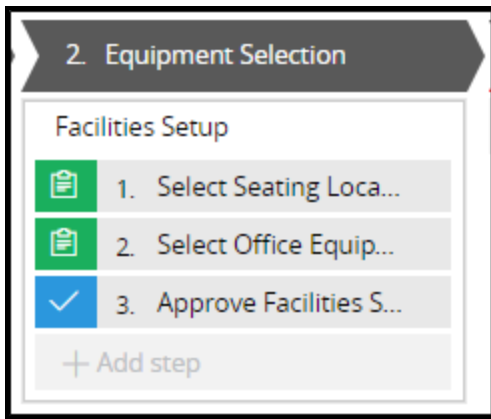


7. Position the cursor over the **Pre-arrival Setup** stage. A down arrow icon appears on the stage to indicate the Stage menu.
8. From the Stage menu, select **Add process**. A second process displays in the Pre-arrival Setup stage.
9. Select the new process. In the highlighted field, enter **Send Welcome Packet**.
10. Select the first step in the process and enter **Identify Home Office**.

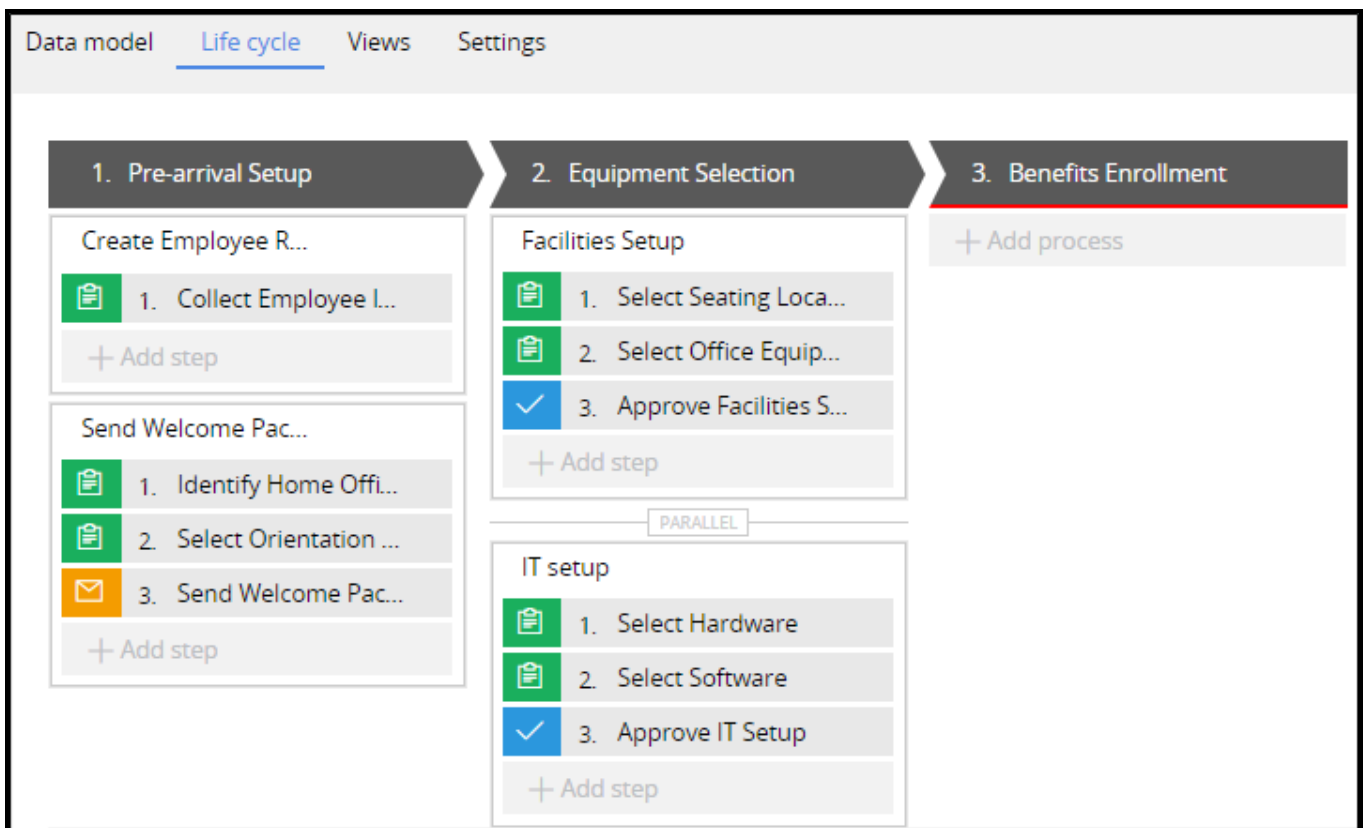
11. Under the Identify Home Office step, click **+ Add step**. A pop-up opens to select the type of step to add.
12. Click **Collect information**. A second step is added to the process.
13. In the empty field, enter **Select Orientation Plan**.
14. Under the Select Orientation Plan step, click **+ Add step**. A pop-up opens to select the type of step to add.
15. Select **More > Utilities > Send Email**.
16. Click **Select**. A third step is added to the process.
17. In the highlighted field, enter **Send Welcome Packet**.



18. Under the Equipment Selection stage, click **+ Add process**.
19. In the highlighted field, enter **Facilities Setup**.
20. Select the first step in the process and enter **Select Seating Location**.
21. Under the Select Seating Location step, click **+ Add step**. A pop-up opens to select the type of step to add.
22. Select **Collect Information**.
23. In the empty field, enter **Select Office Equipment**.
24. Under the Facilities setup step, click **+ Add step**. A pop-up opens to select the type of step to add.
25. Select **Approve/Reject**.
26. In the Highlighted field, enter **Approve Facilities Setup**.



27. Position the cursor over the **Equipment selection** stage. A down arrow icon appears on the stage to indicate the Stage menu.
28. From the Stage menu, select **Add parallel process**. A second process displays in the Equipment selection stage.
29. In the highlighted field, enter **IT Setup**.
30. Repeat steps 20-26 to add three steps to the IT Setup process: **Select Hardware**, **Select Software**, and **Approve IT Setup**.
31. Click **Save**.



Configure the Onboarding case type to create a Benefits Enrollment child case

Configure an onboarding case to create a benefits enrollment case as a child case. This requires the user to complete the benefits enrollment case before they can complete the onboarding case.

1. Under the Benefits enrollment stage, click **+ Add process**.
2. Under the Benefits enrollment step, click **+ Add step**. A pop-up opens to select the type of step to add.
3. Select **More > Utilities > Create Case(s)**.
4. Click **Select**. A second step is added to the process.
5. In the highlighted field, enter **Select Benefits**.
6. In the properties panel for the Select Benefits step, select **Create a child case**.
7. From the Case type drop-down field, select **Benefits Enrollment**.
8. Delete the first step in the process.
9. Click **Save**.

The screenshot displays a software interface for configuring a case lifecycle. At the top, there are tabs for 'Data model', 'Life cycle' (which is selected), 'Views', and 'Settings'. Below the tabs, the lifecycle is visualized as a sequence of three stages, each represented by a dark grey arrow pointing right:

- 1. Pre-arrival Setup**: Contains two process boxes. The first, 'Create Employee R...', has a step '1. Collect employee I...' with a green icon and a '+ Add step' button. The second, 'Send Welcome Pac...', has steps '1. Identify Home Offi...', '2. Select Orientation ...', and '3. Send Welcome Pac...' with green and orange icons, and a '+ Add step' button.
- 2. Equipment Selection**: Contains two process boxes. The first, 'Facilities Setup', has steps '1. Select Seating Loca...', '2. Select Office Equip...', and '3. Approve Facilities S...' with green and blue icons, and a '+ Add step' button. The second, 'IT Setup', has steps '1. Select Hardware', '2. Select Software', and '3. Approve IT Setup' with green and blue icons, and a '+ Add step' button. A 'PARALLEL' label is positioned between the 'Facilities Setup' and 'IT Setup' boxes.
- 3. Benefits Enrollment**: Contains one process box, 'Benefits Enrollment', which has a step '1. Select Benefits' with an orange icon and a '+ Add step' button.

Run through the onboarding process to verify case behavior

Test the onboarding case to verify the steps added to the case life cycle.

1. From the **+Create** menu, select **New > Onboarding**. The Create view opens.
2. Click **Done**. The Collect Employee Info form opens.
3. Click **Advance this case**. The Identify Home Office form opens.
4. Click **Advance this case**. The Select Orientation Plan form opens.
5. Click **Advance this case**. The Select Hardware form opens.
6. Click **Advance this case**. The Select Software form opens.
7. Click **Advance this case**. The Approval form opens.
8. Click **Approve**. A confirmation form opens.
9. Under **Open Assignments**, click **Facilities setup (Equipment setup)**. The Select Seating Location form opens.
10. Click **Advance this case**. The Select Office Equipment form opens.
11. Click **Advance this case**. The Approval form opens.
12. Click **Approve**. The Confirm Employee Details form for the Benefits Enrollment case opens.
13. Click **Advance this case**. The Identify Dependents form opens.
14. Click **Advance this case**. The Select Medical Coverage form opens.
15. Click **Advance this case**. The Select Dental Coverage form opens.
16. Click **Advance this case**. The Select Vision Coverage form opens.
17. Click **Advance this case**. The Review Selections form opens.
18. Click **Advance this case**. A confirmation form opens to confirm that case processing has completed.

Skip the Create view when creating an Onboarding case

The default configuration for the Onboarding case type is to present the Create view when the user creates a case, before the first step in the case life cycle. This form is not used to create an Onboarding case. Configure the Onboarding case type to skip this form when a user creates an onboarding case.

1. In the Designer Studio, click the **Onboarding** tab to return to the Onboarding case type in the Case Designer.
2. In the Case Designer, click the **Settings** tab.
3. On the Settings tab, click **General**. The General settings panel opens.
4. Under Behavior, click **Skip 'Create' view when users create a new case**.

General

Description*
Onboarding

Initial urgency
10

Behavior

Skip 'Create' view when users create a new case

Offline mode

Enable offline

5. Click **Save** to commit your changes to the Onboarding case type.

DATA MODEL DESIGN

Data elements in Pega applications

Exercise: Defining the Onboarding and Benefits Enrollment data models

Scenario

The HR department has identified information needed to process onboarding and benefits enrollment cases. Both onboarding and benefits enrollment cases must collect information about employees, such as their employment status, manager, and start date. Benefits enrollment cases must collect information about an employee's dependents to begin insurance coverage. Onboarding cases must collect information needed by the Facilities department to assign a seating location in one of TGB's offices.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create data elements required by the Onboarding and Benefits Enrollment case types. To do this:

- Create the following properties for the Onboarding case type only:
 - Remote (True/False)
 - Office (Text)
- Add the following properties to the Employee data type:
 - Contractor (True/False)
 - Manager (Text)
 - Start Date (Date)
- Create a Dependents page list and Dependent data type for the Benefits Enrollment case.
- Create the Relationship property for the Dependent data type with two allowed values:
 - Spouse/Partner
 - Child
- Update the Dependent data type to inherit data elements from the standard class *Data-Party*.

Detailed steps

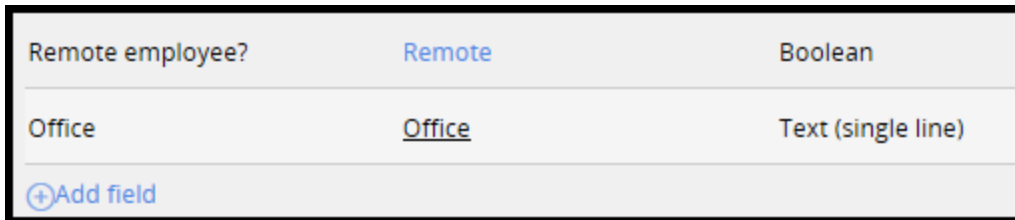
Create properties used to describe onboarding cases

1. In the Cases Explorer, click **Onboarding**. The Onboarding case type opens in the Case Designer.
2. Click the **Data model** tab.
3. On the **Data model** tab, click **Add field**. A row of fields appears on the tab.
4. Under Name, enter **Remote employee?**.
5. Under ID, enter **Remote**.
6. From the drop-down list under Type, select **Boolean**. This completes the definition for the Remote property.



Remote employee?	Remote	Boolean
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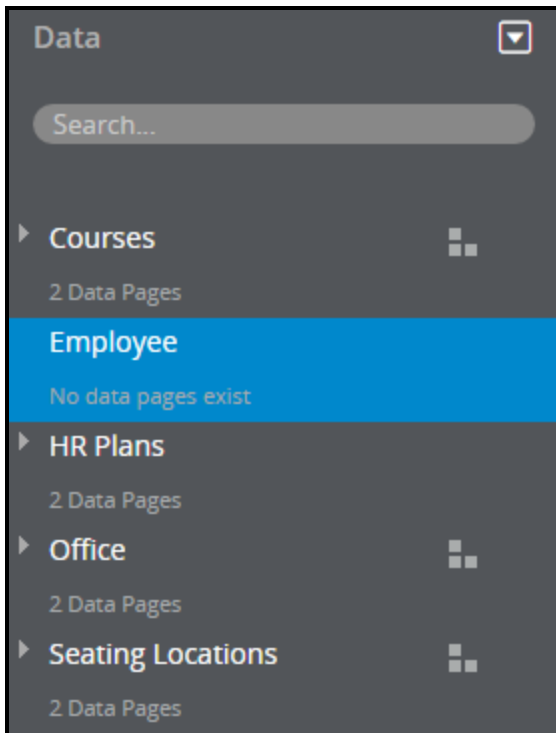
7. Click **Add field**.
8. Under Name, enter **Office**.
9. Click **Save** to commit your changes to the data model for the Onboarding case type.



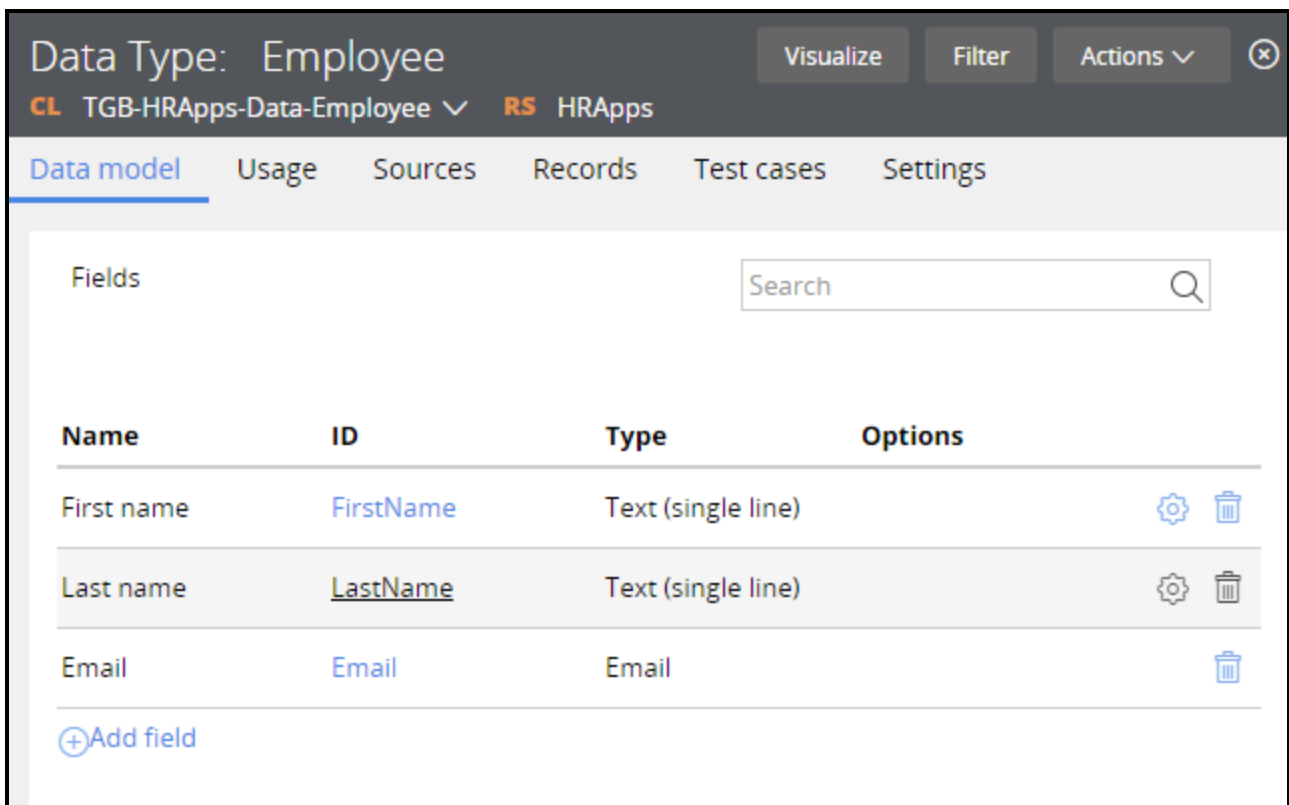
Remote employee?	Remote	Boolean
Office	Office	Text (single line)
+Add field		

Extend the Employee data class with new properties for onboarding cases

1. In the navigation area, click **Data** to open the Data Explorer. The Data Explorer displays the set of data types available to the HRApps application.



2. In the Data Explorer, click **Employee**. The work area displays the Employee data type form.



3. On the Data Model tab of the Employee data type, click **Add field**.

4. In the left-most field, enter **Contractor**.

5. from the drop-down list, select **Boolean**.

6. Click **Add field**.
7. In the left-most field, enter **Manager**.
8. From the drop-down list, select **Text (Single line)**.
9. Click **Add field**.
10. In the left-most field, enter **Start Date**.
11. From the drop-down list, select **Date only**.
12. Press the **Tab** key to exit the drop-down list. The Employee data type form displays the three properties you created.

Contractor	Contractor	Boolean
Manager	Manager	Text (single line)
Start date	<u>StartDate</u>	Date only

Create the Dependents page list and Dependent data class

Create the Dependents page list and Dependent data class to model dependents for benefits enrollment cases.

1. In the Cases Explorer, click **Benefits Enrollment**. The Benefits Enrollment case type opens in the Case Designer.
2. On the **Data Model** tab, click **Add field**.
3. Under Name, enter **Dependents**.
4. From the Type list, select **Field group (list)**. An empty field and **New** link are displayed under Options.

Name	ID	Type	Options
Dependents	Dependents	Field group (list) ▼	Enter data type ▾ New
+ Add field			

5. Click **New**. A pop-up appears to define the data class.
6. In the pop-up, in the first field enter **Dependent**.
7. Expand **Advanced**.
8. In the **Parent class** field, enter **TGB-HRApps-Data**.

Dependent

Dependent

Advanced

Parent class

TGB-HRApps-Data

Identifier: TGB-HRApps-Data-Dependent [Edit](#)

9. Click **Submit**. The pop-up closes and the definition of the Dependents property updates.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Dependent New ✓

[+Add field](#)

Add the Relationship property to the Dependent data class

1. Click **Actions** and select **Refresh**. The Case Designer refreshes and returns to the Life cycle tab.
2. Click the **Data model** tab.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent

[+Add field](#)

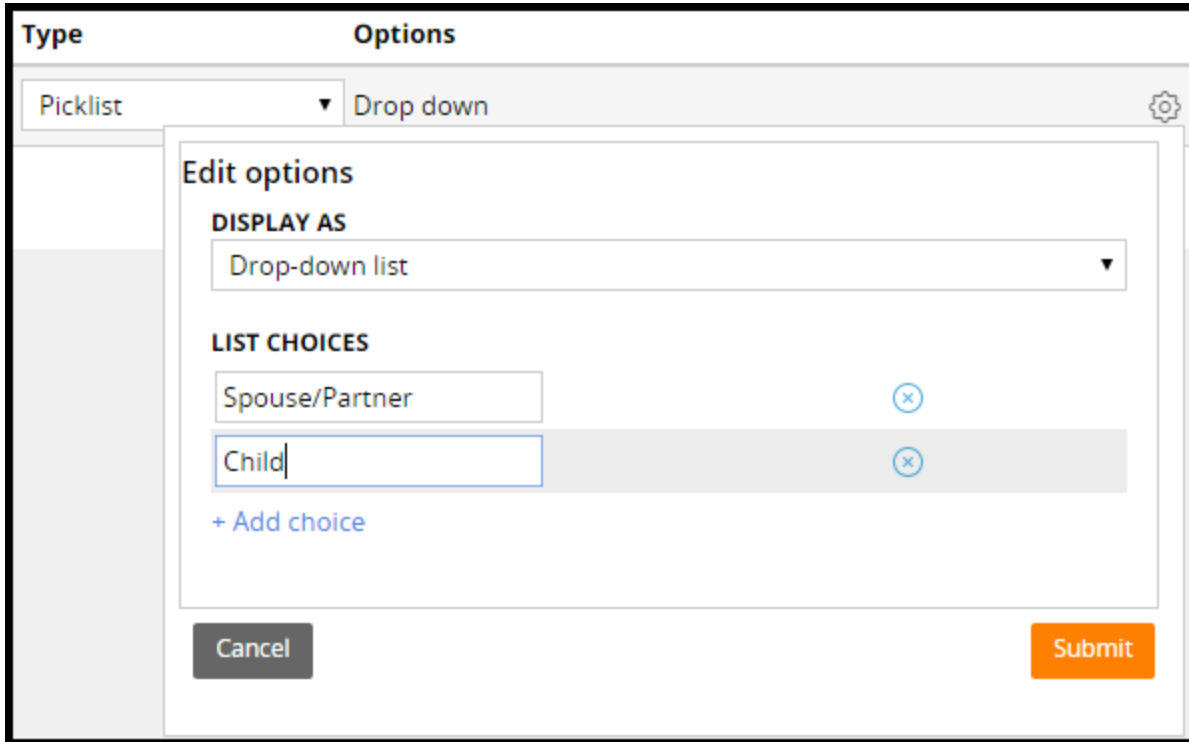
3. In the **Options** column, click **Dependent**. The Dependent data type form appears.
4. Click **Add field**.
5. Under Name, enter **Relationship**.
6. From the drop-down list under Type, select **Picklist**.

Name	ID	Type	Options
Relationship	Relationship	Picklist	Drop down

[+Add field](#)

7. Click the **gear** icon for the Relationship row. The Edit options pop-up opens.
8. Under **List** choices, enter **Spouse/Partner**.
9. Click **+ Add choice**.

- Under **List** choices, enter **Child**.



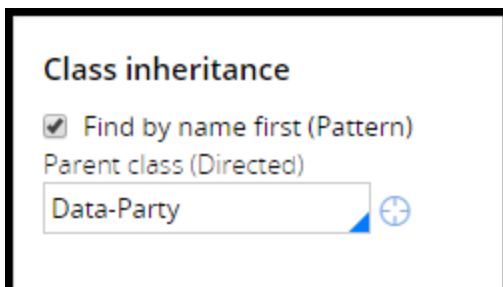
The screenshot shows a configuration window for a Picklist. The 'Type' is set to 'Picklist' and the 'Options' are set to 'Drop down'. The 'Edit options' section includes a 'DISPLAY AS' dropdown set to 'Drop-down list'. The 'LIST CHOICES' section contains two entries: 'Spouse/Partner' and 'Child'. The 'Child' entry is currently selected and highlighted. There are 'Cancel' and 'Submit' buttons at the bottom of the dialog.

- Click **Submit**. The Edit options pop-up closes.

Update the inheritance for the Dependent data class

Update the Dependent data class to reference the standard class *Data-Party* as a parent class for directed inheritance. This allows the Dependent class to reuse properties defined in the class *Data-Party*.

- In the Navigation area, switch to the Application Explorer.
- In the Application Explorer, expand **BenefitsEnrollment > Data Model > Property**.
- In the Application Explorer, click the **Dependents** property. The Dependents property record opens.
- Next to the **Page definition** field, click the **crosshair** icon. The Dependent class record opens.
- Under **Class inheritance**, in the **Parent class (Directed)** field, enter **Data-Party**.
- Click **Save**. The Dependent data class now inherits any properties defined for the class *Data-Party*.



The screenshot shows the 'Class inheritance' dialog box. The 'Find by name first (Pattern)' checkbox is checked. The 'Parent class (Directed)' field is set to 'Data-Party'.

Setting property values automatically

Exercise: Initializing the list of dependents for married or partnered employees

Scenario

As part of the benefit enrollment process, employees identify their dependents — family members who are to be covered by a company-sponsored health plan. If an employee is married or partnered, the human resources (HR) department wants to automatically add an entry to the list of dependents for the employee's covered spouse.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Add a list of dependents to the Identify Dependents step of a benefits enrollment case. Allow users to identify the marital status of a new employee during a benefits enrollment case. If the employee is married or partnered, add an entry to the list of dependents for the employee's spouse or partner.

To do this:

- Create a Marital Status property in the Benefits Enrollment case. Add to the property a list with two values: Single and Married/Partnered.
- Add the Marital Status property to the Confirm Employee Details step of the Benefits Enrollment case life cycle.
- Create a data transform named Initialize Spouse in the Benefits Enrollment class. Configure the data transform to set the value of the Relationship property in the first row of the Dependents page list to Spouse/Partner when the employee selects Married/Partnered as the marital status.
- Add the Dependents page list to the Identify Dependents step of the Benefits Enrollment case life cycle.
- Add the data transform to the Confirm Employee Details connector in the Select Participants process.

Detailed steps

Create a property to track marital status for benefits enrollment cases

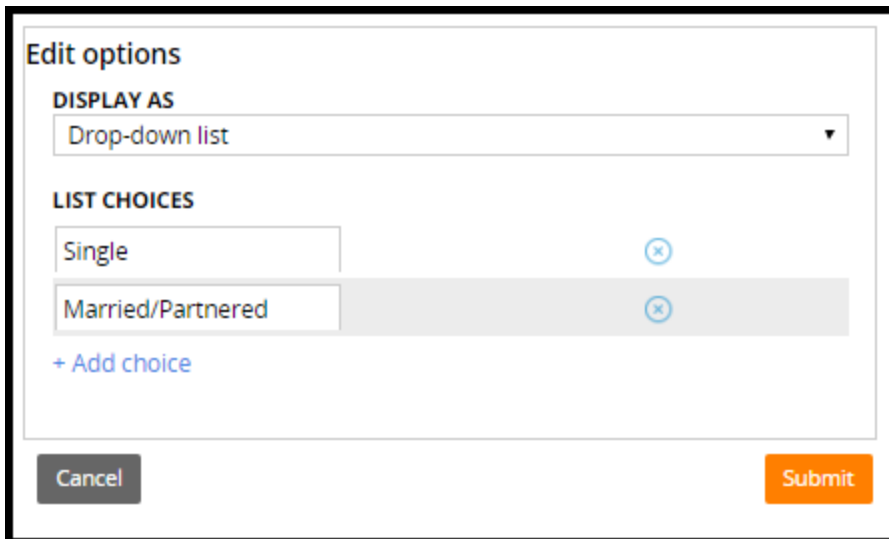
Create a property to record the marital status of the employee. Provide two options in a list for the user to choose from: Single and Married/Partnered.

1. In the Cases Explorer, click **Benefits Enrollment**. The Benefits Enrollment case type opens in the Case Designer.
2. Click the **Data model** tab.
3. Click **Add field**.
4. Under Name, enter **Marital status**.
5. From the **Type** drop-down, select **Picklist**.



A horizontal configuration bar for a field named 'Marital status'. It contains a text input with 'Marital status', a text input with 'MaritalStatus', a dropdown menu with 'Picklist' selected, and a dropdown menu with 'Drop down' selected. On the right side, there are icons for settings (gear) and deletion (trash).

6. Click the **gear** icon. The Edit options pop-up opens.
7. In the Edit options pop-up, under List Choices, enter **Single**.
8. Click **+Add choice**. A second field appears under List Choices.
9. Under List Choices, enter **Married/Partnered**.



The 'Edit options' dialog box. It has a title 'Edit options'. Under 'DISPLAY AS', there is a dropdown menu with 'Drop-down list' selected. Under 'LIST CHOICES', there are two text input fields: the first contains 'Single' and the second contains 'Married/Partnered'. Each field has a small 'x' icon to its right. Below the list is a '+ Add choice' link. At the bottom, there are 'Cancel' and 'Submit' buttons.

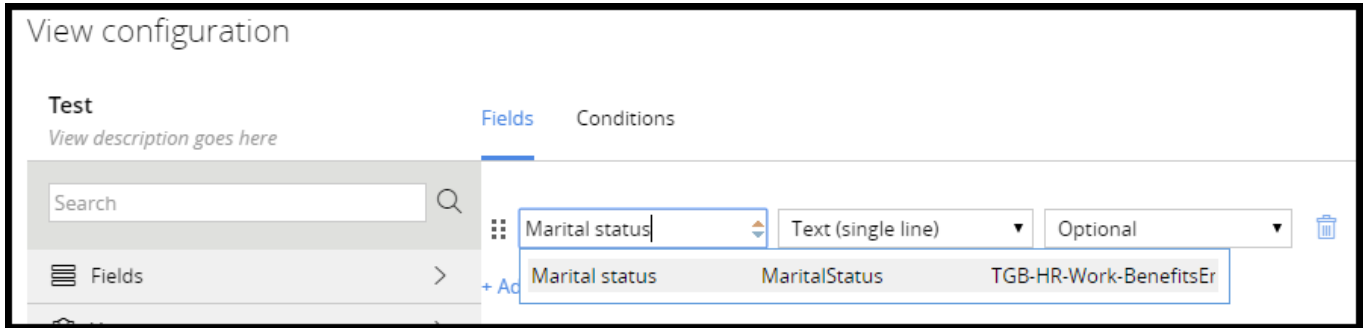
10. Click **Submit**. The Edit Options pop-up closes.
11. Click **Save** to commit your changes to the Benefits Enrollment data model.

Add the Marital status property to the Confirm Employee Details form

Add the Marital status property to the UI for the Confirm Employee Details step.

1. In the Case Designer, click the **Life cycle** tab.
2. Select the **Confirm Employee Details** step.
3. Click **Configure view**. The View Configuration dialog opens.

- Under **Fields**, enter or select **Marital status**.

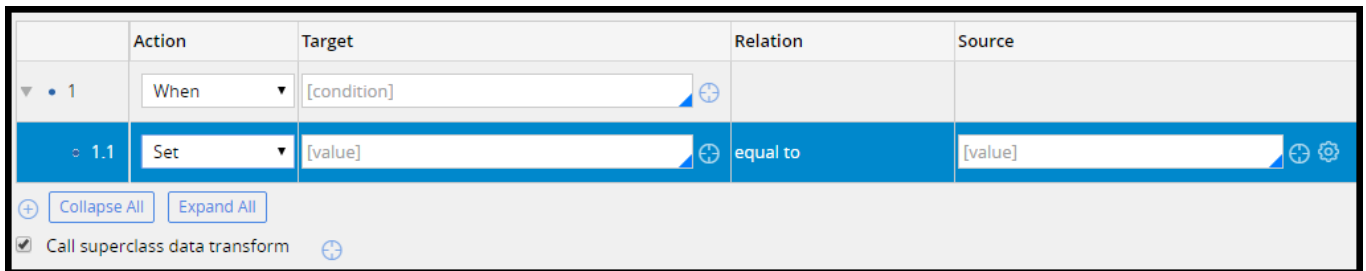


- Click **Submit**. The View Configuration dialog closes.

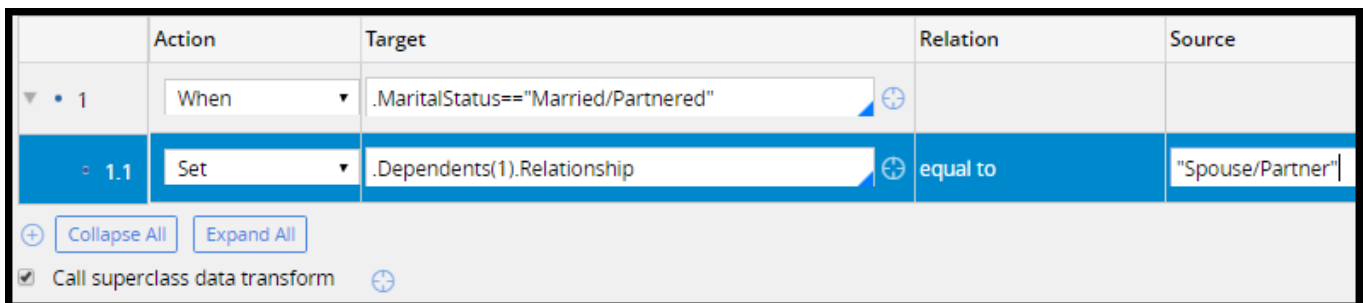
Initialize the Dependents page list if the employee is married

Configure a data transform to set the value of Relationship in the first row of the Dependents page list to Spouse/Partner if the employee is married or partnered.

- In the Application Explorer, expand **Benefits Enrollment > Data Model**.
- Under Benefits Enrollment, right-click **Data Model** and select **+Create > Data Transform**. The New Record form appears.
- In the **Label** field, enter **Initialize spouse**.
- Click **Create and open**. The Data Transform rule form appears.
- Under Action, in the drop-down list, select **When**. A second row appears on the rule form.



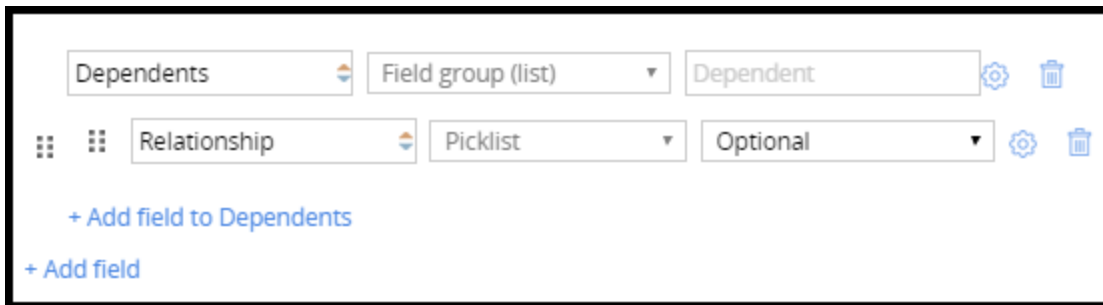
- In the top row, under **Target**, enter **.MaritalStatus == "Married/Partnered"**.
- In the second row, under **Target**, enter or select **.Dependents(1).Relationship**.
- Under **Source**, enter **"Spouse/Partner"**.
- Click **Save**.



Add the Dependents page list to the Identify Dependents step of the Benefits Enrollment case life cycle

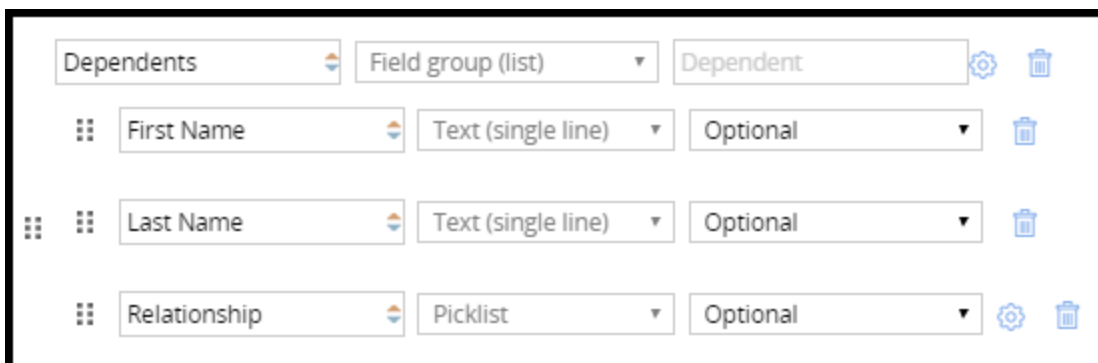
Add the Dependents page list to the Identify Dependents step to test your changes and verify that the value of Relationship in the first row of the list is set to Spouse/Partner if the employee selects a marital status of Married/Partnered.

1. Click the **Benefits Enrollment** tab to return to the Benefits Enrollment case type.
2. In the Case Designer, click the **Life cycle** tab to display the life cycle for the Benefits Enrollment case type.
3. Select the **Identify Dependents** step.
4. Click **Configure view**. The View Configuration dialog opens.
5. Under **Fields**, enter or select **Dependents**.
6. Press **Tab** to exit the field. A row of fields appears under the Dependents row.



The screenshot shows the 'View Configuration' dialog for the 'Identify Dependents' step. The 'Dependents' field is selected, and the 'Field group (list)' dropdown is open. The 'Dependent' field is currently empty. Below the field configuration, there are two buttons: '+ Add field to Dependents' and '+ Add field'.

7. Click **+Add field to Dependents**.
8. In the empty field under Relationship, enter or select **First Name**.
9. Click **+Add field to Dependents**.
10. In the empty field under Relationship, enter or select **Last Name**.
11. Grab the selection handle for the Relationship row, and drag the row below the Last Name row.



The screenshot shows the 'View Configuration' dialog for the 'Identify Dependents' step. The 'Dependents' field is selected, and the 'Field group (list)' dropdown is open. The 'Dependent' field is currently empty. Below the field configuration, there are three rows of fields: 'First Name' (Text (single line), Optional), 'Last Name' (Text (single line), Optional), and 'Relationship' (Picklist, Optional). The 'Relationship' row is selected, and the selection handle is visible.

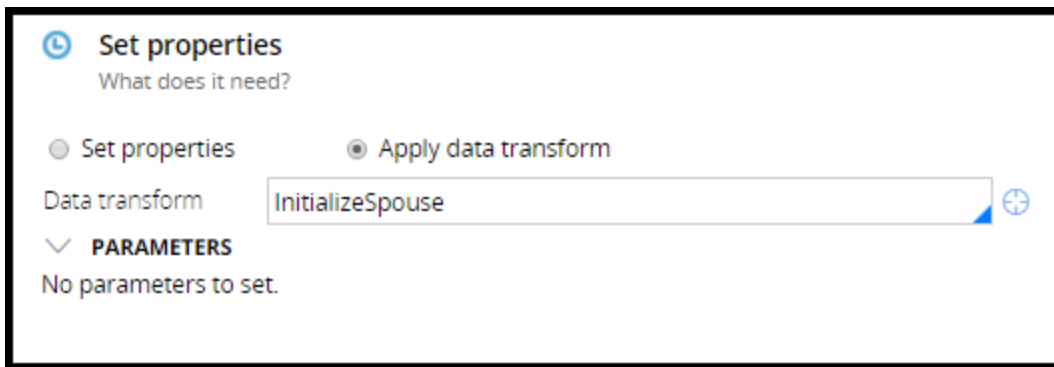
12. Click **Submit**. The View Configuration dialog closes.

Add the data transform to the Select Participants process

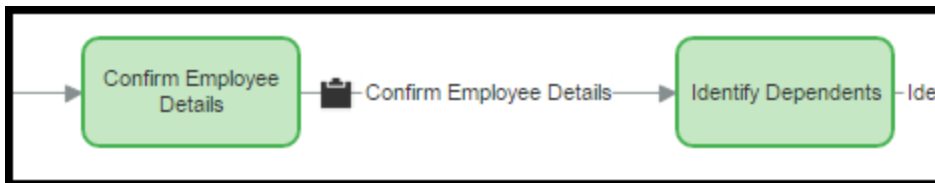
Configure the Select Participants process to run the InitializeSpouse data transform after a user completes the Confirm Employee Details assignment.

Note: When completing this part of the exercise, be sure to check in any rules that you check out to edit. This ensures that your exercise environment behaves as expected in later exercises. Failure to check in any rules that you check out may cause other exercises to return errors.

1. On the Life cycle tab of the Benefits Enrollment case type, select the **Select Participants** process.
2. Click **Open process**. The Select Participants flow rule opens.
3. Double-click the connector labeled **Confirm Employee Details**. The Connector properties panel opens.
4. In the Connector properties panel, under Set properties, select **Apply Data Transform**.
5. In the **Data transform** field, enter or select **InitializeSpouse**.



6. Click **Submit**. A **clipboard** icon appears on the Confirm Employee Details connector.



7. Click **Save** to save the flow rule.
8. Click the Benefits Enrollment tab to return to the Case Designer.
9. Click **Save** to save the case type.

Test your changes

Create a benefits enrollment case to test that the relationship listed in the first row of the Dependents list is set to Spouse/Partner if the user selects a marital status of Married/Partnered.

1. From the Case Designer, click **Run**. The New: Benefits Enrollment form opens.
2. Click **Done**. The Collect Employee Details form opens.
3. On the Confirm Employee Details form, from the **Marital Status** field, select **Married/Partnered**.
4. Click **Submit**.

5. On the Identify Dependents form, verify that the Dependents list contains one row, and that in this row, the drop-down list in the Relationship column has been set to Spouse/Partner.

The screenshot shows a web form titled "Identify Dependents". In the top right corner, there is a user profile icon with the letter "A" and the text "Administrator". Below the title, there are two links: "+ Add Item" and "x Delete". The form contains three input fields: "First Name *", "Last Name *", and "Relationship to Employee". The "Relationship to Employee" field is a dropdown menu currently displaying "Spouse/Partner". At the bottom right of the form, there are three buttons: "Cancel", "Save", and "Submit".

Setting property values declaratively

Exercise: Automatically updating the total cost of benefits

Scenario

During the benefits enrollment process, employees select a medical insurance plan, dental insurance plan, and vision insurance plan offered by the company. To make affordable choices, employees need to know the combined cost of their selections. To help employees select affordable options, HR wants benefits enrollment cases to calculate the total of insurance and display the total during the coverage selection process.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Add a total cost to each of the coverage selection forms and the Review Selections form. To do this:

- Create a property named "Total benefit cost" to store decimal data.
- Create a page property for each benefit type to record the employee cost of each insurance plan.
 - MedicalPlan (TGB-HRApps-Data-HRPlan)
 - DentalPlan (TGB-HRApps-Data-HRPlan)
 - VisionPlan (TGB-HRApps-Data-HRPlan)

The data class TGB-HRApps-Data-HRPlan has already been created by another system architect. This data class contains properties to describe insurance plans, including a property to store the cost paid by the employee for coverage (.EmployeeCost).

- Create a declare expression for the Total benefit cost property to calculate the total benefit cost as the sum of the employee cost (.EmployeeCost) for each plan.
- Add the Total benefit cost property to the following four assignments in the Benefits Enrollment case life cycle.
 - Select Medical Coverage
 - Select Dental Coverage
 - Select Vision Coverage
 - Review Selections

Detailed steps

Create the Total benefit cost property for benefit enrollment cases

Create a property to store the total cost of benefits selected by the user.

1. In the Cases Explorer, click **Benefits Enrollment**. The Benefits Enrollment case type opens in the Case Designer.
2. In the Case Designer, click the **Data model** tab. The Case Designer displays the data model for the Benefits Enrollment case type.
3. Click **Add field**. A new row is added to the list of perproperties.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent
Marital status	MaritalStatus	Picklist	Drop down
<input type="text"/>	<input type="text"/>	Text (single line) ▼	

[+Add field](#)

4. Under Name, in the field enter **Total benefit cost**.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent
Marital status	MaritalStatus	Picklist	Drop down
Total benefit cost	<input type="text"/>	Text (single line) ▼	

5. Under Type, from the drop-down list select **Currency**.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent
Marital status	MaritalStatus	Picklist	Drop down
Total benefit cost	TotalBenefitCost	Currency ▼	

6. Click **Save** to create the Total benefit cost property for the Benefits Enrollment case type.

Create page properties for medical, dental, and vision plans to access the employee cost property for each plan

Create page properties for medical plan, dental plan, and vision plan information. Configure each page to reference the HRPlans data type. The HRPlans data type contains properties to store information about insurance plans, including the cost of an insurance plan.

1. On the Data model tab of the Benefits Enrollment case type click **Add field**. A row of empty fields is added to the property list.
2. Under Name, in the field enter **Medical plan**.
3. Under Type, from the drop-down list select **Field group**. A field and New link are added to the Options column.
4. Under Options, in the field enter or select **TGB-HRApps-Data-HRPlan**.
5. Click **Add field**. A row of empty fields is added to the property list.
6. Under Name, in the field enter **Dental plan**.
7. Under Type, from the drop-down list select **Field group**. A field and New link are added to the Options column.
8. Under Options, in the field enter or select **TGB-HRApps-Data-HRPlan**.
9. Click **Add field**. A row of empty fields is added to the property list.
10. Under Name, in the field enter **Vision plan**.
11. Under Type, from the drop-down list select **Field group**. A field and New link are added to the Options column.
12. Under Options, in the field enter or select **TGB-HRApps-Data-HRPlan**.
13. Click **Save** to create the Medical plan, Dental plan, and Vision plan pages. These pages reference the HRPlans data type, which contains a property that stores the value of an insurance coverage plan.

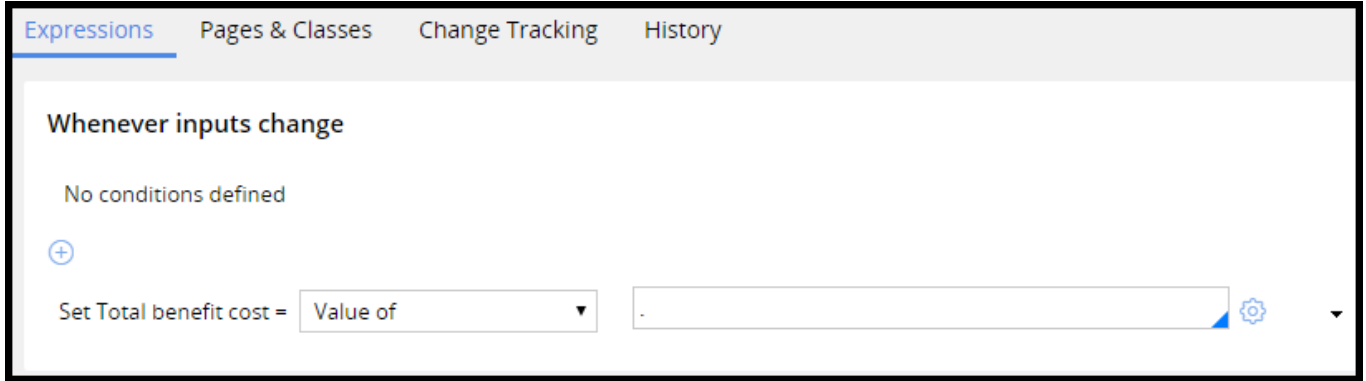
Medical plan	MedicalPlan	Field group	Data type: HR Plans
Dental plan	DentalPlan	Field group	Data type: HR Plans
Vision plan	VisionPlan	Field group	Data type: HR Plans
⊕ Add field			

Create a declare expression rule for the Total benefit cost property

Create a declare expression to calculate the total benefit cost as the sum of the employee cost of the selected medical plan, dental plan, and vision plan.

1. In Designer Studio, click the Application Explorer.
2. In the Application Explorer, expand **Benefits Enrollment > Data Model > Property**.

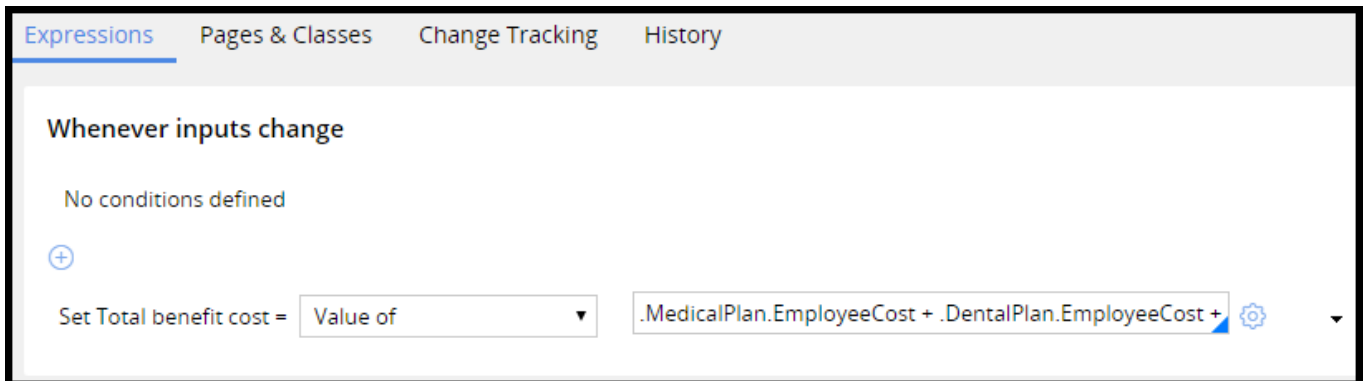
3. Right-click **TotalBenefitCost** and select **Define Expression**. The New Record form appears. If the TotalBenefitCost property does not appear in the Application Explorer, open the Application Explorer menu and select **Refresh App Explorer**.
4. In the **Label** field, enter **Benefit cost calculation**.
5. Click **Create and open**. The Declare Expressions rule form appears.



6. In the field to the right of the Value of drop-down list, enter **.MedicalPlan.EmployeeCost + .DentalPlan.EmployeeCost + .VisionPlan.EmployeeCost**.

Note: *.EmployeeCost* is the property in the TGB-HRApps-Data-HRPlan data class that stores the value of an insurance coverage plan.

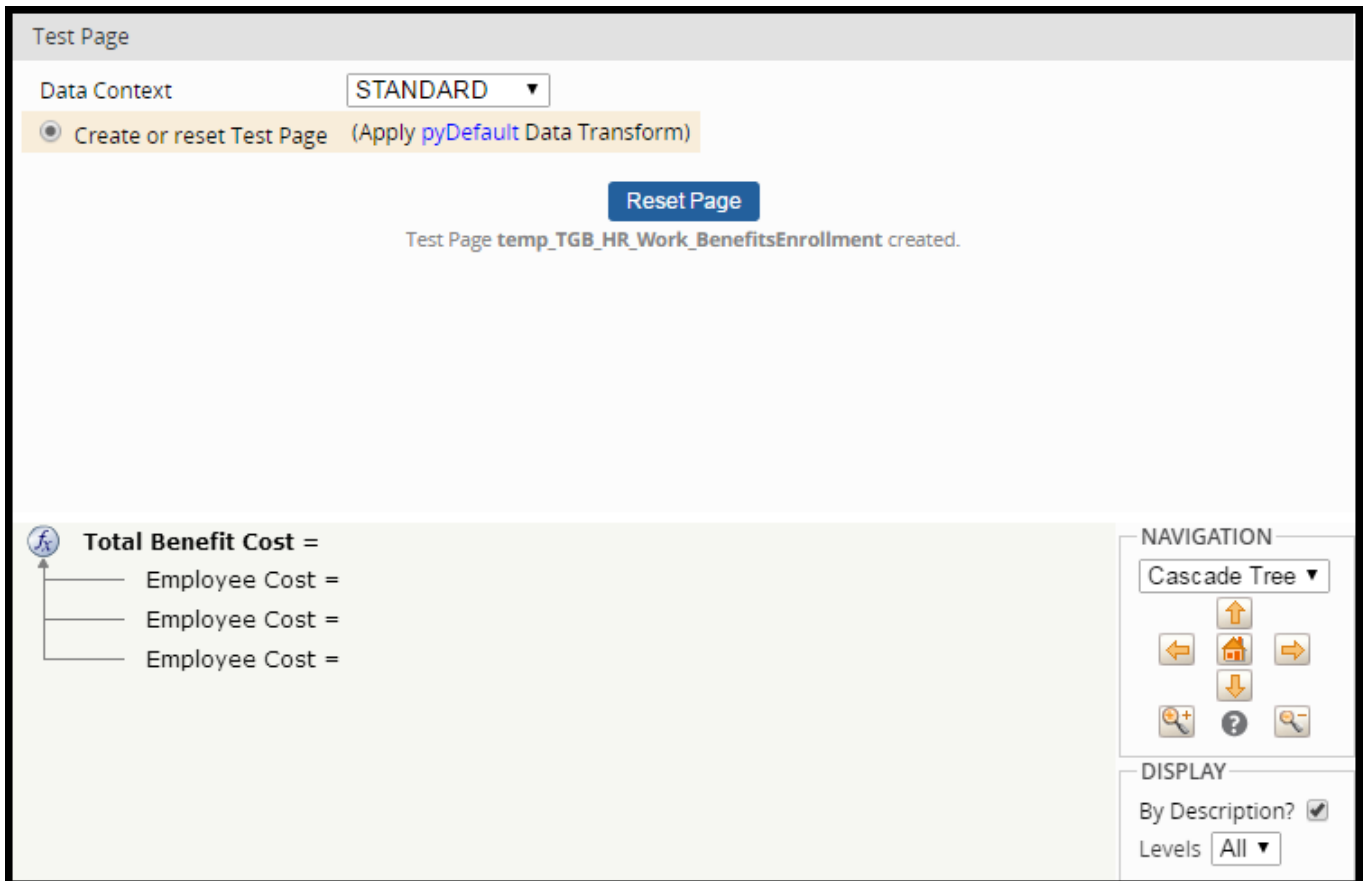
7. Click **Save**.



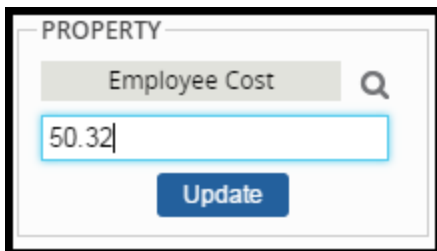
Test the declare expression calculation

Test the declare expression to verify that the calculation computes as expected.

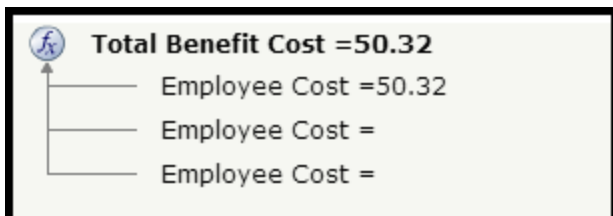
1. From the **Actions** menu, select **Run**. A dialog appears, displaying the Total benefit cost calculation as a tree structure.



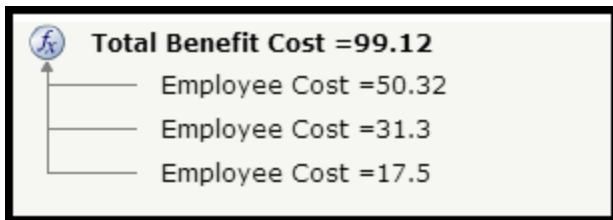
2. In the expression tree, select the first **Employee cost =** node. Under the Display section, an Employee Cost field appears.
3. In the **Employee Cost** field, enter 50.32.



4. Click **Update**. The expression tree updates to reflect the entered value.



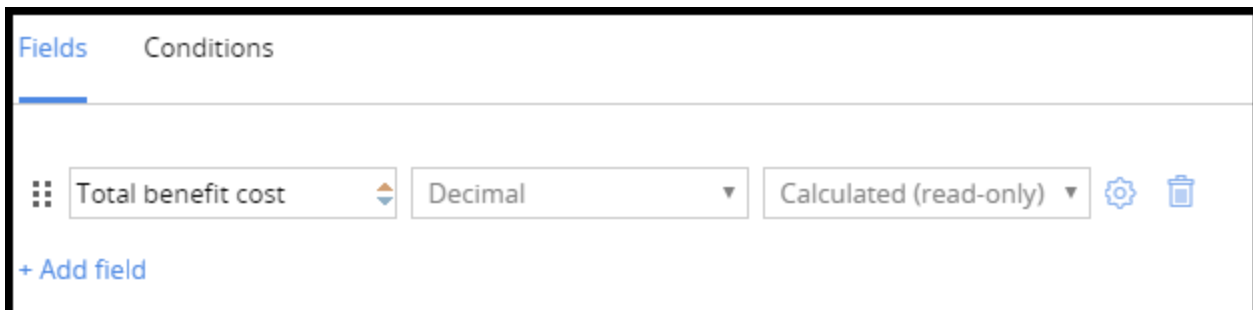
5. Repeat steps 2-4 for the remaining two nodes. For **Employee Cost =** values, enter 31.30 and 17.50.



Add the Total benefit cost property to each of the insurance selection forms and the Review Selections form

Add the total benefit cost to the Select Medical Coverage, Select Dental Coverage, Select Vision Coverage, and Review Selections forms. This displays the total cost of the benefits selected by the user on each form.

1. In the Case Designer, open the Benefits Enrollment case.
2. On the Benefits Enrollment case, click the Life cycle tab to return to the benefits enrollment case life cycle.
3. In the **Insurance selection** stage, select the **Select Medical Coverage** step.
4. In the properties panel for the step, click **Configure view**. The View Configuration dialog appears.
5. On the **Fields** tab, in the leftmost field, enter or select **Total benefit cost**.
6. Press **Tab** to exit the field. The contents of the form update to reflect the property details.



7. Click **Submit**. The View Configuration dialog closes.
8. Repeat steps 3-7 for the remaining two insurance selection forms, and for the Review Selections form.
9. Click **Save** to commit your changes to the Benefits Enrollment case type.

Test your changes

Create a benefits enrollment case to test your configuration.

1. Create a benefits enrollment case.
2. Verify that the Total benefit cost property appears on each of the insurance selection forms and the

Review Selections form.

Covered parties ✓	Insurance selection	Review selections	Complete stage ✓	
Select Medical Plan			A Administrator	
Total benefit cost				
		Cancel	Save	Submit

Note: The *.TotalBenefitCost* property is calculated and displays read-only, so no field appears on any of the forms. Since the value of the property is defined as the sum of three properties that also do not appear on any forms, no value is calculated for the total benefit cost. In an upcoming exercise, you address this issue by adding fields for the insurance plan information to each form.

Passing data to another case

Exercise: Passing data to another case

Scenario

The human resources (HR) department needs to reduce their data entry work. The HR manager is requesting that the candidate data from the onboarding forms automatically populate the benefits enrollment form.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

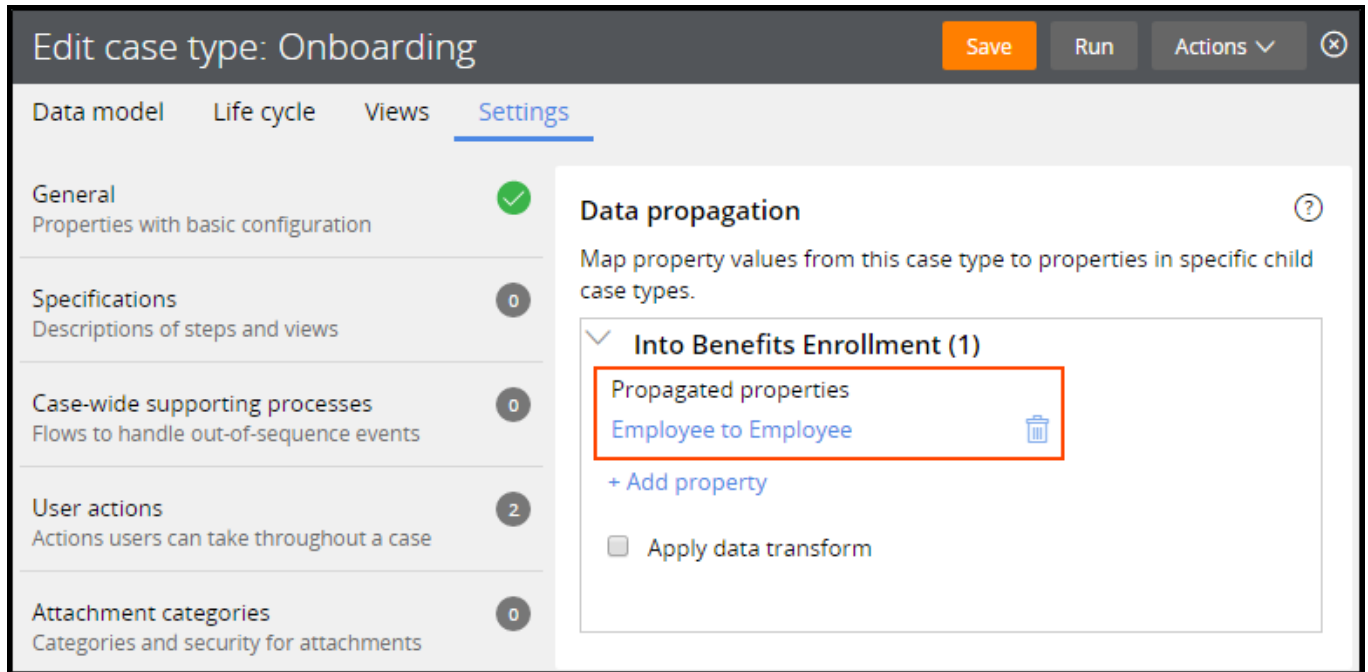
Configure the onboarding case type to automatically copy employee data to the benefits enrollment child case when creating the benefits enrollment case.

Add fields to the Collect Employee Info form to allow users to enter values for the properties on the Employee page.

Detailed steps

1. Open the Case Explorer.
2. Select the **Onboarding** case type.
3. Open the **Settings** tab.
4. On the Settings tab, click **Data propagation**.
5. Expand the **Into Benefits Enrollment** area.
6. Under Into Benefits Enrollment, click the **Add property** link. A pop-up appears to allow you to configure data propagation from the onboarding case to a benefits enrollment case.
7. In the pop-up, under **Propagate property value**, enter or select **Employee**.
8. Under To property value, enter or select **Employee**.
9. Click **OK** to dismiss the pop-up.
10. Click **Save** to commit your changes to the data propagation configuration for the Onboarding case

type.



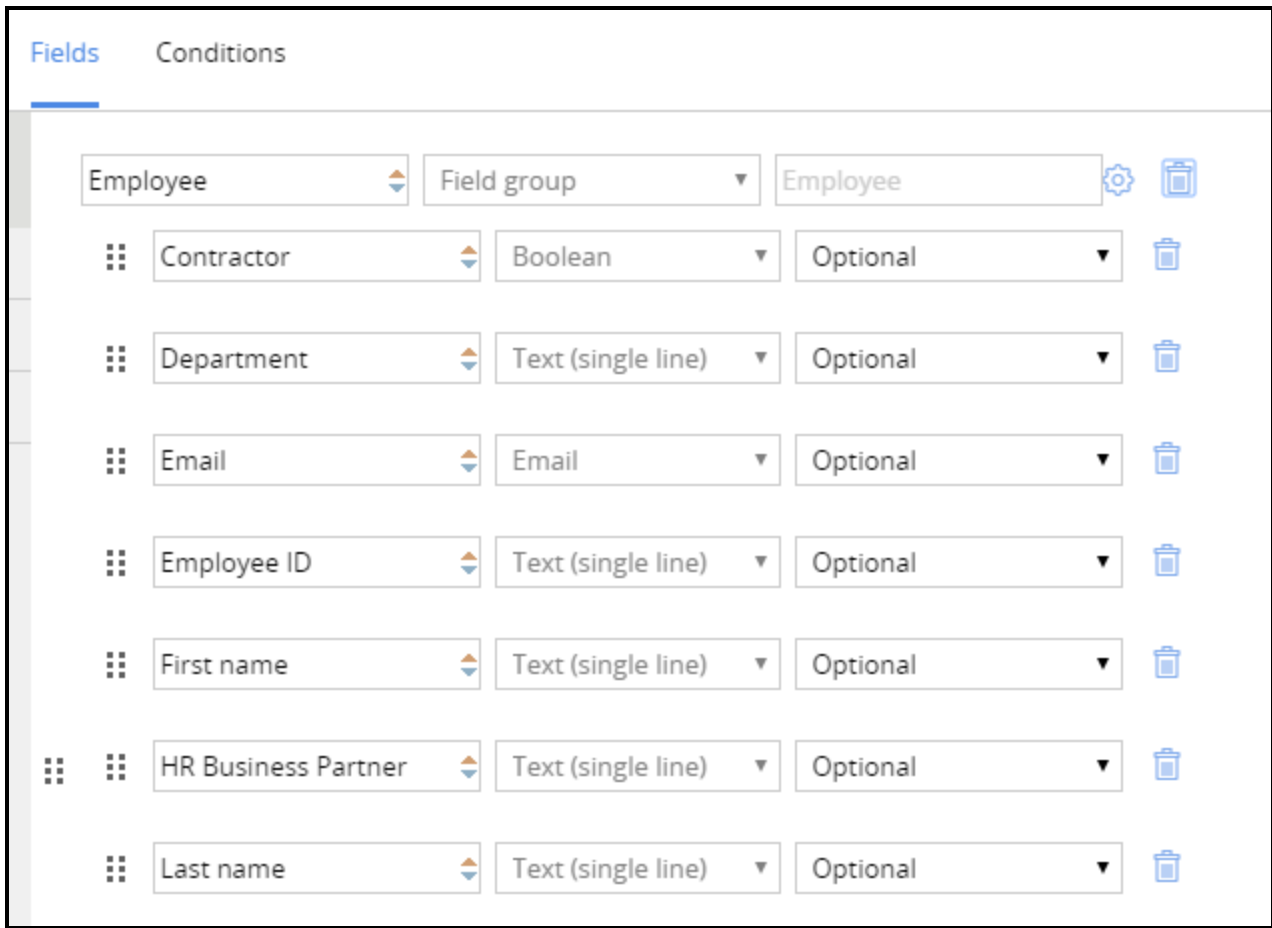
Configure the Collect Employee Info form to collect properties needed for data propagation

Add properties to the Collect Employee Info form to collect the data to copy from an onboarding case to a benefits enrollment case.

1. On the **Onboarding** tab in the Case Designer, click the **Life cycle** tab.
2. In the Onboarding case life cycle, click the **Collect Employee Info** step.
3. Click **Configure View**. The View Configuration dialog opens.
4. In the empty text box under **Fields**, enter or select **Employee**.

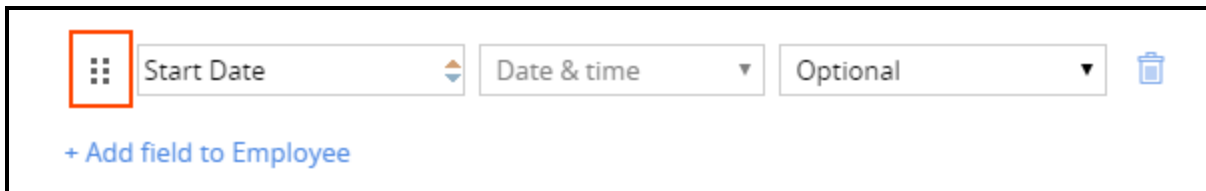


5. Press the **Tab** key. A set of fields appears under Employee.










Note: If Pega does not display the set of fields under Employee, skip to step 14 and add the fields shown in the screenshot.

6. Hover over the selection rectangle for the **Start date** field, then press the mouse button to select the field.











7. Drag the mouse cursor under the **Contractor** field, then release the mouse button.
8. Select the selection rectangle for the **First name** field and drag the field below the Start date field.
9. Select the selection rectangle for the **Last name** field and drag the field below the First name field.
10. Select the selection rectangle for the **Email** field and drag the field below the Last name field.

Fields Conditions

Employee	Field group	Employee	
Contractor	Boolean	Optional	
Start date	Date only	Optional	
First name	Text (single line)	Optional	
Last name	Text (single line)	Optional	
Email	Email	Optional	
Department	Text (single line)	Optional	
Employee ID	Text (single line)	Optional	

11. To the right of the Department row, click the **Delete** icon. The row is removed from the list of fields.
12. To the right of the Employee ID row, click the **Delete** icon. The row is removed from the list of fields.
13. To the right of the HR Business Partner row, click the **Delete** icon. The row is removed from the list of fields.
14. To the right of the SSN row, click the **Delete** icon. The row is removed from the list of fields.

Fields Conditions

Field	Field group	Field type	Field format	Field icon
Employee	Field group	Employee		 
Contractor	Boolean	Optional		
Start date	Date only	Optional		
First name	Text (single line)	Optional		
Last name	Text (single line)	Optional		
Email	Email	Optional		
Manager	Text (single line)	Optional		

15. Click **Submit**. The View Configuration dialog closes.
16. Click **Save** to commit your changes to the Onboarding case type.

Note: The benefits enrollment case type is not configured to display employee information, so you cannot verify your changes solely by creating and processing an onboarding case. The next lesson covers how to view case data that is not displayed on a form by using the Clipboard tool.

Reviewing application data

Exercise: Reviewing case data on the clipboard

Scenario

You have configured data propagation for the onboarding case to copy employee information to the benefits enrollment case. To verify that the benefits enrollment case contains the correct information, your manager has asked you to go through the onboarding process and verify that the data propagation works as expected.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Review case data on the clipboard to ensure that the data propagation you configured works as expected. To do this:

- Create an onboarding case, and provide employee information on the Collect Employee Info form.
- Continue through the Onboarding process to create a benefits enrollment case.
- After you create the benefits enrollment case, use the Clipboard tool to verify that data on the Employee page for the Benefits Enrollment case matches your entries on the Collect Employee Info form.

Detailed steps

Create an onboarding case, and verify that the contents of the Employee page are copied to the benefits enrollment case when the case is created.

1. From the **+Create** menu, select **New > Onboarding** to create a new onboarding case.
2. On the Collect Employee Info form, enter data into each of the fields using the information in the following example.

Collect Employee Info
A Administrator

Contractor

Employee Start date

Employee First name

Employee Last name

Employee Email

Employee Manager

Cancel
Save
Submit

3. Click **Submit** to advance to the Identify Home Office form.
4. Click **Submit** to advance to the Select Orientation Plan form.
5. Click **Submit** to advance to the Select Hardware form.
6. Click **Advance this case** to advance to the Select Software form.
7. Click **Advance this case**. A confirmation form is displayed to inform you that the case has been routed for approval.
8. Under Open assignments, click **Please approve or reject this Approval** to advance to the Approval form.

Edit
Actions ▾

Open assignments

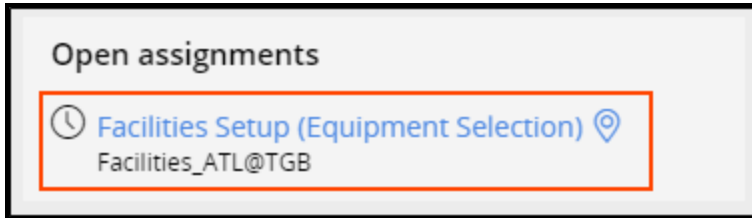
🕒 Facilities Setup (Equipment Selection) 📍
 Administrator

🕒 Please approve or reject this Approval 📍
 IT@TGB

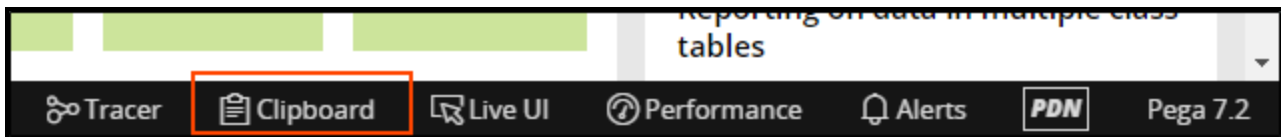
9. Click **Approve**. A confirmation form is displayed.
10. Under Open Assignments, click **Facilities Setup (Equipment Selection)** to advance to the Select

Seating Location form.

11. Click **Submit** to advance to the Select Office Equipment form.
12. Click **Advance this case**. A confirmation form is displayed to inform you that the case has been routed for approval.
13. Under Open assignments, click **Facilities Setup (Equipment Selection)** to advance to the Approval form.



14. Click **Approve** to advance to the Confirm Employee Details form for the benefits enrollment child case.
15. On the Developer toolbar, click **Clipboard**. The Clipboard tool opens in a new window.



16. In the left pane of the Clipboard tool, in the User Pages section expand **pyWorkPage**.
17. Under pyWorkPage, select **Employee (TGB-HRApps-Data-Employee)**. The contents of the Employee page are displayed in the right pane of the Clipboard tool.

Clipboard B-6 Search...

Clipboard page: pyWorkPage.Employee Edit Refresh Actions

Property	Value
Contractor	false
Email	havens@mail.me.de
FirstName	Tom
LastName	Havens
Manager	Frank Taylor
pxObjClass	TGB-HRApps-Data-Employee
StartDate	20160501

- ▶ D_UITemplateMeta (Pega-UI-Component)
- ▶ Declare_AppExplorerData (Code-Pega-List)
- ▶ Declare_CaseTree (Rule-Obj-Class)
- ▼ Declare_MyCheckedOutRules
 - ▶ Declare_MyCheckedOutRules[personalR
- ▶ Declare_pyDisplay (Embed-UI-RunTime-Di
- ▶ Declare_pzRecentsCache (Code-Pega-List)
- ▶ Declare_RuleTypeMenu (Data-RuleForm-Ru
- ▶ newAssignPage (Assign-Worklist)
- ▶ PostMessage (PegaSocial-Message)
- ▶ preActivitiesParameter (@baseclass)
- ▶ pyActionInfo (Embed-UI-RunTime-Element
- ▶ pyBreadCrumbs (Code-Pega-List)
- ▶ pyDocuments (classless)
- ▶ pyFilterSettings (classless)
- ▶ pyMessageOutput (Code-SocialOutput)
- ▶ pyPortal (Data-Portal)
- ▶ pyPropertyPage (Rule-Obj-Property)
- ▶ pyReportParameters_temp (Code-Pega-Lis
- ▶ pyReportParamPage (Embed-QueryInputs)
- ▶ pyWorkCover (TGB-HRApps-Work-Onboard
- ▼ pyWorkPage (TGB-HRApps-Work-BenefitsE
 - ▶ Dependents
 - ▶ Employee (TGB-HRApps-Data-Employee)
 - ▶ pxFlow
 - ▶ pxStageHistory
 - ▶ pxSystemUpdateDetailsList

18. Verify that the contents of the Employee page match the values you entered in step 2.

PROCESS DESIGN

Configuring a work party

Exercise: Creating an employee work party

Scenario

The human resources (HR) department sends each new employee a welcome email as part of the onboarding process. To address this email, you must add the employee to the onboarding case as a work party.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Add the new employee to an onboarding case as a party to the case, and populate the work party with employee information from the Create Employee Info form. To do this:

- Define the Employee work party on the work parties rule for the Onboarding case.
- Create a data transform named *EmployeeParty* to populate the work party with identifying information.
- Configure the Create Employee Record process to call the *addWorkObjectParty* API activity and add the Employee work party to the Onboarding case.

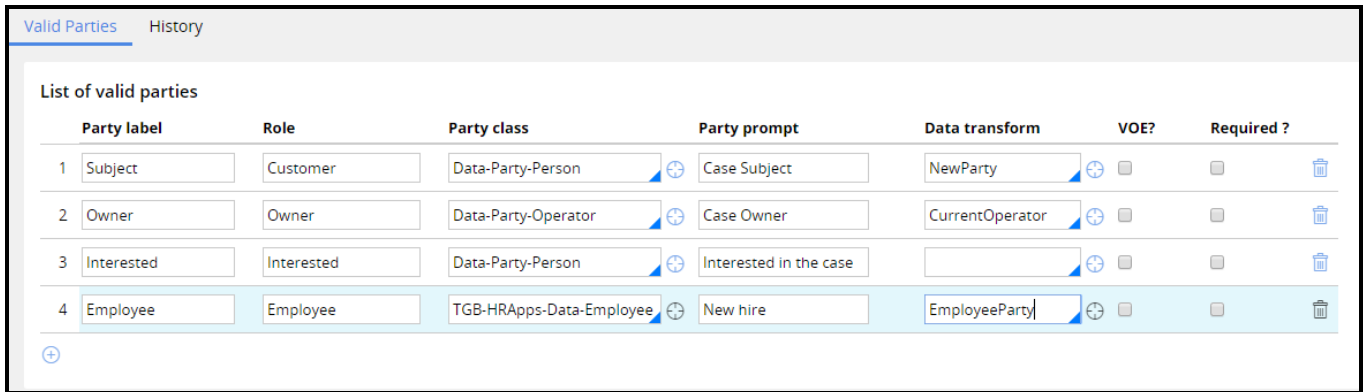
Detailed steps

Create the Employee party in the pyCaseManagementDefault work parties rule

Create a work party to represent the employee in an onboarding case.

1. In the Application Explorer, expand **Onboarding > Process > Work Parties**.
2. Click **pyCaseManagementDefault**. The *pyCaseManagementDefault* work parties rule opens.
3. In the "List of valid parties" section of the rule form, click the **Add a row** icon.
4. In the new row, under **Party Name**, enter **Employee**.
5. Under **Party Class**, select or enter **TGB-HRApps-Data-Employee**.
6. Under **Party Prompt**, enter **New hire**.

7. Under **Data Transform**, enter **EmployeeParty**.



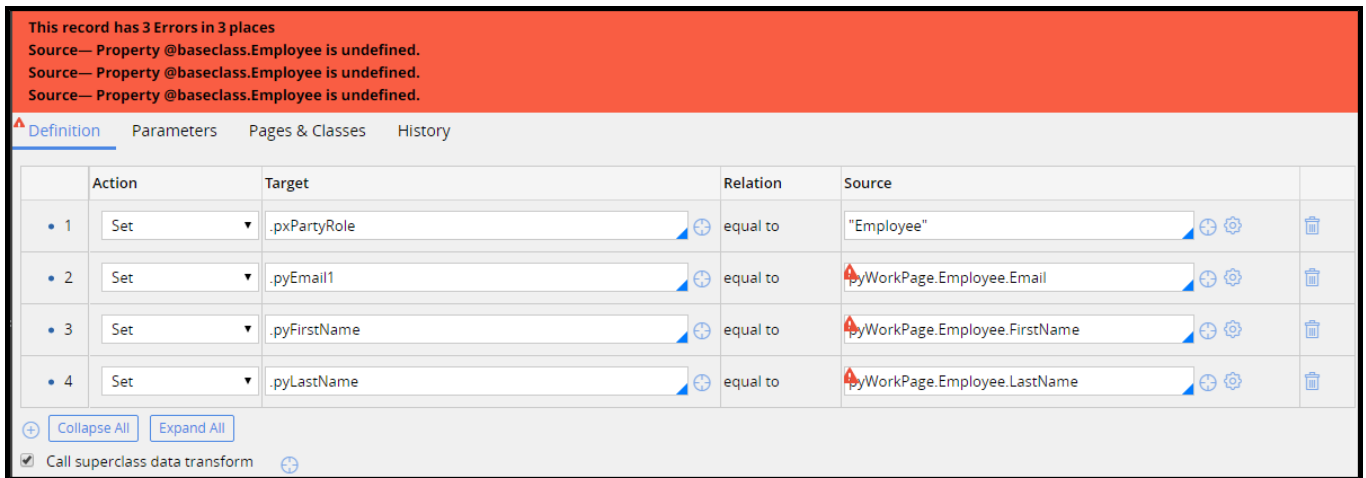
Create the EmployeeParty data transform to copy data to the work party

Create a data transform to copy property values from the onboarding case to the Employee work party,

1. Click the **crosshair** icon to the right of the **Data Transform** field to create the *EmployeeParty* data transform. The New Record form opens.
2. In the New Record form, click **Create and open** to create the data transform. The Data Transform rule form opens.
3. In the first row of the data transform, under **Target**, enter or select **.pxPartyRole**.
4. Under **Source**, enter **"Employee"**.
5. Click the **Add a row** icon to create three additional rows.
6. Complete each empty row on the data transform using the values in the following table.

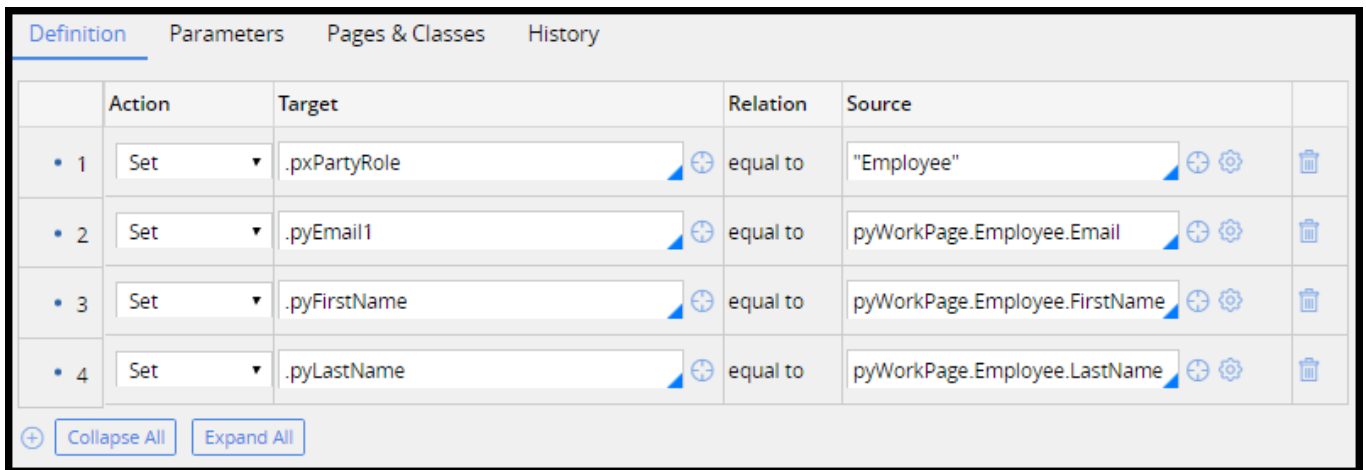
Action	Target	Source
Set	.pyEmail1	pyWorkPage.Employee.Email
Set	.pyFirstName	pyWorkPage.Employee.FirstName
Set	.pyLastName	pyWorkPage.Employee.LastName

7. Click **Save** to save the data transform. Note the errors that occur.



Note: These errors occur because the context of the source properties is unknown. To resolve this issue, add a reference for pyWorkPage on the Pages & Classes tab of the data transform.

8. Click the **Pages & Classes** tab to specify the class for the page pyWorkPage.
9. Under Page name, enter **pyWorkPage**.
10. Under Class, enter or select **TGB-HRApps-Work-Onboarding**.
11. On the data transform rule form, click the **Definition** tab.
12. Click **Save** to save the data transform. Note that the data transform saves with no errors.

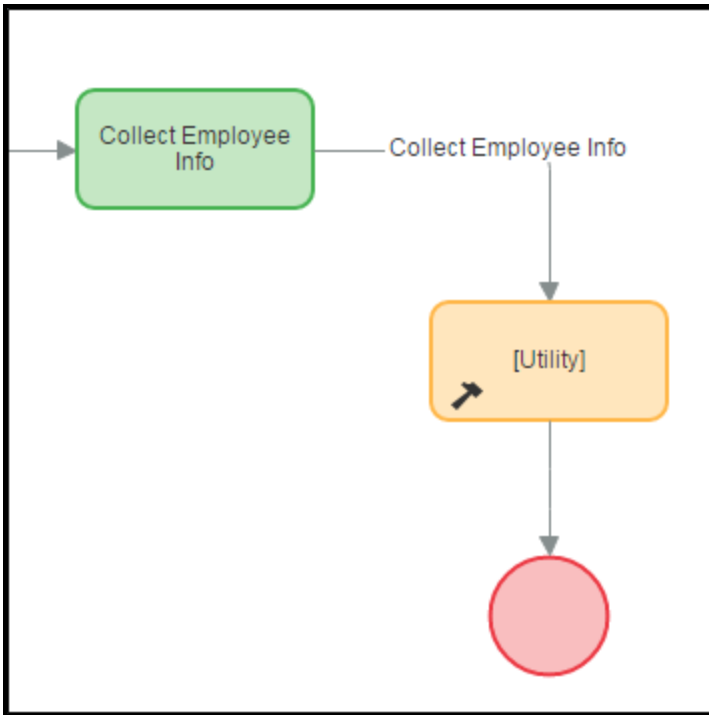


13. Return to the *pyCaseManagementDefaults* work parties rule.
14. Click **Save**.


Add the addWorkObjectParty activity to the Create Employee Record process


Add the API activity *addWorkObjectParty* to the Create Employee Record process to create the Employee work party automatically.

1. In the Case Designer, select the **Create Employee Record** process, then click **Open Process**.
2. Add a utility shape to the process, after the Collect Employee Info assignment.



3. Double-click the utility shape to open the Properties panel.
4. In the **Utility** field, enter **Create Employee Work Party**.
5. In the **Rule** field, enter **addWorkObjectParty**.
6. Press the **Tab** key to add the activity parameters to the Properties panel.
7. In the **PartyRole** field, enter **Employee** to add the Employee work party to the case.
8. In the **PartyClass** field, enter **TBG-HRApps-Data-Employee**.
9. In the **PartyModel** field, enter **EmployeeParty**.

 **Automation details**
Define automation

Rule*
 

▼ **PARAMETERS**

PartyRole

PartyClass

PartyModel

PartyRepeatable

partyPage

PartyIDUsed

10. Click **Submit** to close the Properties panel.
11. Click **Save** to save the flow.

Note: Model is an older name for a data transform rule.

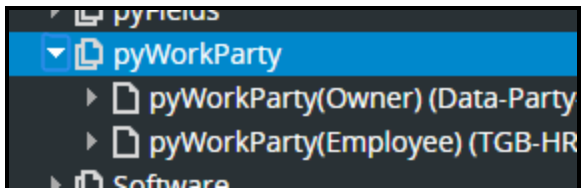
Test your changes

Create a new onboarding case to confirm that the Employee work party is created automatically after the user completes the Collect Employee Info assignment.

1. From the **Create** menu, select **New > Onboarding**.
2. Complete the Collect Employee Info form.
3. Click **Submit** to submit the form. The Identify Home Office form opens.
4. In the Participants section, verify that the application created the Employee party.



5. On the Developer toolbar, click **Clipboard**. The Clipboard tool opens.
6. In the Clipboard tool, under **User Pages**, expand **pyWorkPage > pyWorkParty**.



7. Select **pyWorkParty(Employee)** and verify that the information you entered on the Collect Employee Info form was added to the Employee work party.

Note: The Employee work party includes information you did not copy with your data transform. Pega automatically adds additional information to the work party by using rules defined in the *Data-Party* class.

Configuring a service level agreement

Exercise: Establish a service level agreement for the Select Orientation Plan assignment

Scenario

As part of the onboarding process, managers must identify an orientation plan for each new employee. During the onboarding process, HR selects one or more orientation courses for the employee. To ensure that HR can enroll the new employee in the selected courses, the orientation plan for an employee must be completed within two days, and preferably within one day. If the HR partner assigned to the onboarding case fails to complete the assignment within two days, a reminder email is sent to the HR partner every day until the assignment is completed.

The following table provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Add a service level agreement to the Select Orientation Plan assignment of the Onboarding case type. Configure the service level agreement to remind HR partners to select orientation courses for the employee in a timely manner by configuring:

- A goal interval of one day.
- A deadline of two days.
- A repeating action for late assignments to send a reminder email to the HR partner.

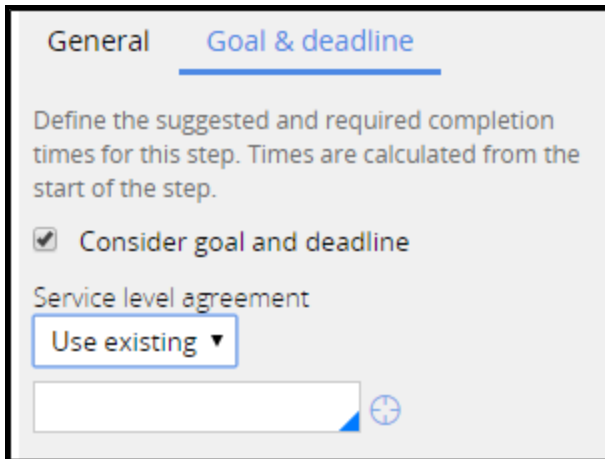
Detailed steps

Configure a service level agreement for the Select Orientation Plan assignment. For this service level agreement:

- Configure an initial urgency of 20.
- Configure a goal interval of one day, with an urgency of 10.
- Configure a deadline interval of two days, with an urgency of 10.
- Configure a passed deadline interval of one day, with an urgency of 10 and no limit on the number of events.
- Add an escalation action to notify the assignee upon completion of each passed deadline interval.

Create the service level agreement for the Select Orientation Plan

1. In the Cases Explorer, select **Onboarding**. The Onboarding case type opens in the Case Designer.
2. In the Pre-arrival stage of the Benefits Enrollment case life cycle, click the **Select Orientation Plan** step. The properties panel for the step opens to the right of the case life cycle.
3. In the properties panel, click the **Goal & deadline** tab.
4. Select the **Consider goal and deadline** check box. The properties panel updates to display goal and deadline configuration options.
5. From the **Service level agreement** drop-down list, select **Use existing**. An empty field is displayed below the drop-down list.



General **Goal & deadline**

Define the suggested and required completion times for this step. Times are calculated from the start of the step.

Consider goal and deadline

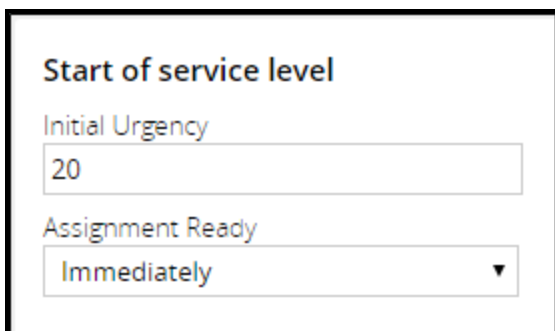
Service level agreement

Use existing ▼

6. In the empty field, enter **SelectOrientationPlan**.
7. Click the **crosshair** icon to the right of the field. The New Record form opens.
8. Click **Create and open**. The Service Level Agreement rule form opens.

Configure intervals and urgency adjustments for the service level agreement

1. In the **Initial Urgency** field, enter **20**.



Start of service level

Initial Urgency

20

Assignment Ready

Immediately ▼

2. In the Goal section, under **Days**, enter **1**.
3. Under **Amount to increase urgency**, enter **10**.

GOAL

Days Hrs Mins Secs

Amount to increase urgency

Time interval starts when the associated assignment (or work item) is created

Only calculate using business days

Actions	When
Select Action...	Edit
+	

- In the Deadline section, under **Days** enter 2.
- Under **Amount to increase urgency**, enter 10.

DEADLINE

Days Hrs Mins Secs

Amount to increase urgency

Time interval starts when the associated assignment (or work item) is created

Only calculate using business days

Actions	When
Select Action...	Edit
+	

- In the Passed Deadline section, clear the contents of the **Limit passed deadline events to** field.
- Under **Days**, enter 1.
- Under **Amount to increase urgency**, enter 10.
- Under **Actions**, click **Select Action**. The **Perform Action** drop-down list is displayed for the Passed Deadline interval.

PASSED DEADLINE

Limit passed deadline events to

Days Hrs Mins Secs

Amount to increase urgency

Time interval starts when the deadline is reached

Only calculate using business days

Actions	When
Select Action...	Edit
Perform Action <input type="text" value="Select action ..."/>	<input type="text"/>
+	

- From the **Perform Action** drop-down list, select **Notify Assignee**.
- Click **Save**.

PASSED DEADLINE

Limit passed deadline events to

Amount to increase urgency

10

Days Hrs Mins Secs

1 0 0 0

Time interval starts when the deadline is reached

Only calculate using business days

Actions	When
⋮ Notify Assignee	Edit
+	

- In Designer Studio, click the **Onboarding** tab. Designer Studio returns to the case life cycle for the Onboarding case.
- Click **Save**.

General Goal & deadline

Define the suggested and required completion times for this step. Times are calculated from the start of the step.

Consider goal and deadline

Service level agreement

Use existing ▼

SelectOrientationPlan

Test your changes

- From the **+Create** menu, select **New > Onboarding**. The Collect Employee Info form opens.
- Click **Submit**. The onboarding case advances to the Identify Home Office form.
- Click **Submit**. The onboarding case advances to the Select Orientation Plan form. The time remaining in the goal interval is indicated on a green background. The time remaining in the deadline interval is indicated to the right of the user name.

Onboarding (0-141)

Pre-Arrival > Equipment Selection > Benefits Enrollment

Complete stage ✓

23 hours from now

Select Orientation Plan

Administrator

Due in 2 days from now

Routing assignments

Exercise: Routing an assignment

Scenario

Currently, all IT requests route to the requestor's manager for approval. Management decided that the IT department is better qualified to analyze IT requests. The organization decided that users in the IT workgroup are better qualified to analyze IT requests. All IT requests will go to the IT workbasket (IT@TGB). IT members can access the requests in this workbasket.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Update the application to ensure that IT requests route to the IT workgroup (IT@TGB), rather than to the operator's reporting manager.

To support the requirement, route assignments to the IT@TGB workbasket in the Approve IT Setup approval flow. Specify the IT@TGB workbasket in the Approve IT Setup approval flow router setting.

Detailed steps

To update the router setting in the Approve IT Setup, follow these steps:

1. From the **Onboarding** case life cycle, open the IT Setup process.
2. Right-click the **Approve IT Setup** SmartShape.
3. Select **View Properties**.
4. In the **Approve IT Setup properties** panel, do the following:
 - a. In the **Approval to be completed by** field, select **Work Basket**.

- b. In the autocomplete field, under the **Approval to be completed** label, select **IT@TGB**.

Approve IT Setup

Subprocess: Approve IT Setup

Start a reusable subprocess.

Subprocess details
Define subprocess flow information

Single approval configuration

Approval to be completed by Work Basket

IT@TGB

If **APPROVED** then Continue and

- 5. In the **property** panel, click **Submit**.
- 6. Save the IT Setup flow.

Configuring correspondence

Exercise: Sending a welcome email to new employees

Scenario

As part of the onboarding process, TGB sends each new employee a welcome email. This email contains the start date, manager, and home office for the employee. The email also provides information about paperwork that the employee must bring on the first day.

The following table provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create the welcome email to send to new employees during the onboarding process.

Detailed steps

To accomplish this task, create a correspondence rule named WelcomeEmail. The WelcomeEmail correspondence rule contains the content of the email. Add to the welcome message references for the following properties:

- First name (.Employee.FirstName)
- Office (.Office)
- Start date (.Employee.StartDate)
- Manager (.Employee.Manager)

Then, reference the WelcomeEmail correspondence rule on the Send Welcome Email step in the Onboarding case life cycle. For a recipient, use the Employee work party you created in a previous exercise.

Finally, use the Case Designer to add the Office property to the Identify Home Office step.

Note: Your exercise environment is not configured to send email correspondence. During this exercise, you may notice that the attached email indicates an exception error. This exception results from the application being unable to send the email in the exercise environment. You can ignore this error.

Create the WelcomeEmail correspondence rule

Create the correspondence rule to send as an email.

1. In the Application Explorer, expand **Onboarding**.
2. Right-click **Process** and select **+Create > Correspondence**. The New Record form opens.
3. In the **Label** field, enter **Welcome email**.
4. In the **Correspondence Type** field, press the **down arrow** and select **Email**.
5. Click **Create and open**. The Correspondence rule form opens.

Create the contents of the Welcome email

Enter the contents of the email on the correspondence rule form. Add property references to customize the email with details from the onboarding case.

1. In the Correspondence rule form editor, enter the following text:

Dear **FirstName**,

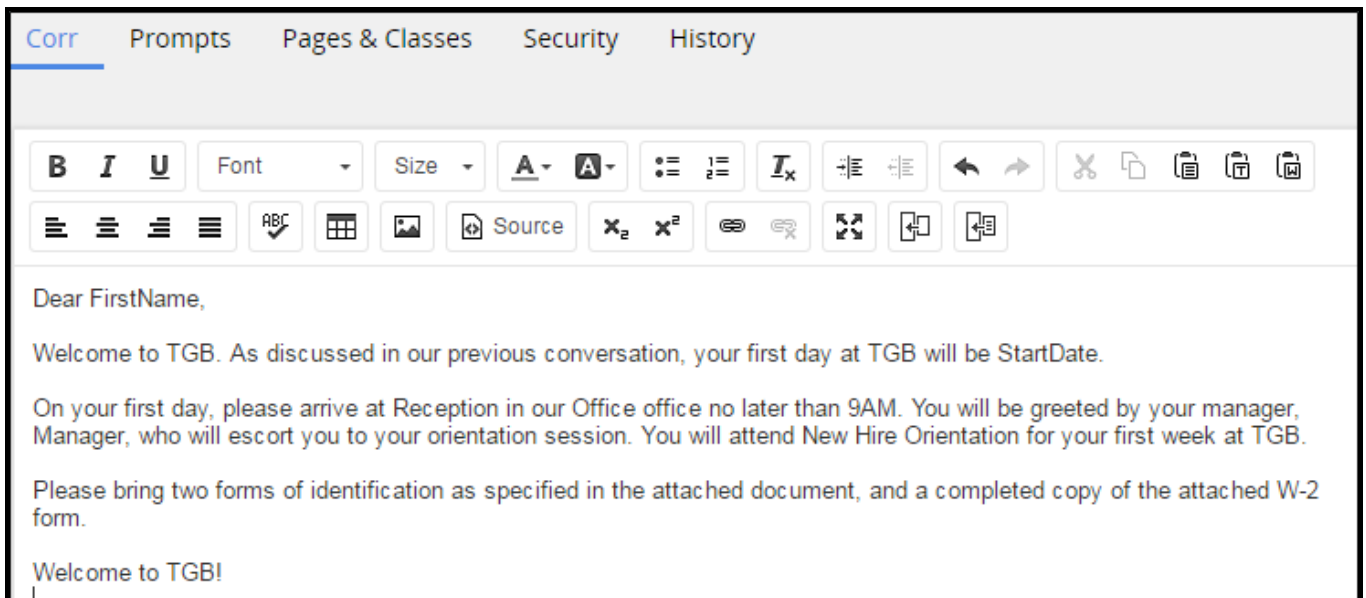
Welcome to TGB. As discussed in our previous conversation, your first day at TGB will be **StartDate**.

On your first day, please arrive at Reception in our Office office no later than 9AM. You will be greeted by your manager, **Manager**, who will escort you to your orientation session. You will attend New Hire Orientation for your first week at TGB.

Please bring two forms of identification, as specified in the attached document, and a completed copy of the attached W-2 form.

Welcome to TGB!

Note: **FirstName**, **StartDate**, **Office**, and **Manager** are placeholders for property references. Enter these placeholders for now, to indicate where to insert property references in upcoming steps.



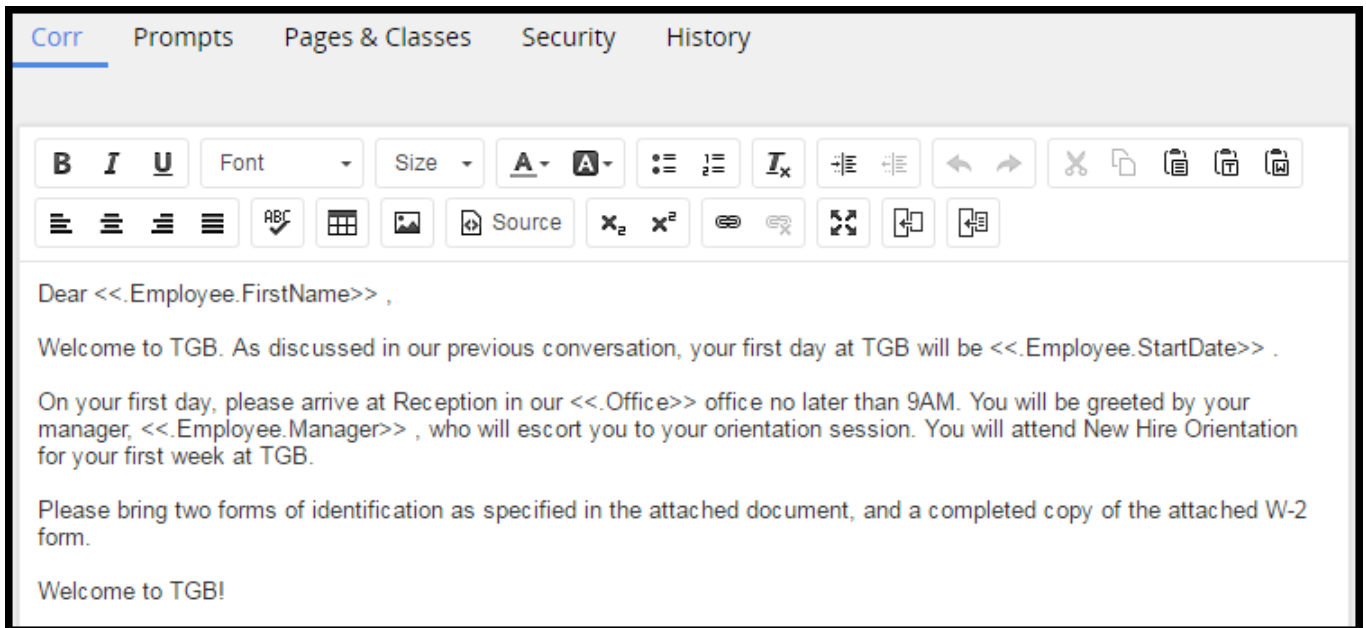
2. Select the text **FirstName** in the text of the email.
3. Click the **Insert Property** button on the editor toolbar. The Property Parameters dialog opens.

4. In the **Name** field, enter **.Employee.FirstName**.
5. Click **Save**. The Property Parameters dialog closes, and a reference for the First Name property is displayed in the email text.

6. Repeat steps 2-5 to replace the text StartDate, Office, and Manager with property references, as outlined in the following table.

Text	Property Reference
StartDate	.Employee.StartDate
Office	.Office
Manager	.Employee.Manager

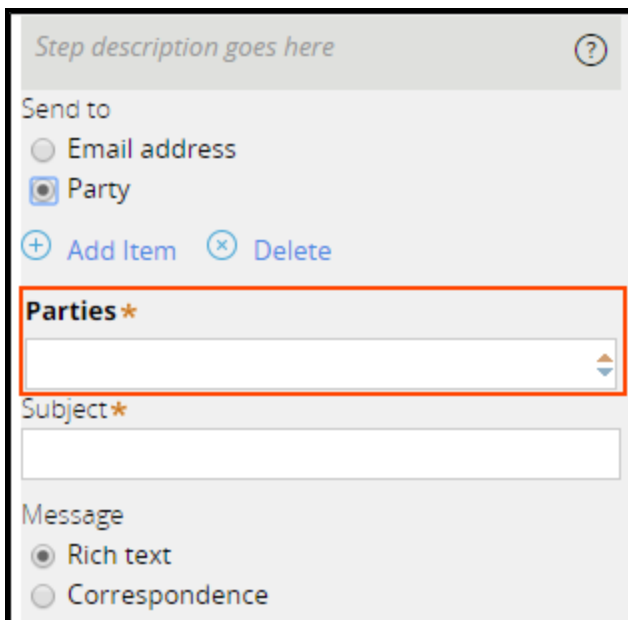
7. Click **Save**. Your form will look like the following example:



Configure the Onboarding case type to send the welcome email

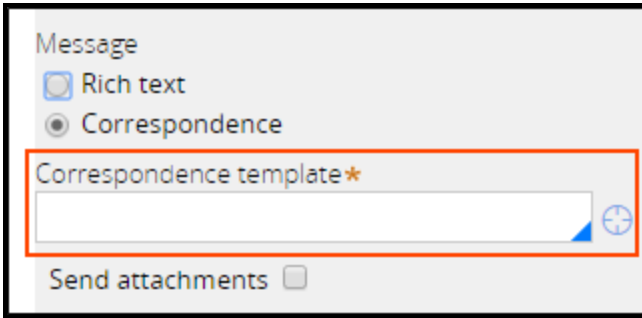
Configure the Onboarding case type to send the welcome email to the Employee party at the Send Welcome Packet step.

1. In the Cases Explorer, click **Onboarding**. The Onboarding case opens in the Case Designer.
2. In the Send Welcome Packet flow, select the **Send Welcome Email** step. The properties panel for the Send Email utility shape opens to the right of the case life cycle.
3. Under **Send to**, select **Party**. The properties panel updates to display a Parties field.



4. In the **Parties** field, enter or select **Employee**.
5. In the **Subject** field, enter **Welcome**.

- Under **Message**, select **Correspondence**. The properties panel updates to display the Correspondence template field.



- In the **Correspondence template** field, enter **WelcomeEmail**.
- Click **Save** to update the Onboarding case type to send the WelcomeEmail email.

Add the Office property to a form

Add the Office property to the Identify Home Office form to allow users to enter an office. The value that users enter in this field is used to customize the correspondence to the new employee.

- In the Case Designer, select the **Identify Home Office** step. The properties panel for the Identify Home Office step opens to the right of the case life cycle,
- In the properties panel, click **Configure view**. The View configuration dialog opens.
- In the View configuration dialog, under Fields enter or select **Office**.



- Click **Submit**. The View configuration dialog closes.
- In the Case Designer, click **Save** to commit your changes to the Onboarding case type.

Test your changes

- Create a new Onboarding case.
- On the **Collect Employee Info** form, enter data in the fields as shown in the following example.

Collect Employee Info
A Administrator

Contractor

Employee Start date

Employee First name

Employee Last name

Employee Email

Employee Manager

3. Click **Submit**. The case advances to the Identify Home Office form.
4. On the Identify Home Office form, in the **Office** field, enter **Berlin**.
5. Click **Submit**. The case advances to the Select Orientation Plan form.
6. Click **Submit**. Under **Attachments**, the email generated by the application is listed.



7. Click **Welcome** to open the email attachment.
8. Verify that the content matches the rule and the data you entered on previous forms in the case.

Sent: (Not yet sent)
From: user@pega.com
To: havens@mail.me.us
Subject: Welcome

Dear Tom ,

Welcome to TGB. As discussed in our previous conversation, your first day at TGB will be 5/1/16 .

On your first day, please arrive at Reception in our Berlin office no later than 9AM. You will be greeted by your manager, Frank Taylor , who will escort you to your orientation session. You will attend New Hire Orientation for your first week at TGB.

Please bring two forms of identification as specified in the attached document, and a completed copy of the attached W-2 form.

Welcome to TGB!

9. Close the Onboarding case.

Circumstancing rules

Exercise: Circumstancing the welcome email for contract employees

Scenario

TGB sends a welcome email to both full-time and contract employees. Unlike full-time employees, contractors have a shorter orientation period — one day — and must provide different paperwork on their first day. You must customize the email sent to contractors to reflect these differences.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

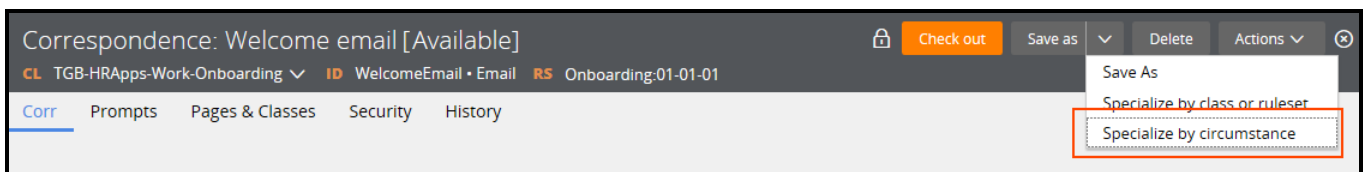
Customize a version of the welcome email to send to contract employees to mention that orientation lasts one day, and that the employee must provide a completed copy of the Contract Employee Agreement on their first day of work.

To do this, create a circumstanced version of the WelcomeEmail correspondence rule. For a circumstancing condition, test whether the value of the Contract employee property (.Employee.Contractor) is true.

Detailed steps

Create a circumstanced version of the WelcomeEmail correspondence rule

1. In the Application Explorer, expand **Onboarding > Process > Correspondence**, then select **WelcomeEmail** to open the welcome email.
2. Click the pull-down menu on the **Save as** button, and select **Specialize as circumstance**.



3. On the Specialize Correspondence form, select **Property and Date**.

Correspondence Record Configuration

Label* Identifier WelcomeEmail not editable
 A short description or title for this record

Correspondence Type
 Email

CIRCUMSTANCE BY Template Property and Date

Choose a property and/or a date property. All entered conditions must evaluate to true for this record to be chosen at run-time.

Property Value

- In the **Property** field, select or enter **.Employee.Contractor**.
- In the **Value** field, enter **true**.

CIRCUMSTANCE BY Template Property and Date

Choose a property and/or a date property. All entered conditions must evaluate to true for this record to be chosen at run-time.

Property Value

- Click **Create and open**. The Correspondence rule form opens.

Define the behavior for the circumstance

- Update the text of the email to read:

Dear <<.Employee.FirstName>> ,

Welcome to TGB. As discussed in our previous conversation, your first day at TGB will be <<.Employee.StartDate>> .

On your first day, please arrive at Reception in our <<.Office>> office no later than 9AM. You will be greeted by your manager, <<.Employee.Manager>> , who will escort you to your orientation session. You will attend New Hire Orientation for your first day at TGB.

Please bring two forms of identification as specified in the attached document, and a completed copy of the attached Contract Employee Agreement.

Welcome to TGB!

- Click **Save**.

Test your changes by creating a new onboarding case

- From the Create menu, select **New > Onboarding** case.
- On the Collect Employee Info form, select **Contractor**, then complete the remaining fields on the

form.

Collect Employee Info	A Administrator
<input type="checkbox"/> Contractor	
Employee Start date 05/01/2016	
Employee First name Tom	
Employee Last name Havens	
Employee Email havens@mail.me.us	
Employee Manager Frank Taylor	

3. Click **Submit**. The case advances to the Identify Home Office form.
4. On the Identify Home Office form, in the **Office** field, enter **Berlin**.
5. Click **Submit**. The case advances to the Select Orientation Plan form.
6. On the Select Orientation Plan form, click **Submit**.
7. Open the attached email and verify that the content matches the circumstanced version of the rule. The attached email should mention that the recipient attends New Hire Orientation for their first day, and that the recipient should bring a completed copy of the Contract Employee Agreement.

Sent: (Not yet sent)
From: default@sample.com
To: havens@mail.me.de
Subject: Welcome

Dear Tom ,

Welcome to TGB. As discussed in our previous conversation, your first day at TGB will be 5/1/16 .

On your first day, please arrive at Reception in our Berlin office no later than 9AM. You will be greeted by your manager, Harry Nelson , who will escort you to your orientation session. You will attend New Hire Orientation for your first day at TGB.

Please bring two forms of identification as specified in the attached document, and a completed copy of the attached Contract Employee Agreement.

Welcome to TGB!

8. Close the onboarding case.

DECISION DESIGN

Configuring when rules

Exercise: Skipping facilities setup for remote employees

Scenario

TGB hires remote employees — employees who do not work in one of the five main TGB offices. The onboarding process for remote employees does not require selecting a seating location or requesting office equipment such as a desk or telephone.

The HR department indicates that for these remote employees, onboarding cases skip the Facilities Setup process.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Identify onboarding cases for remote employees, and skip the Facilities setup for these cases.

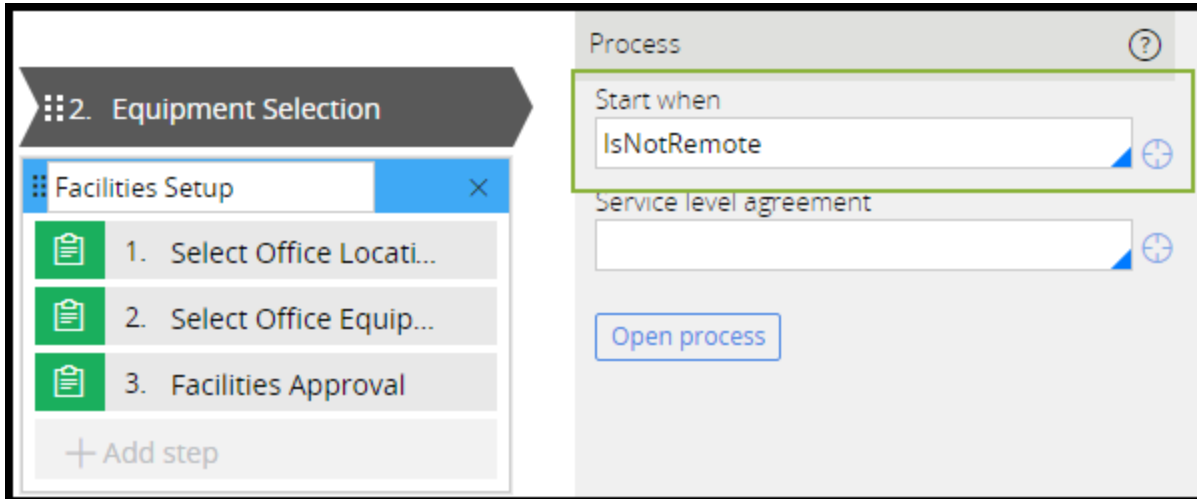
You can create a When rule to test the value of the .Remote property, and return a true value if the value of the property is "false". Then, use this When rule as a **Start when** condition on the Facilities Setup process.

Detailed steps

Create a when rule to identify remote employees

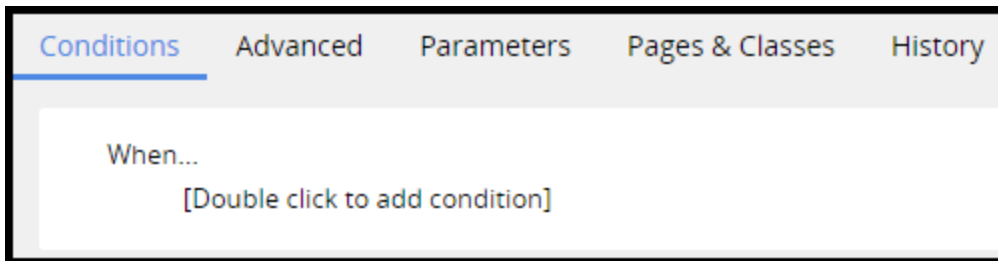
1. Open the Onboarding case type in the Case Designer.
2. Select the **Facilities Setup** process.
3. In the **Process** panel, under **Start when**, enter **IsNotRemote**, then click the **crosshair** icon next to

the field.



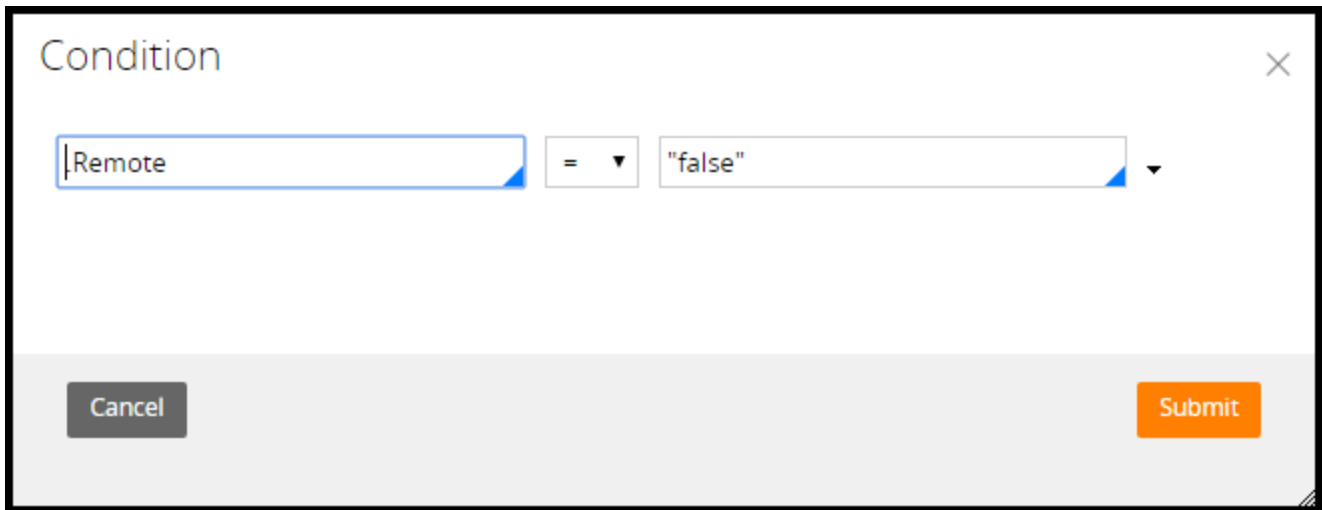
Note: Tip: Name When rules to identify the condition that returns a true result. The Facilities Setup process runs only if the employee is not considered remote.

4. On the New Rule form, click **Create and open**. A new When rule form opens.



Define the condition to test if an employee is remote

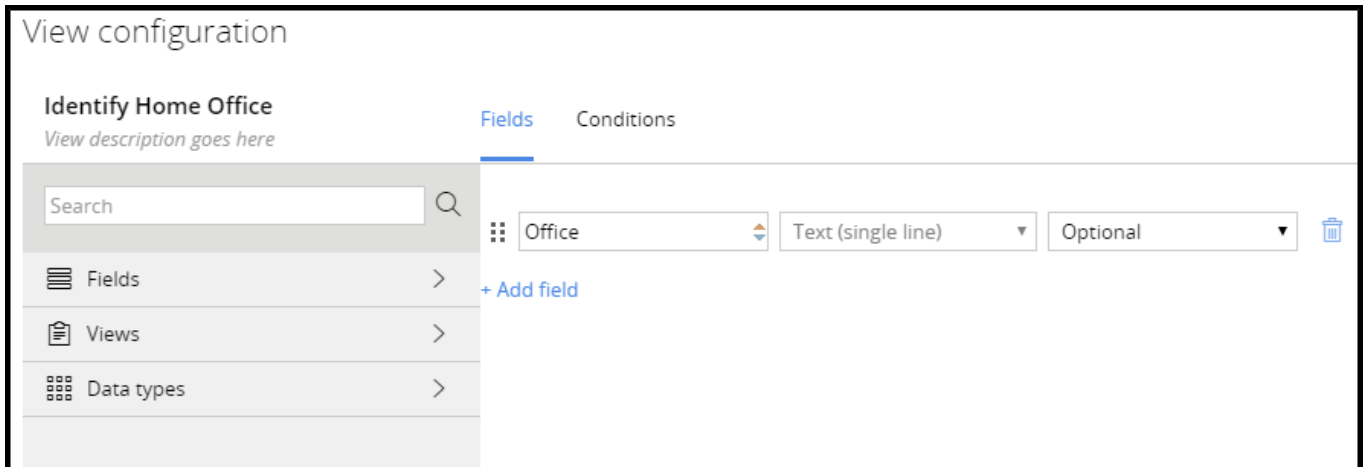
1. On the **Conditions** tab of the When rule form, double-click the text **[Double click to add condition]**. The Condition dialog opens.
2. In the Condition dialog, in the leftmost field, select or enter **.Remote**.
3. In the rightmost field, enter **"false"**.



4. Click **Submit**. The Condition dialog closes.
5. Click **Save** to commit your change to the when rule.

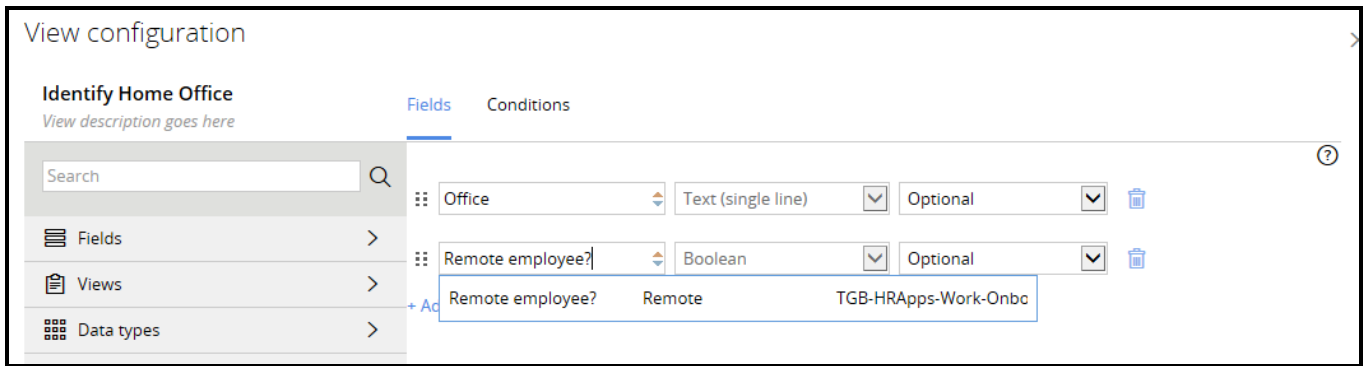
Add a check box for the Remote property to the Identify Home Office form

1. Return to the Case Designer.
2. Select the **Identify Home Office** step.
3. Click **Configure view**. The View Configuration dialog appears.



4. Click **Add field**. A row of empty fields is added to the dialog.
5. Under **Fields**, select the **Remote** property, which you created in a previous exercise.

Note: Confirm that you add the property named Remote, as shown in the following screenshot, rather than creating a new property.



6. Click **Submit** to save your changes to the form. The View Configuration dialog closes.
7. Click **Save** to commit your changes to the Onboarding case type.

Test your changes

1. Create a new onboarding case.
2. On the **Identify Home Office** form, click the **Remote Employee?** check box.
3. Continue to the Equipment Selection stage, and verify that the Facilities Setup process does not run.

Configuring decision tables and decision trees

Exercise: Configuring a decision table to route Facilities requests

Scenario

During the onboarding process, the Facilities department must set up a workstation for on-site employees. To avoid delays in the onboarding process, HR wants to ensure that each Facilities request is routed to the correct local office of the Facilities department.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create a decision table to route a Facilities request to the appropriate workbasket, based upon the home office specified for the employee.

Detailed steps

Configure a decision table to route the Facilities request to one of the five workbaskets configured for the Facilities department:

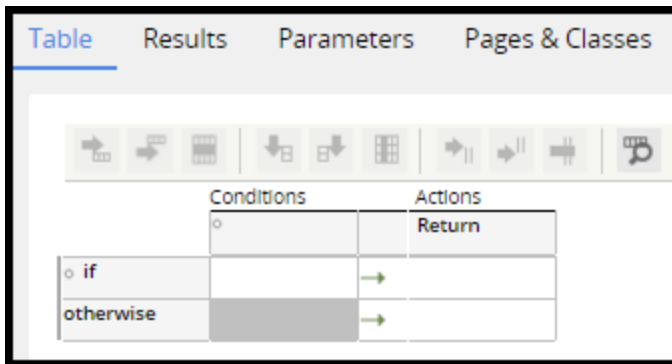
- Facilities_ATL@TGB (Atlanta home office)
- Facilities_BER@TGB (Berlin home office)
- Facilities_LON@TGB (London home office)
- Facilities_TOK@TGB (Tokyo home office)
- Facilities_VAN@TGB (Vancouver home office)

Replace the Approve Facilities Setup approval shape with an assignment of the same name — the Approve/Reject step does not support the router you need to use. Configure the assignment to use the ToDecisionTable router, and select the decision table you create as the parameter passed to the router.

Create a decision table for routing cases to the correct Facilities workbasket

Create a decision table to automate the routing logic for Facilities requests.

1. Open the Application Explorer.
2. Expand **Onboarding > Decision**.
3. Right-click **Decision** and select **+Create > Decision Table**. The New Record form opens.
4. In the **Label** field, enter **Facilities routing**.
5. Click **Create and open**. The decision table rule form opens.



Configure the decision table to return a workbasket based on the selected home office

Configure the decision table to return the name of the workbasket that corresponds to each TGB office.

1. Under **Conditions**, click the empty header cell. The Decision Table property chooser dialog opens.
2. In the **Property** field, enter or select **.Office**.
3. Click **Save**. The Decision Table property chooser dialog closes, returning you to the decision table rule form.
4. Under **Conditions**, click the empty cell and enter **"Atlanta"**.
5. Under **Actions**, click the empty cell next to the cell containing "Atlanta" and enter **"Facilities_ATL@TGB"**.
6. In the empty cell in the **otherwise** row, enter **"Facilities@TGB"**.
7. Click the **Insert row before** icon four times to create four rows in the decision table for the remaining TGB offices.
8. Enter information in the remaining rows according to the following table.

Conditions	Actions
"Berlin"	"Facilities_BER@TGB"
"London"	"Facilities_LON@TGB"

"Tokyo"	"Facilities_TOK@TGB"
"Vancouver"	"Facilities_VAN@TGB"

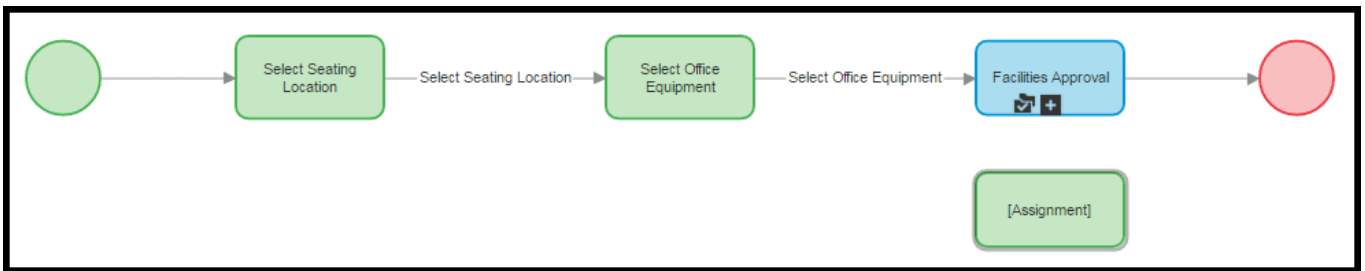
9. Click **Save**. The completed decision table should match the following screenshot.

	Conditions	Actions
	Office	Return
if	"Atlanta"	→ "Facilities_ATL@TGB"
else if	"Berlin"	→ "Facilities_BER@TGB"
else if	"London"	→ "Facilities_LON@TGB"
else if	"Tokyo"	→ "Facilities_TOK@TGB"
else if	"Vancouver"	→ "Facilities_VAN@TGB"
otherwise		→ "Facilities@TGB"

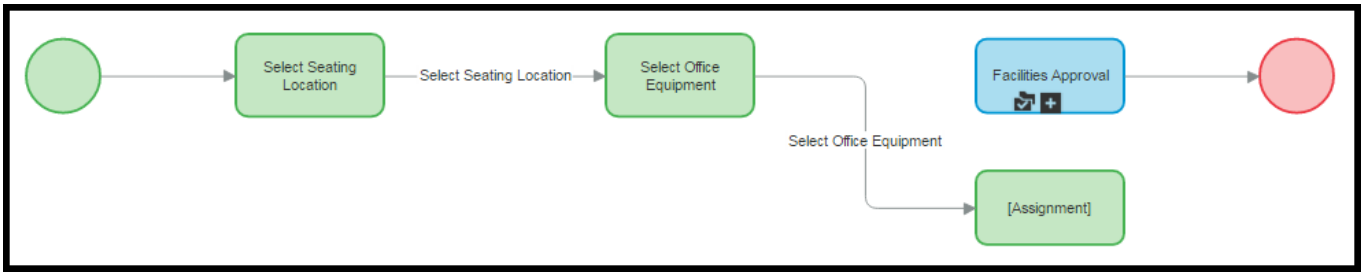
Replace the Facilities Approval step with an assignment named Facilities Review

Replace the Approve Facilities Setup approval shape with an assignment of the same name — the Approve/Reject step does not support the router you need to use.

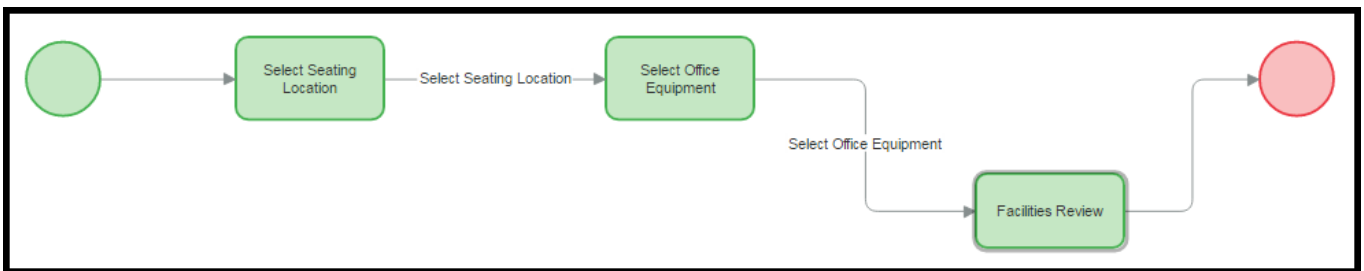
1. Open the Cases Explorer.
2. In the Cases Explorer, click **Onboarding**. The Onboarding case type opens in the Case Designer.
3. Select the **Facilities Setup** process. The Process properties panel opens to the right of the case life cycle.
4. In the Process properties panel, click **Open process**. The Facilities Setup flow rule opens.
5. From the Flow Shapes menu, select **Assignment** and drag an assignment onto the flow editor.



6. Reposition the Select Office Equipment connector so it connects to the assignment you just added to the flow.



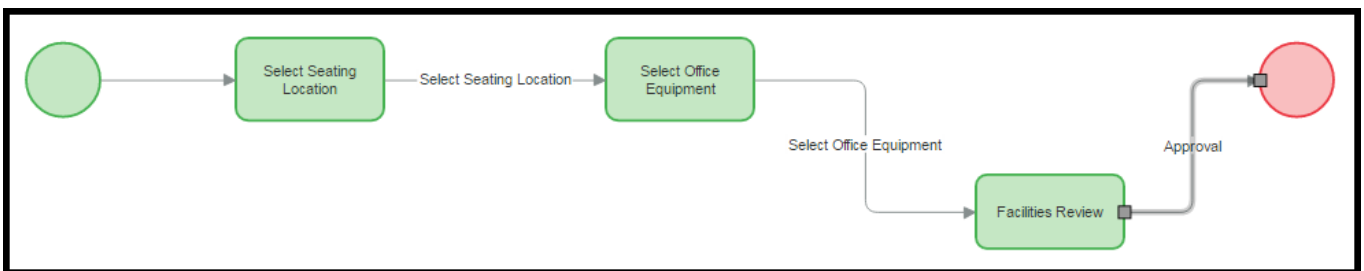
7. Add a connector from the assignment to the end shape.
8. Delete the Facilities Approval shape and the connector leading from the Facilities Approval shape to the end shape.
9. Right-click the assignment shape you added, and select **View Properties**. The Assignment Properties dialog opens.
10. In the **Assignment** field, enter **Facilities Review**.
11. Click **Submit**.



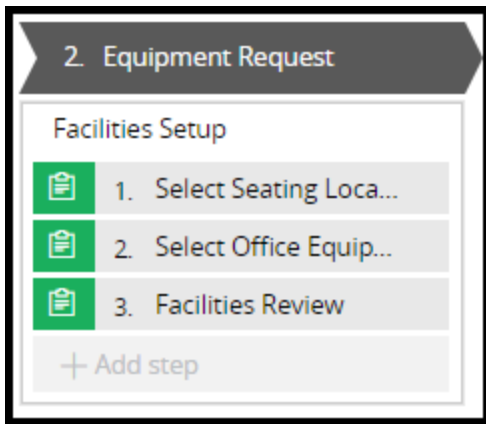
12. Right-click the connector between the Facilities Review assignment and the end shape, and select **View Properties**. The Connector Properties dialog opens.
13. In the **Connector** field, enter **Approval**.
14. In the **Flow Action** field, enter or select **pyApproval**.

Note: In Pega, a flow action record describes an action that a user can perform to complete an assignment. The *pyApproval* flow action is a standard action for approving a case. Flow actions are discussed in the lesson *Designing a UI form*.

15. Click **Submit**.



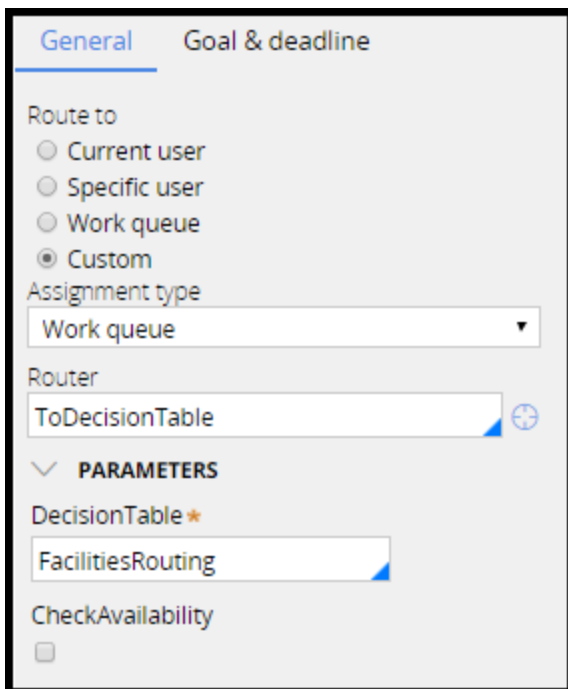
16. Click **Save** to commit your changes to the process.
17. Close the Facilities Setup flow rule. The Designer Studio returns to the Case Designer.
18. From the **Actions** menu, select **Refresh**. The life cycle for the Onboarding case type updates to reflect your changes to the Facilities Setup flow rule.



Configure the Facilities Review assignment to use the ToDecisionTable router

Configure the Facilities Review assignment to use the ToDecisionTable router. Select the decision table you create as the parameter passed to the router.

1. In the Case Designer, select the **Facilities Review** assignment. The Assignment Properties panel opens on the right side of the Case Designer.
2. Under **Route to**, select **Custom**.
3. From the **Assignment type** drop-down list, select **Work queue**.
4. In the **Router** field, enter or select **ToDecisionTable**. An expanded Parameters section is added to the Assignment Properties panel.
5. Under Parameters, in the **DecisionTable** field, enter or select **FacilitiesRouting**.
6. Click **Save** to commit your changes to the Onboarding case type.

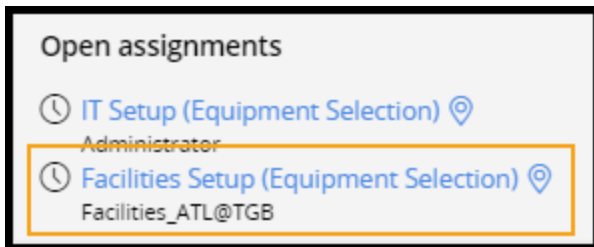


Test your changes

1. Create a new Onboarding case.
2. Complete the Collect Employee Info form.
3. Click **Submit**. The Identify Home Office form appears.
4. In the **Office** field, enter one of the five valid home office locations: Atlanta, Berlin, London, Tokyo, or Vancouver.

Note: If you do not enter one of the five valid office locations, Pega returns an error on the Facilities Review form.

5. Click **Submit**.
6. Continue to the Facilities Review form.
7. Verify that the Facilities Review assignment was routed to the workbasket that corresponds to the home office you entered in step 4.



Home Office	Workbasket
Atlanta	Facilities_ATL@TGB
Berlin	Facilities_BER@TGB
London	Facilities_LON@TGB
Tokyo	Facilities_TOK@TGB
Vancouver	Facilities_VAN@TGB

Note: If you do not enter a home office in step 4, Pega returns an error on the Facilities Review assignment. This error occurs because the routing activity does not process the otherwise result. You can address this problem by preventing the user from submitting the form until they select a home office. The lesson *Validating user data* presents two approaches to resolving this error.

UI DESIGN

Designing a UI form

Exercise: Configuring Onboarding and Benefits Enrollment UI forms

Scenario

Now that the data model and business process for the Onboarding and Benefits Enrollment case types are mostly complete, you have begun attending Grooming/Elaboration sessions to design the UI for these case types. You have been asked to configure the UI for the Select Seating Location and Select Orientation Plan forms in the Onboarding case type. You have also been asked to update the Review Selections form for the Benefits Enrollment case type.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create a reusable Employee Information section containing the following properties:

- First Name
- Last Name
- Manager
- Start date

Create the Select Seating Location form with the following two properties, then add the Employee Information section to the form:

- Office, as a read-only text field
- Location, as a drop-down list

Create a page list property named Courses for enablement courses. Update the Select Orientation Plan form with a list of course data, then add the Employee Information section to the form.

Update the property definition for the Courses page list property to reference a data page containing data about the enablement courses.

Update the form for the Review Selections assignment in the Benefits Enrollment case type to add the Employee Information, Confirm Employee Details, and Identify Dependents sections.

Note: In this exercise, you update forms that were created by using the Case Designer. When the Case Designer creates a section rule, the suffix "_0" is appended to the name of the section. This allows you to differentiate between sections created by the Case Designer and sections created by system architects.

Detailed steps

Create the Select Seating Location form

Create the Select Seating Location form with two properties:

- Office, as a read-only text field
- Location, as a drop-down list

1. In the Cases Explorer, click the **Onboarding** case. The Onboarding case type opens in the Case Designer.
2. Click the **Select Seating Location** step. The properties panel for the step opens to the right of the case life cycle.
3. Click **Configure view**. The View Configuration dialog opens.
4. In the View configuration dialog, under **Fields**, enter or select **Office**. The Office field is added to the Select Seating Location form.



5. From the right-most drop-down list, select **Read-only**.
6. Click **+ Add field**. A second row of fields is added to the dialog.
7. In the field labeled **Enter field here ...**, enter **Location**.
8. From the drop-down list labeled **Text (single line)**, select **Picklist**.



- Click **Submit**. The View Configuration dialog closes.
- Click **Save** to commit your changes to the Onboarding case type.

Update the Select Orientation Plan form

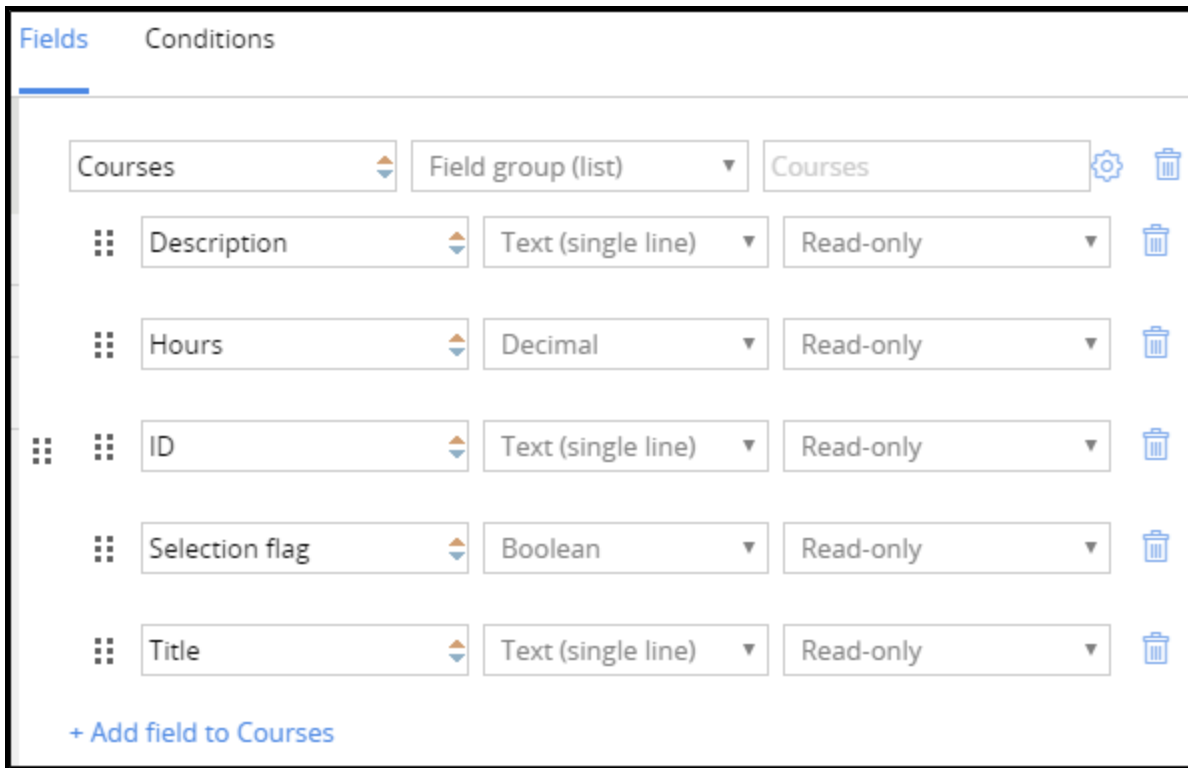
Update the Select Orientation Plan form to add a repeating list to display course data and remove the Manager field from the form.

- In the Case Designer, click the **Data model** tab.
- On the **Data model** tab, click **Add field**. A row of fields displays on the tab.
- Under **Name**, enter **Courses**.
- From the **Type** list, select **Field group (list)**. An empty field and a **New** link are displayed under Options.

Name	ID	Type	Options
Remote employee?	Remote	Boolean	
Office	Office	Text (single line)	
Location	Location	Picklist	Drop down
Courses	Courses	Field group (list)	Enter data type New

[+Add field](#)

- Under **Options**, enter or select **Courses** to reference the Courses data class.
- Click **Save** to create the Courses page list property.
- Click the **Life cycle** tab. The Case Designer displays the life cycle for the Onboarding case type.
- In the Case Designer, click the **Select Orientation Plan** step. The properties panel for the step opens to the right of the case life cycle.
- Click **Configure View**. The View configuration dialog opens.
- In the View configuration dialog, under **Fields**, enter **Courses**.
- Press **Tab** to exit the field. The View Configuration dialog updates to display the properties defined for the Courses page list property.
- From the drop-down list to the right of the field containing the field name, select **Field group (list)**. The View Configuration dialog updates to display the properties defined for the Courses page list property.



13. Click and hold the selection handle for the ID property.



14. Drag the cursor above the Description property, then release the mouse button to reorder the properties in the list.

Fields Conditions

Courses			
Field group (list)	Courses		
ID	Text (single line)	Read-only	
Description	Text (single line)	Read-only	
Hours	Decimal	Read-only	
Selection flag	Boolean	Read-only	
Title	Text (single line)	Read-only	

+ Add field to Courses

- Use the selection handle for the Title property to move the Title property above the Description property.
- Use the selection handle for the Selection flag property to move the property above the ID property.

Fields Conditions

Courses			
Field group (list)	Courses		
Selection flag	Boolean	Read-only	
ID	Text (single line)	Read-only	
Title	Text (single line)	Read-only	
Description	Text (single line)	Read-only	
Hours	Decimal	Read-only	

+ Add field to Courses

- Click **Submit**. The View configuration dialog closes.
- Click **Save** to commit your changes to the Onboarding case type.

Update the Courses property to copy data from the data page containing course information

Update the Courses property to automatically populate data from a data page that caches course data.

1. In Designer Studio, open the Application Explorer.
2. Expand **Onboarding > Data Model > Property** and click **Courses**. The Courses property rule opens.
3. Under **Data access**, select **Copy data from a data page**. The Courses rule form updates.

The screenshot shows the configuration for the 'Courses' property rule. It has three tabs: 'General', 'Advanced', and 'History'. The 'General' tab is selected. Under 'Property type', the 'Page List' is set to 'TGB-HRApps-Data-Courses'. The 'Data access' section has three radio button options: 'Manual', 'Refer to a data page', and 'Copy data from a data page'. The 'Copy data from a data page' option is selected. Below these options is a checkbox for 'Load each page in this page list individually' which is unchecked. The 'Data Page' field is set to 'TGB-HRApps-Data-Courses'.

4. In the **Data Page** field, enter or select **D_CoursesList** to populate the Courses page list with course data from the data page.

- Click **Save** to commit your changes to populate the Select Orientation Plan form with course data.

General Advanced History

Property type

Page List

Page definition *

TGB-HRApps-Data-Courses

Data access

Manual When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property.

Refer to a data page Interactions with the property happen on the copied data.

Copy data from a data page

Load each page in this page list individually

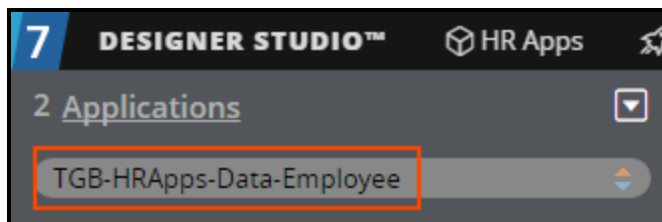
Data Page: *

D_CoursesList TGB-HRApps-Data-Courses

Create a reusable Employee Info section

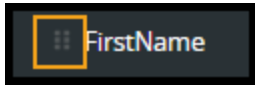
Create a reusable Employee Info section that contains the following properties arranged in two columns.

- First Name
 - Last Name
 - Manager
 - Start date
- In the Application Explorer, use the application scoping control to select **TGB-HRApps-Data-Employee**. The Application Explorer updates to display the contents of the *TGB-HRApps-Data-Employee* class.

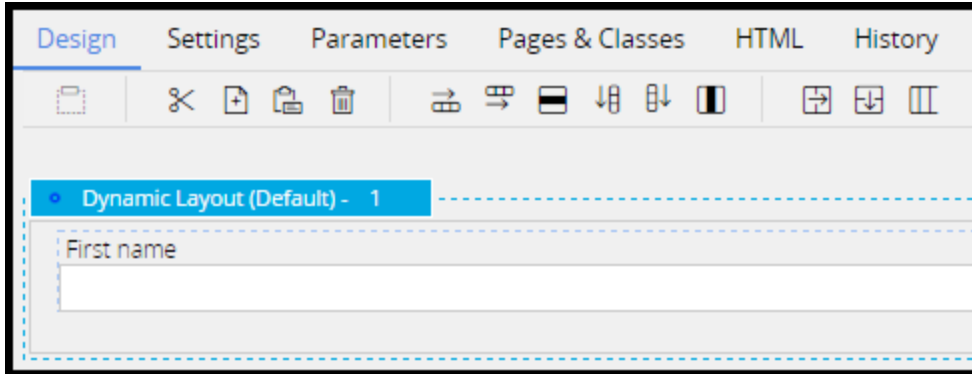


- Right-click **TGB-HRApps-Data-Employee** and select **Create > User Interface > Section**. The New Record form opens.
- In the **Label** field, enter **Employee information**.
- Click **Create and open**. The Employee information section rule opens.
- In the Application Explorer, expand **Data Model > Property**.

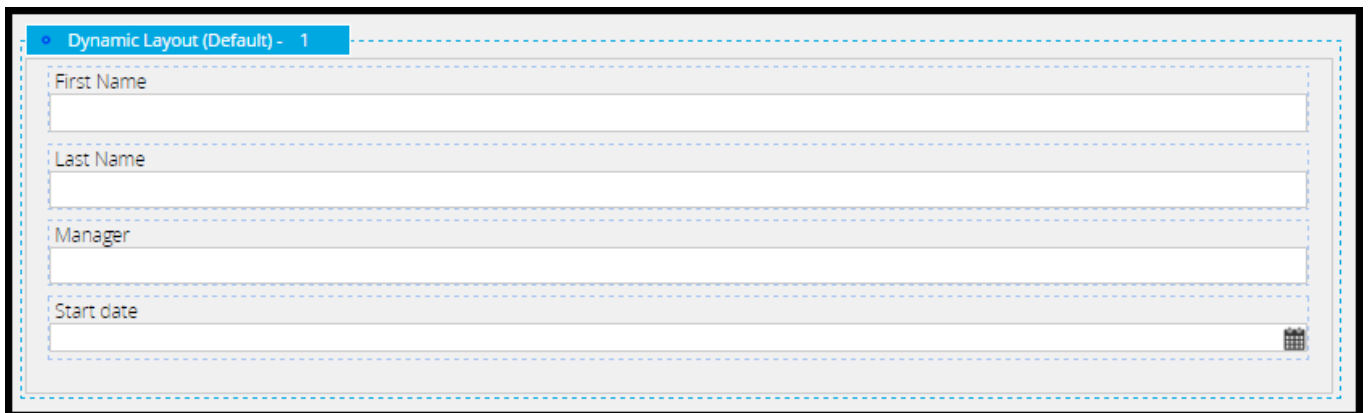
- Click and hold the selection handle for the FirstName property.



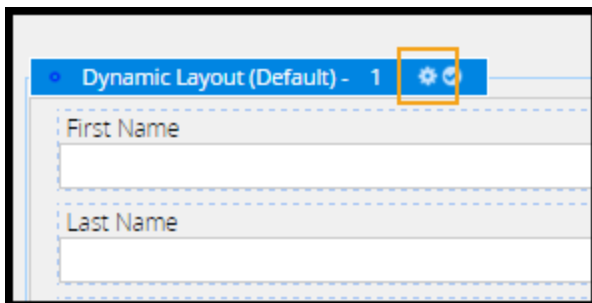
- Drag the cursor into the existing layout, then release the mouse button. A text input control labeled First name is added to the layout.



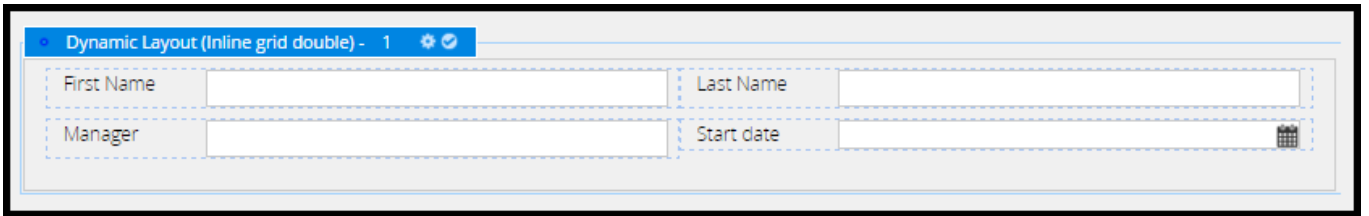
- For the LastName, Manager, and StartDate properties, click the selection handle and drag the cursor from the Application Explorer to the dynamic layout.



- Click the header for the **Dynamic Layout (Default)** layout. A gear icon is displayed on the header.



- Click the **gear** icon. The Dynamic Layout properties panel opens.
- From the **Layout Format** drop-down list, select **Inline grid double**.
- Click **Submit**. The Dynamic Layout properties panel closes and the layout is now presented as two rows of two fields each.

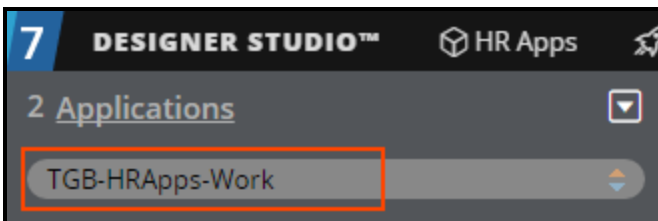


13. Click **Save** to commit your changes to the Employee Information section.

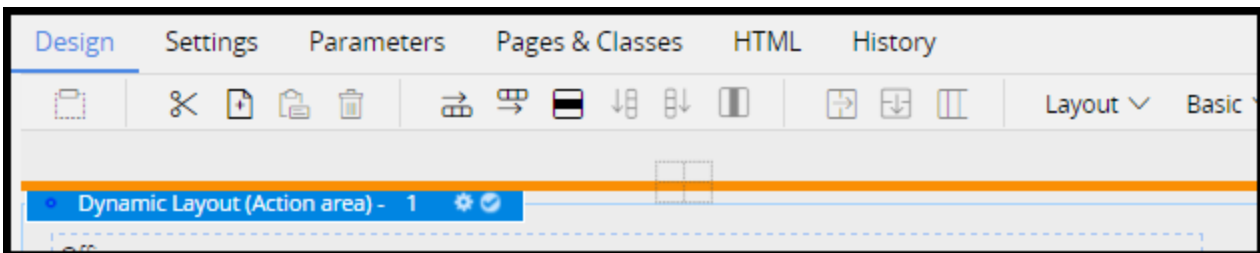
Add the Employee Information section to the Select Seating Location form

Update the Select Seating Location form to add the Employee Information section.

1. In the Application Explorer, use the application scoping control to select **TGB-HRApps-Work**. The Application Explorer updates to display the contents of the *TGB-HRApps-Work* class.



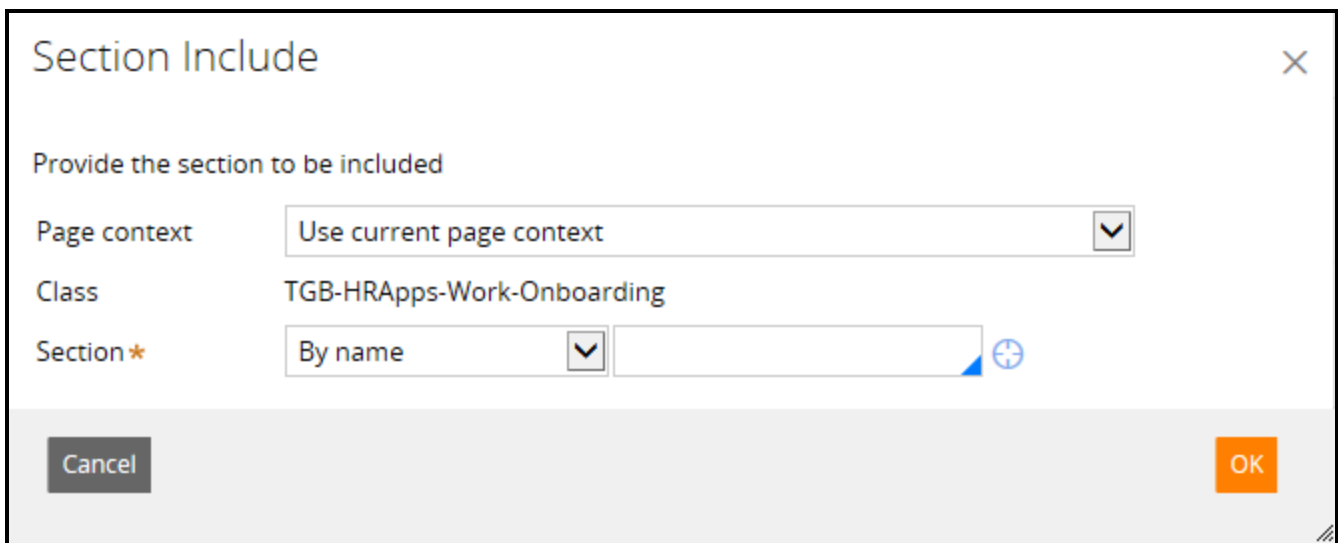
2. Expand **Onboarding > User Interface > Section** and select **SelectSeatingLocation_0**. The Select Seating Location section rule opens.
3. From the **Layout** menu, click **Layout** and hold down the mouse button.
4. Drag the mouse cursor onto the section above the existing layout. An orange line indicates where the layout is added to the section.



5. Release the mouse button. The Set layout type dialog opens.



6. Click **OK**. A dynamic layout is added to the Select Seating Location section.
7. From the **Layout** menu, click **Section** and hold down the mouse button.
8. Drag the mouse cursor into the dynamic layout you just created.
9. Release the mouse button. The Section Include dialog opens.



10. From the **Page context** drop-down list, select **Use clipboard page**. The Section Include dialog updates to display the Clipboard page field.

Section Include

Provide the section to be included

Page context: Use clipboard page

Class: TGB-HRApps-Work-Onboarding

Clipboard page*:

Section*: By name

Cancel OK

11. In the **Class** field, enter or select **TGB-HRApps-Data-Employee**.
12. In the **Clipboard page** field, enter or select **.Employee**.
13. In the field to the right of the By name drop-down list, enter or select **EmployeeInformation**.

Section Include

Provide the section to be included

Page context: Use clipboard page

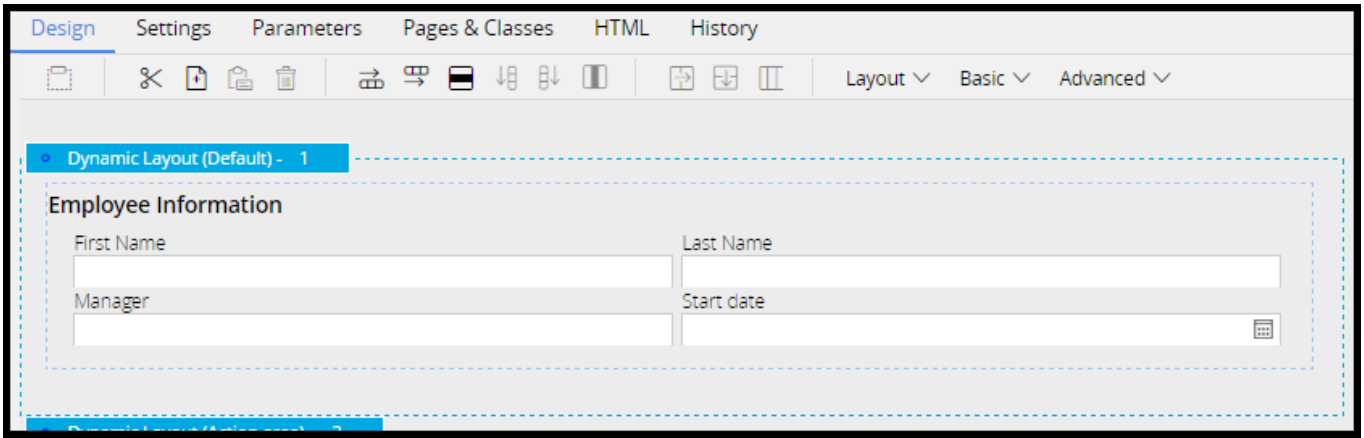
Class: TGB-HRApps-Data-Employee

Clipboard page*: .Employee

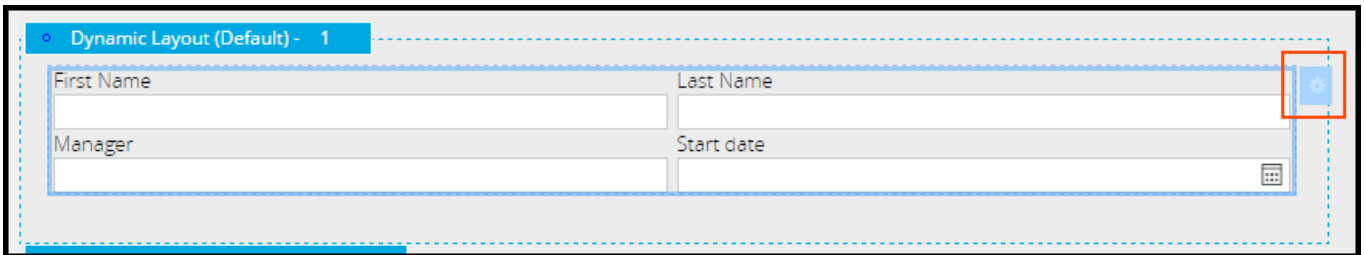
Section*: By name EmployeeInformation

Cancel OK

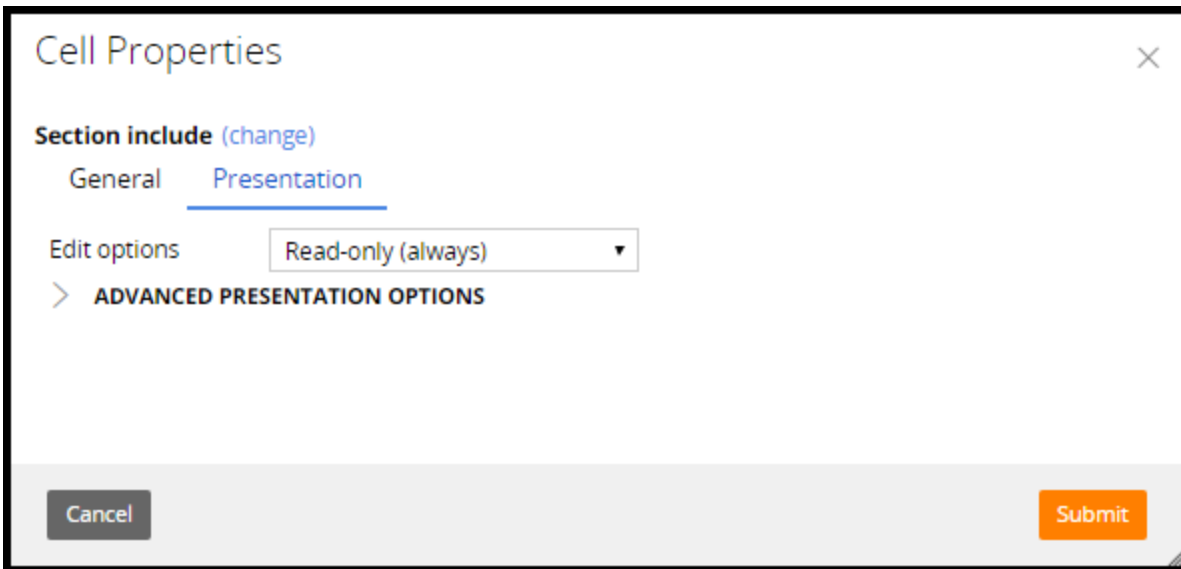
14. Click **OK**. A Section Include layout is added to the Select Seating Location section.



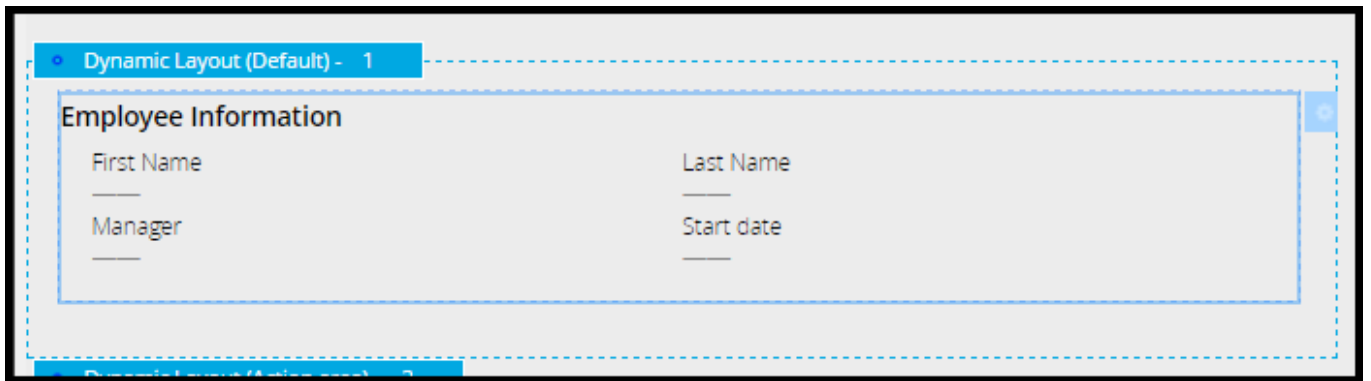
- Click the **Employee Information** section inside the dynamic layout. A gear icon is displayed to the right of the section include.



- Click the **Gear** icon. The Cell Properties panel opens.
- Click **Presentation**.
- From the **Edit options** drop-down list, select **Read-only (always)**.



- Click **Submit**. The Cell Properties panel closes.

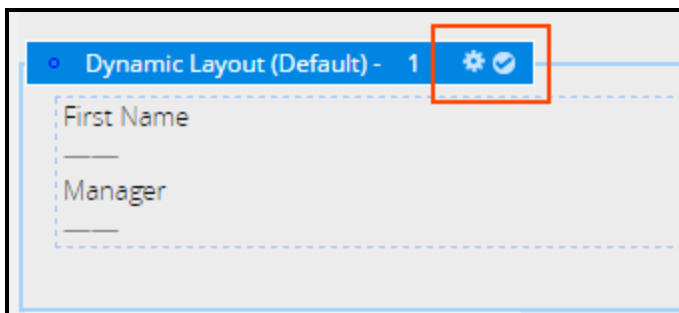


20. Click **Save** to commit your changes to the Select Orientation Plan form.

Update the Select Orientation Plan form

Add the Employee Info section to the Select Orientation Plan form. Update the repeating grid to make the selection flag column editable and remove the label from the column header.

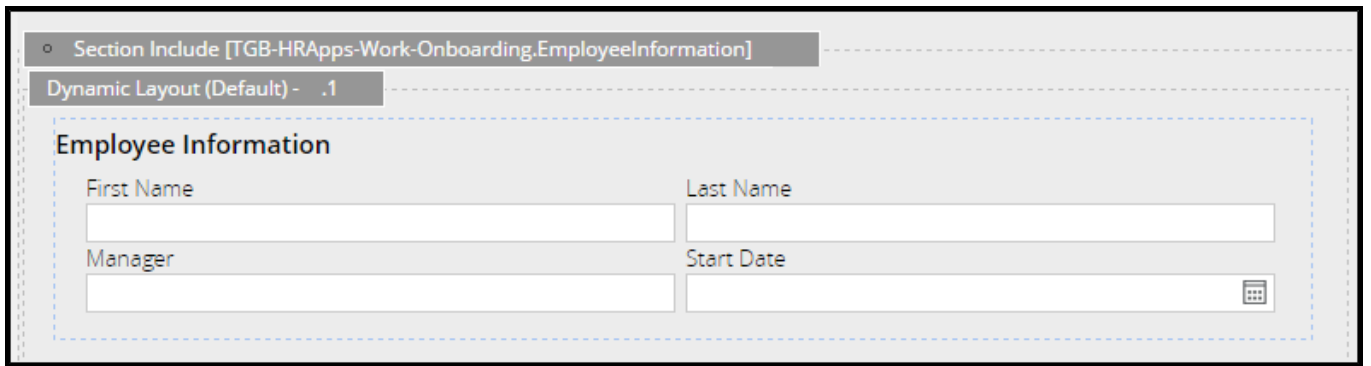
1. In the Select Seating Location section, click the header for the dynamic layout that contains the Employee Information section include. A gear icon and check mark icon are displayed in the layout header.



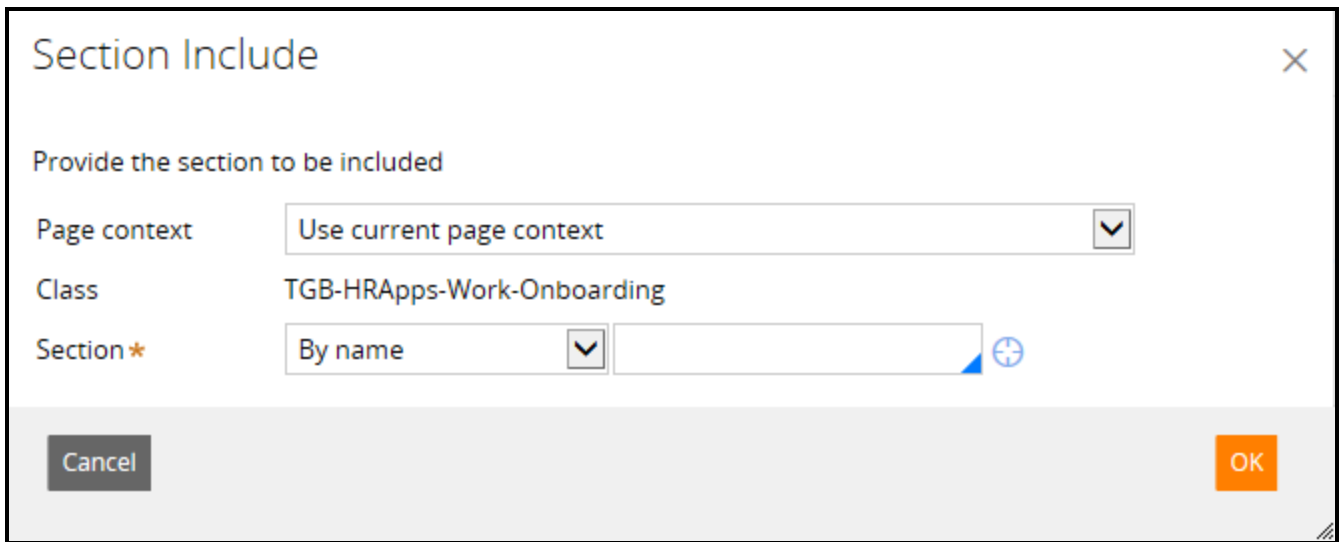
2. Click the **check mark** icon. The Save Layout as Section dialog opens.
3. In the **Purpose** field, enter **EmployeeInformation**.



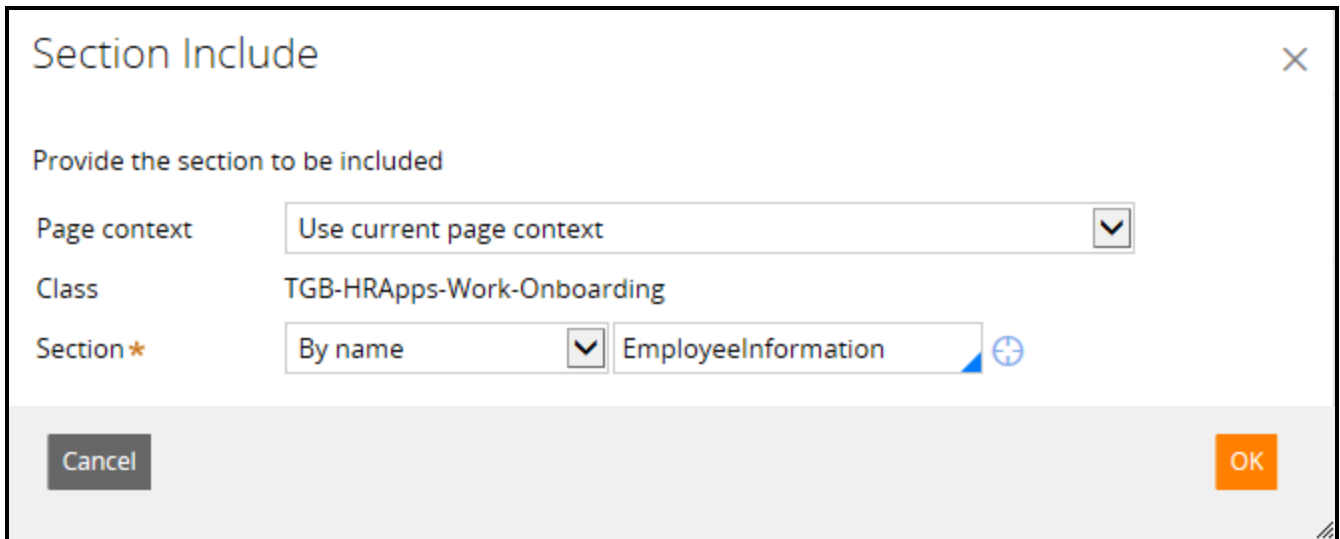
4. Click **Create**. The Save Layout as Section dialog closes, and the Select Seating Location section updates to contain a section include for the Employee Information section instead of the dynamic layout.
5. Click **Save**.



6. In the Application Explorer, expand **Onboarding > User Interface > Section** and select **SelectOrientationPlan_0_Courses**. The Select Orientation Plan section rule opens.
7. From the **Layout** menu, click **Section** and hold down the mouse button.
8. Drag the mouse cursor onto the section above the existing layout. An orange line indicates where the layout is added to the section.
9. Release the mouse button. The Section Include dialog opens.



10. In the field to the right of the By name drop-down list, enter or select **EmployeeInformation**.



Section Include

Provide the section to be included

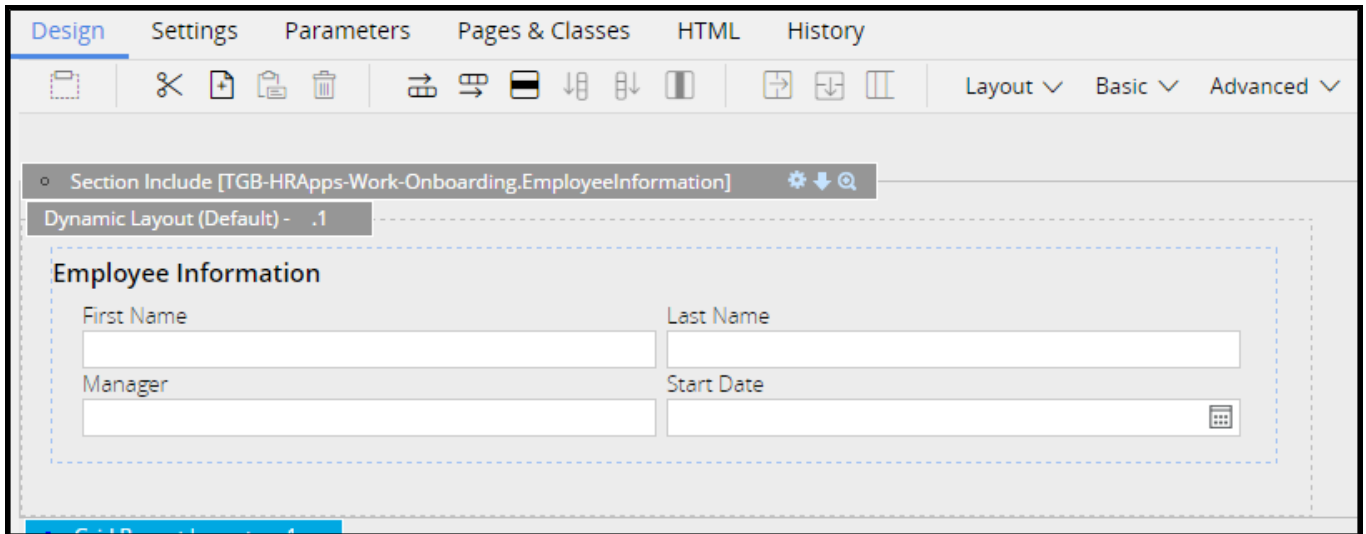
Page context: Use current page context

Class: TGB-HRApps-Work-Onboarding

Section*: By name EmployeeInformation

Buttons: Cancel, OK

11. Click **OK**. The Employee Information section is added to the Select Seating Location section.
12. Click **Save**.



Design Settings Parameters Pages & Classes HTML History

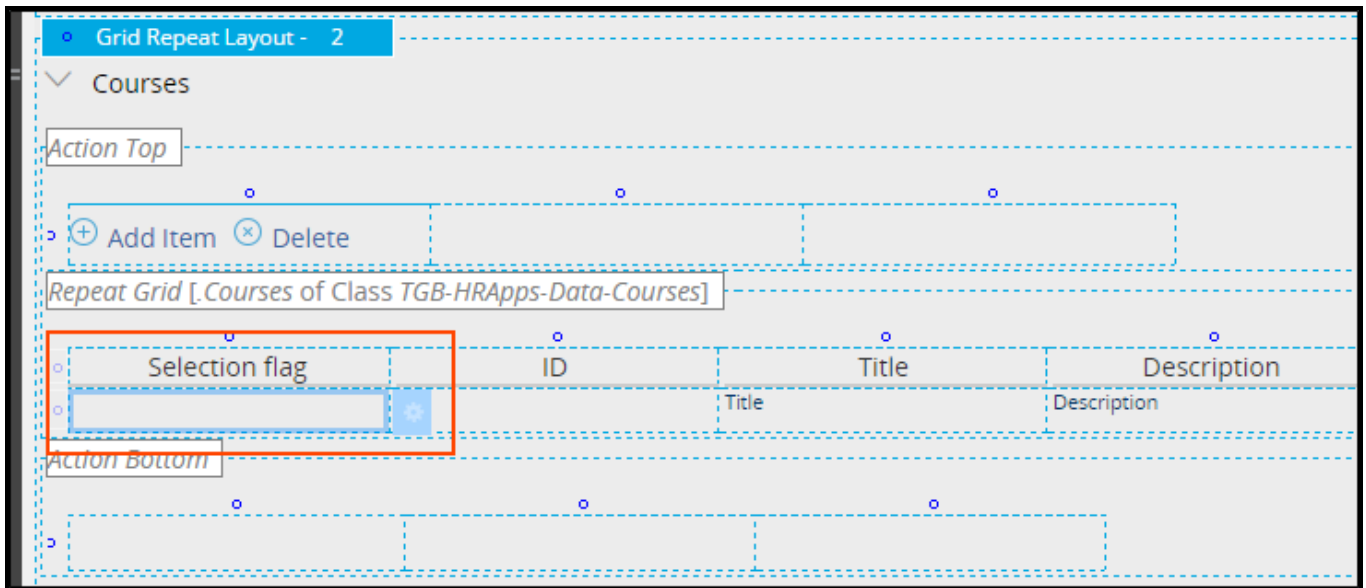
Dynamic Layout (Default) - .1

Employee Information

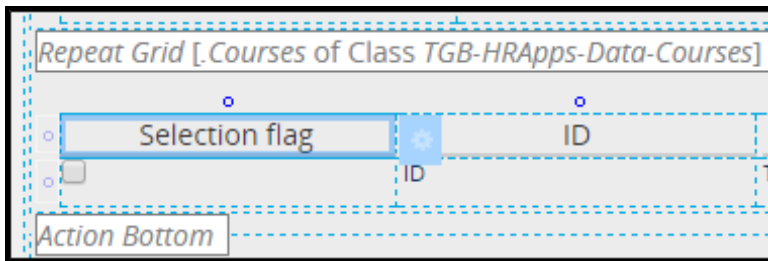
First Name Last Name

Manager Start Date

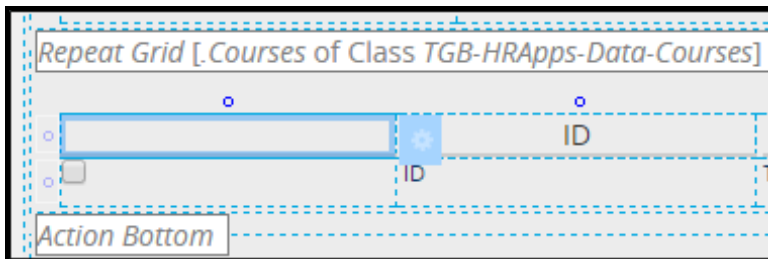
13. In the repeat grid, click the **Selection flag** field. A gear icon is displayed next to the field.



14. Click the **gear** icon to open the Cell Properties dialog.
15. In the Cell Properties dialog, click the **Presentation** tab.
16. On the Presentation tab, from the **Edit options** drop-down list select **Auto**.
17. Click **Submit** to close the Cell Properties dialog and update the repeat grid.
18. Click the header cell for the Selection flag column.



19. Press the **Delete** key to delete the label for the column.

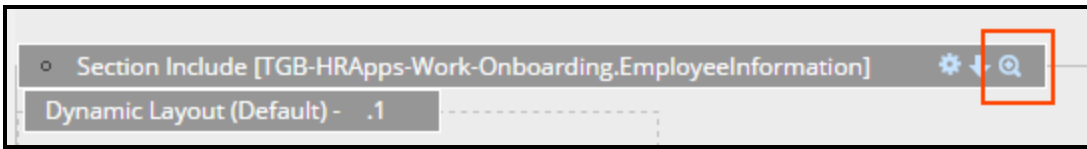


20. Click **Save** to commit your changes to the Select Orientation Plan form.

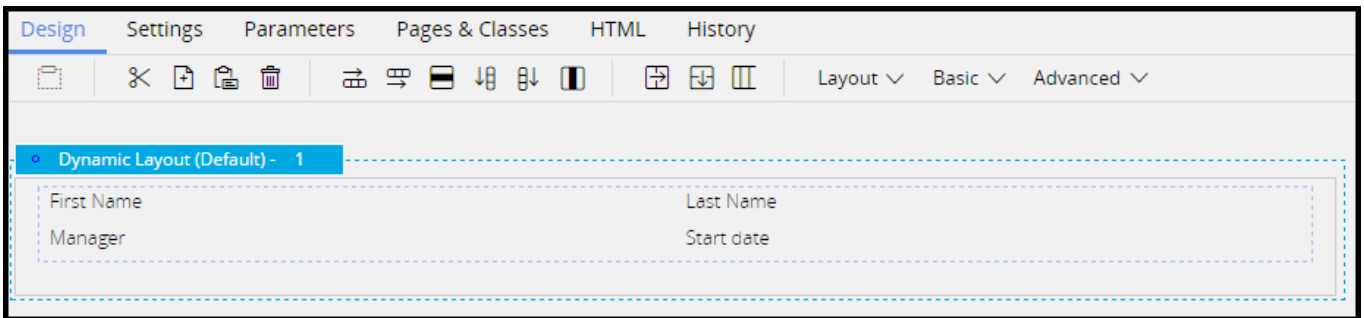
Update the Review Selections form

Save the Employee Information section to the TGB-HRApps-Work class for use in the Benefits Enrollment case type. Update the Review Selections form to add the Employee Information, Confirm Employee Details, and Identify Dependents sections.

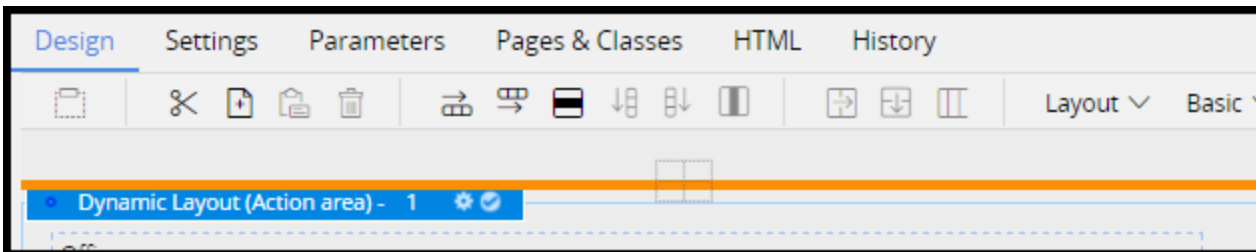
1. In the Select Orientation Plan section, click the header for the section include. A magnifying glass icon is displayed in the layout header.



2. Click the **magnifying glass** icon. A warning dialog informs you that changes to the Employee Information section are not reflected in the Select Orientation Plan section until you refresh it.
3. Click **OK** to dismiss the warning dialog. The Employee Information section rule opens.
4. On the Employee Information section, from the **Save as** menu, select **Specialize by class or ruleset**. The Specialize Section form opens.
5. Under **Apply to**, enter or select **TGB-HRApps-Work**.
6. Click **Create and open**. The Employee Information section rule opens.
7. Click **Save** to create the section rule in the *TGB-HRApps-Work* class, for use in both the Onboarding and Benefits Enrollment case type.

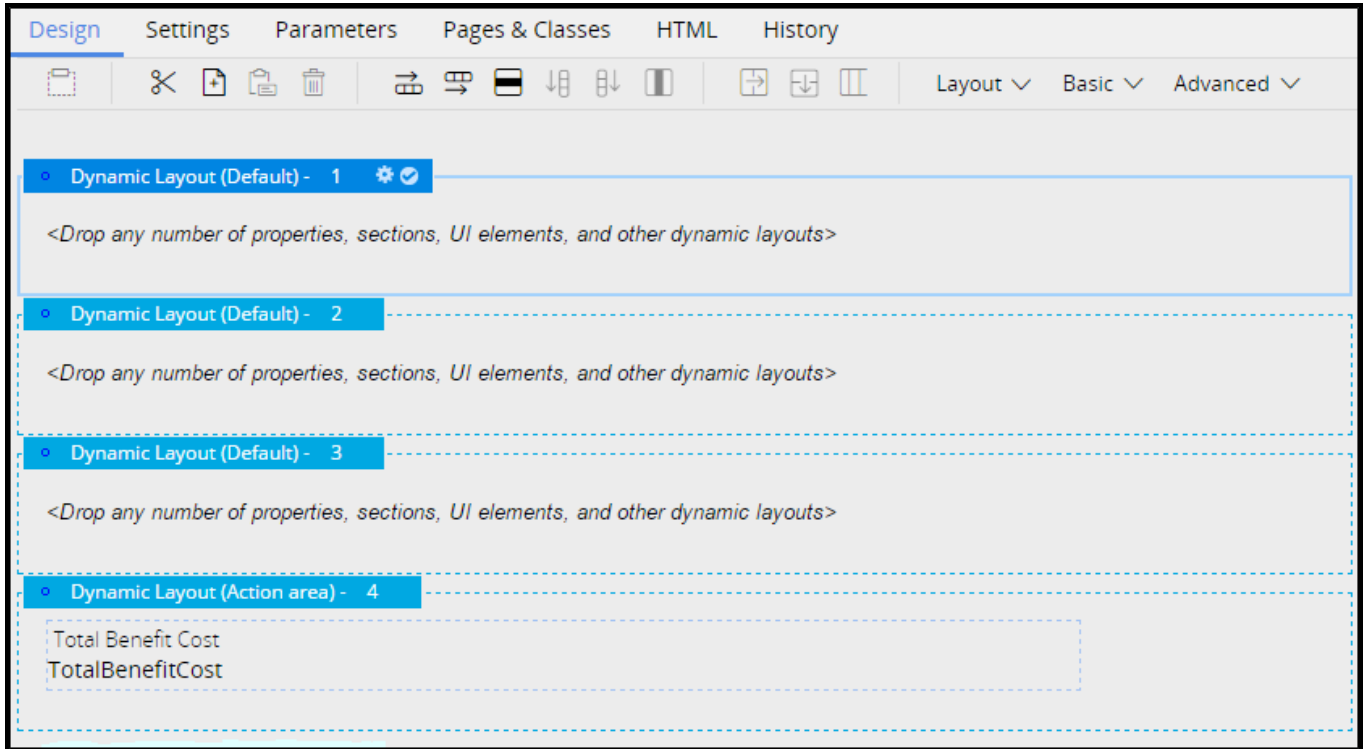


8. In the Application Explorer, expand **Benefits Enrollment > User Interface > Section**.
9. Under Section, select **ReviewSelections_0**. The Review Selections section rule opens.
10. In the Review Selections section rule, open the **Layout** menu.
11. Position the mouse cursor over **Layout** and click and hold the mouse button.
12. Drag the cursor onto the Review Selections section, above the Total benefit cost field. An orange line indicates where the layout is added to the section.

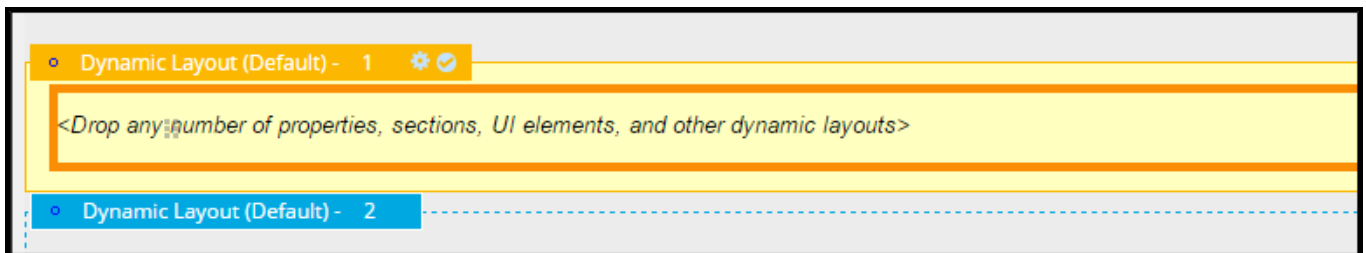


13. Release the mouse button. The Set Layout type dialog opens.
14. Click **OK** to select a dynamic layout. A dynamic layout is added to the section.
15. Repeat steps 10-14 twice, to create two more empty dynamic layouts above the Total benefit cost

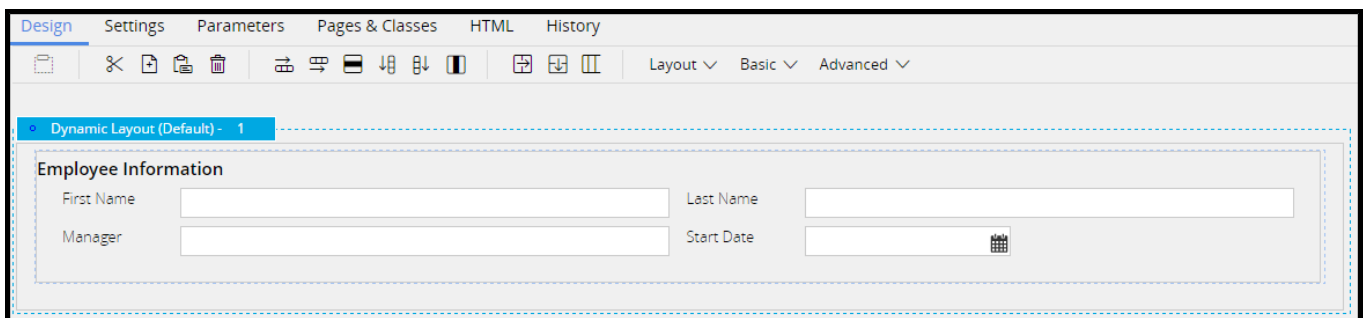
field.



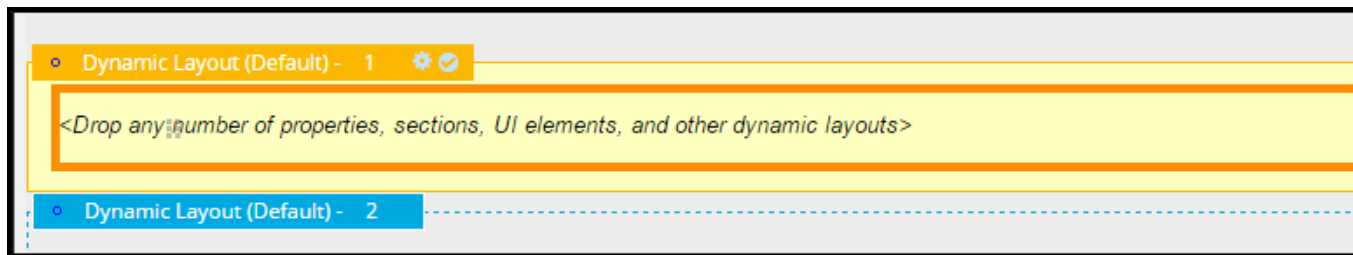
16. In the Application Explorer, expand **TGB-HRApps-Work > User Interface > Section** to list all the section rules in the class.
17. Under **TGB-HRApps-Work > User Interface > Section**, click and hold the selection handle for the **EmployeeInformation** section rule.
18. Drag the cursor onto the first dynamic layout in the Review Selections section, and position the cursor over the text in the layout.



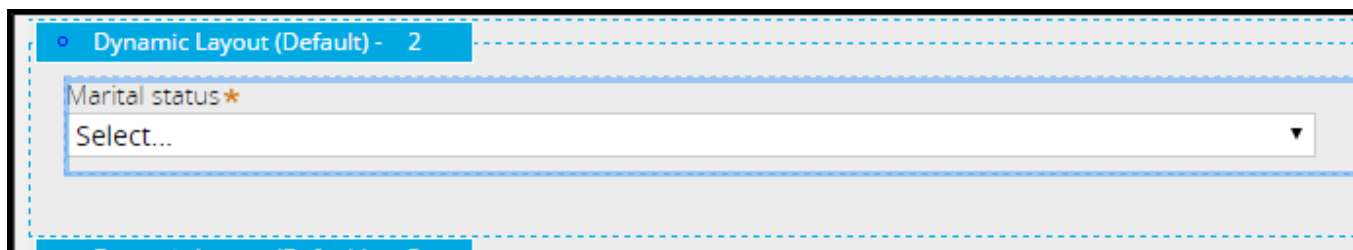
19. Release the mouse cursor. The dynamic layout displays the Employee Information form.



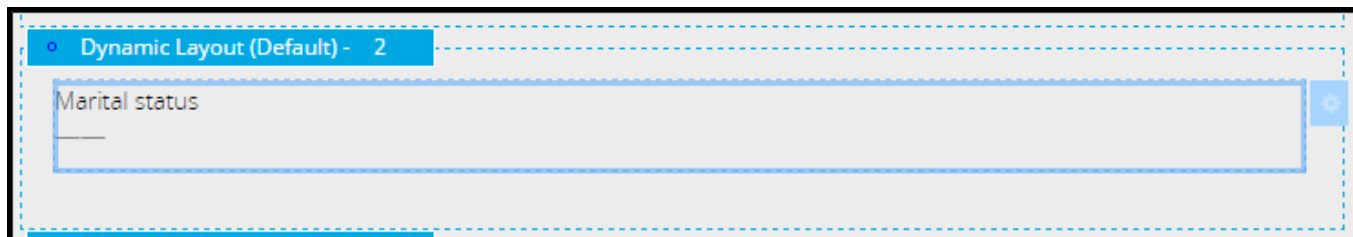
20. In the Application Explorer, under **Benefits Enrollment > User Interface > Section**, click and hold the selection handle for the **ConfirmEmployeeDetails_0** section rule.
21. Drag the cursor onto the second dynamic layout in the Review Selections section, and position the cursor over the text in the layout.



22. Release the mouse cursor. The dynamic layout displays the Confirm Employee Details form.



23. Click the Marital status drop-down list. A gear icon is displayed to the right of the drop-down list.
24. Click the **gear** icon. The Cell Properties dialog opens.
25. In the Cell Properties dialog, click the **Presentation** tab.
26. On the Presentation tab, from the **Edit Options** drop-down list, select **Read-only (always)**.
27. Click **Submit**. The Cell Properties dialog closes.



28. In the Application Explorer, under **Benefits Enrollment > User Interface > Section**, position the mouse cursor over the selection handle for the IdentifyDependents_0 section rule.
29. Click and hold the mouse button, then drag the mouse cursor onto the Review Selections section and into the remaining empty dynamic layout.
30. Release the mouse button to add a section include for the Identify Dependents section.
31. Click the Identify Dependents section. A gear icon is displayed to the right of the drop-down list.

32. Click the **gear** icon to open the Cell Properties panel.
33. In the Cell Properties dialog, click the **Presentation** tab.
34. On the Presentation tab, from the **Edit Options** drop-down list select **Read-only (always)**.
35. Click **Submit**. The Cell Properties dialog closes.

36. Click **Save** to commit your changes to the Review Selections form.

Test your changes

Create a new Onboarding case to test your changes.

1. From the **+Create** menu, select **New > Onboarding**. The Collect Employee Info form is displayed.
2. Complete the Collect Employee Info form and click **Submit**. The Identify Home Office form is displayed.
3. Complete the Identify Home Office form and click **Submit**. The Select Orientation Plan form is displayed.

Select Orientation Plan
A Administrator

First Name Tom	Last Name Havens
Manager Frank Taylor	Start date 5/1/16

▼ Courses

⊕ Add Item ⊗ Delete

		ID	Title	Description	Hours
1	<input type="checkbox"/>	ENG-001	Engineering Orientation	Learn the basic organization of the Engineering group	2
2	<input type="checkbox"/>	GEN-001	Company orientation	Learn about the company's history and corporate structure	1
3	<input type="checkbox"/>	GEN-002	Time Off Management	Review the time off reporting system	0.5
4	<input type="checkbox"/>	GEN-003	Benefits Presentation	Information session on the various company-sponsored benefits	1
5	<input type="checkbox"/>	GEN-004	Insurance Options	Information session on the company-sponsored insurance plans	1.5

4. Click **Submit**. The Select Hardware form is displayed.
5. Click **Advance this case**. The Select Software form is displayed.
6. Click **Advance this case**. A confirmation form is displayed to inform you that the case has been routed for approval.
7. Under Open assignments, click **Please approve or reject this Approval** to advance to the Approval form.

Edit Actions ▼

Open assignments

- 🕒 Facilities Setup (Equipment Selection) 📍
Administrator
- 🕒 Please approve or reject this Approval 📍
IT@TGB

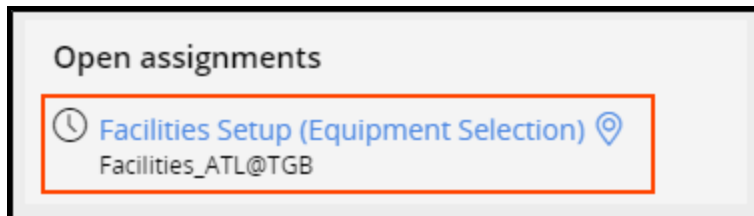
8. Click **Approve**. A confirmation form is displayed.
9. Under Open Assignments, click **Facilities Setup (Equipment Selection)**. The Select Seating Location form is displayed.

Select Seating Location
A Administrator

First Name	Last Name
Tom	Havens
Manager	Start date
Frank Taylor	5/16/16
Office	
Atlanta	
Location	
<input style="width: 100%; border: 1px solid #ccc;" type="text" value="Select..."/>	

Cancel
Save
Submit

10. Click **Submit**. The Select Office Equipment form is displayed.
11. Click **Advance this case**. A confirmation form is displayed to inform you that the case has been routed for approval.
12. Under Open assignments, click **Facilities Setup (Equipment Selection)** to advance to the Approval form.



13. Click **Approve**. The Confirm Employee Details form is displayed.
14. Complete the form and click **Submit**. The Identify Dependents form is displayed.
15. Click **Submit**. The Select Medical Coverage form is displayed.
16. Click **Submit**. The Select Dental Coverage form is displayed.
17. Click **Submit**. The Select Vision Coverage form is displayed.
18. Click **Submit**. The Review Selections form is displayed.

Review Selections A Administrator

First Name: Tom
Last Name: Havens
Manager: Frank Taylor
Start date: 5/16/16

Marital status: Single

▼ Dependents

	First Name	Last Name	Relationship
1			

Total benefit cost

19. Click **Submit** to resolve the case.

Reusing text with paragraph rules

Exercise: Adding instructions to the insurance plan selection forms

Scenario

When selecting insurance plans, employees have the option to waive each type of coverage. To remind employees that they can waive medical, dental, or vision coverage, you must add instructions to each of the benefit selection forms.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Add text to each of the benefit selection forms that states, "Select an insurance plan or elect to waive coverage."

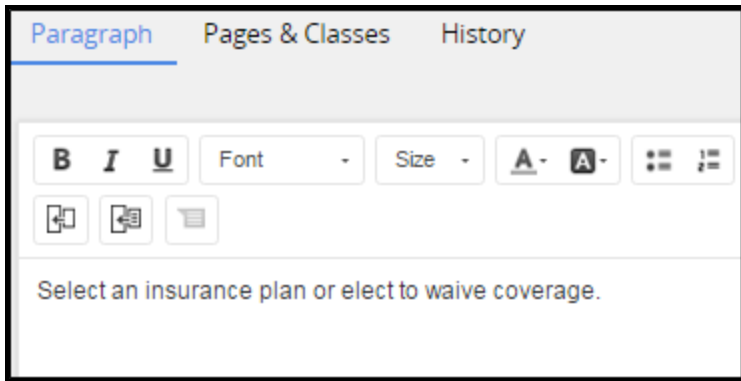
Detailed steps

Create a paragraph rule containing the instructions for the user. Then, add the paragraph to each of the Select Medical Coverage, Select Dental Coverage, and Select Vision Coverage sections.

Create a paragraph rule containing instructions for the insurance selection forms

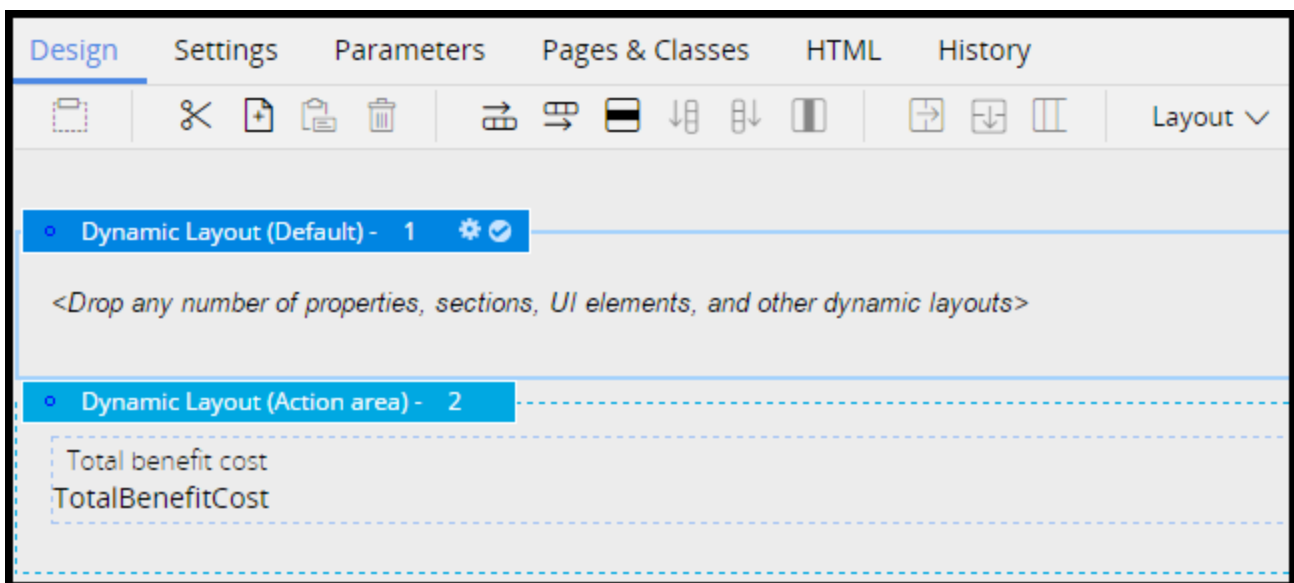
1. In the Application Explorer, right-click **Benefits Enrollment** and select **Create > User Interface > Paragraph**. The New Record form opens.
2. In the **Label** field, enter **Select coverage instructions**.
3. Click **Create and open**. The Paragraph rule form opens.
4. In the rich-text editor, enter **Select an insurance plan or elect to waive coverage**.

5. Click **Save** to commit your changes.



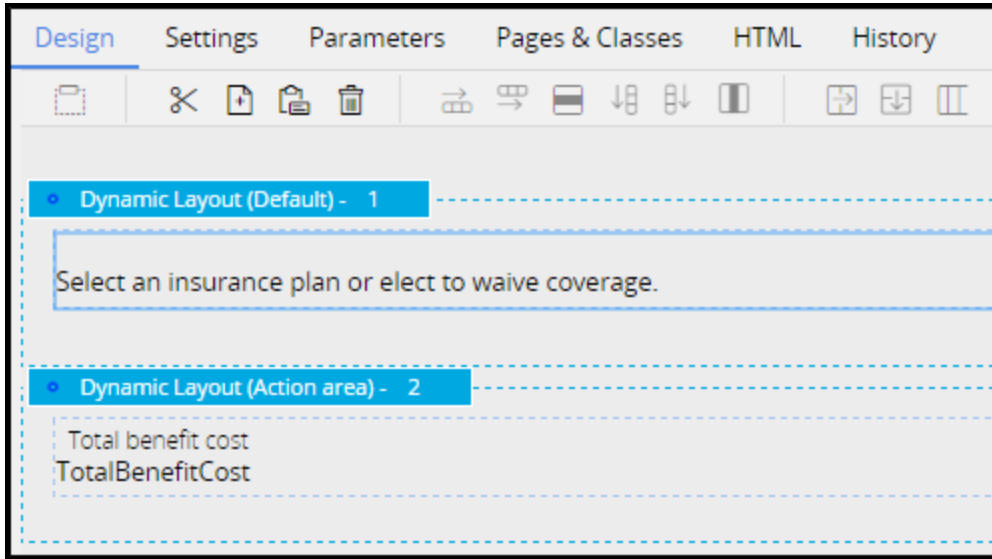
Add the paragraph rule to each of the insurance selection forms

1. In the Application Explorer, expand **Benefits Enrollment > User Interface > Section**.
2. Click **SelectMedicalCoverage_0**.
3. From the **Layout** menu, click and hold the cursor on **Layout** and drag the layout onto the section rule form above the existing layout.
4. Release the cursor. The Set Layout Type dialog opens.
5. Select **Dynamic Layout** as the layout type.
6. Click **OK**. The section form displays an empty layout, above the layout that contains the Total benefit cost property.



7. From the **Advanced** menu, click and hold the cursor on **Paragraph**, and drag the paragraph to the empty layout you created.
8. Release the cursor. The dynamic layout displays an empty layout cell.
9. Click the **gear** icon to the right of the layout cell. The Cell Properties panel opens.
10. In the **Paragraph** field, enter or select **SelectCoverageInstructions**.

11. Click **Submit**. The contents of the paragraph rule display in the layout.



12. Click **Save** to commit your changes.
13. Optional. Repeat steps 1-12 for the SelectDentalCoverage_0 and SelectVisionCoverage_0 section rules.

Test your changes by creating a new benefits enrollment case

1. Open the Cases Explorer.
2. In the Cases Explorer, click **Benefits Enrollment**. The Case Designer opens and displays the life cycle for the Benefits Enrollment case type.
3. In the Case Designer, click **Run**. The New: Benefits Enrollment form opens.
4. Click **Done**. The Confirm Employee Details form opens.
5. Click **Submit**. The Identify Dependents form opens.
6. Click **Submit**. The Select Medical Coverage form opens.
7. On the **Select Medical Coverage** form, verify that the new instructions display on the form.

Covered parties ✓ Insurance selection Review selections

Complete stage ✓

Select Medical Coverage Administrator

Select an insurance plan or elect to waive coverage.

Total Benefit Cost

Cancel Save Submit

8. Close the Benefits Enrollment case. The Design Studio returns you to the Case Designer.

Configuring responsive UI behavior

Exercise: Configuring responsive behavior for orientation courses

Scenario

New hires participate in a set of orientation sessions as part of the onboarding process. Human resources (HR) is responsible for selecting the courses for new employees based upon their employment status, department, and position.

HR has asked that all the columns in the course listing are displayed on a laptop or desktop screen with a width greater than 1024 pixels. For smaller displays, such as a tablet or smart phone, HR wants the course description column hidden to minimize horizontal scrolling.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Configure the course listing to adapt to various screen sizes to minimize horizontal scrolling. To do this:

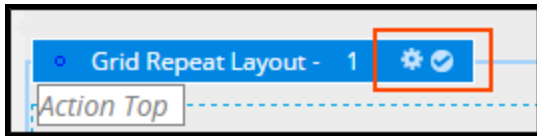
- In the repeating layout of available courses, set the importance for the Description column to **Other**.
- Configure the application skin to drop the Description column for display widths less than or equal to 1024 pixels.

Detailed steps

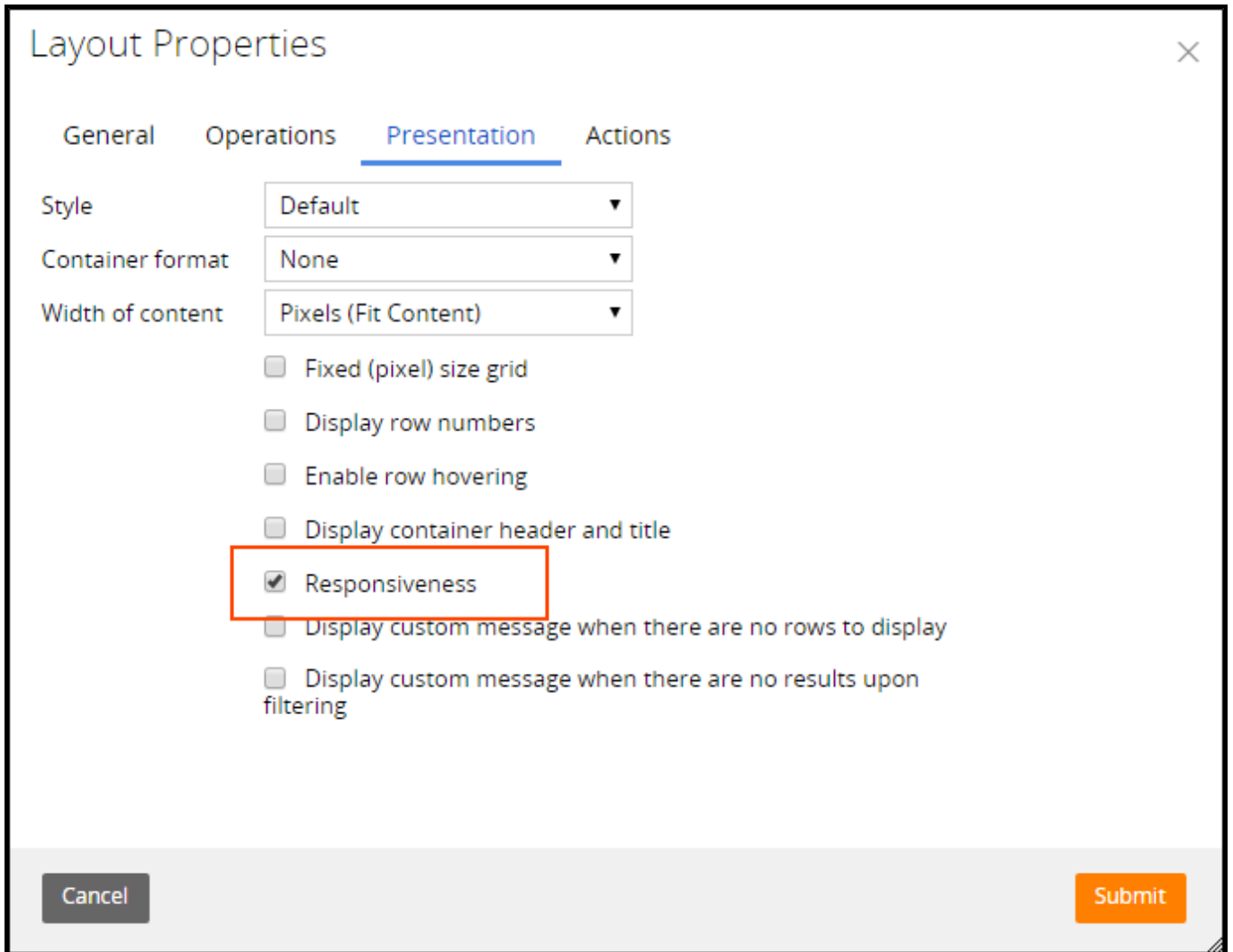
Configure responsive behavior on the course listing

Configure the section rule to drop the Description column when reaching the responsive breakpoint:

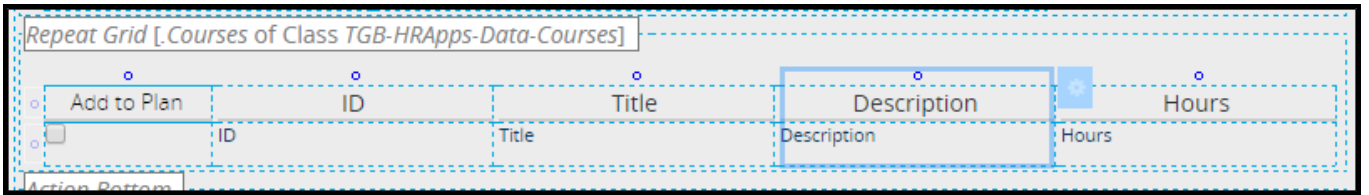
1. In the Application Explorer, under **TGB-HRApps-Work**, expand **Onboarding > User Interface > Section**.
2. Click **SelectOrientationPlan_0**. The Select Orientation Plan section rule opens.
3. Click the **Grid Repeat Layout** header. A gear icon and a check mark icon are displayed on the header.



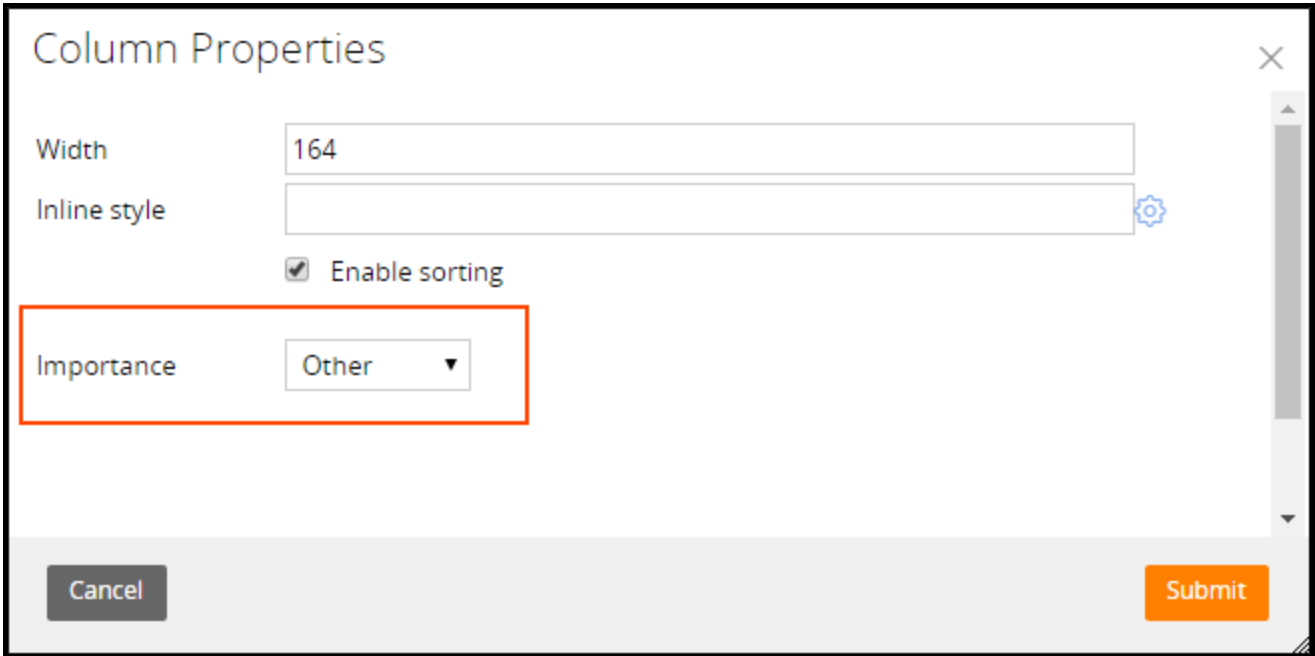
4. Click the **Gear** icon. The Layout Properties dialog opens.
5. Click the **Presentation** tab. The Layout Properties dialog displays the presentation options for the repeating layout.
6. Responsiveness is enabled by default. Verify that the **Responsiveness** check box is selected.



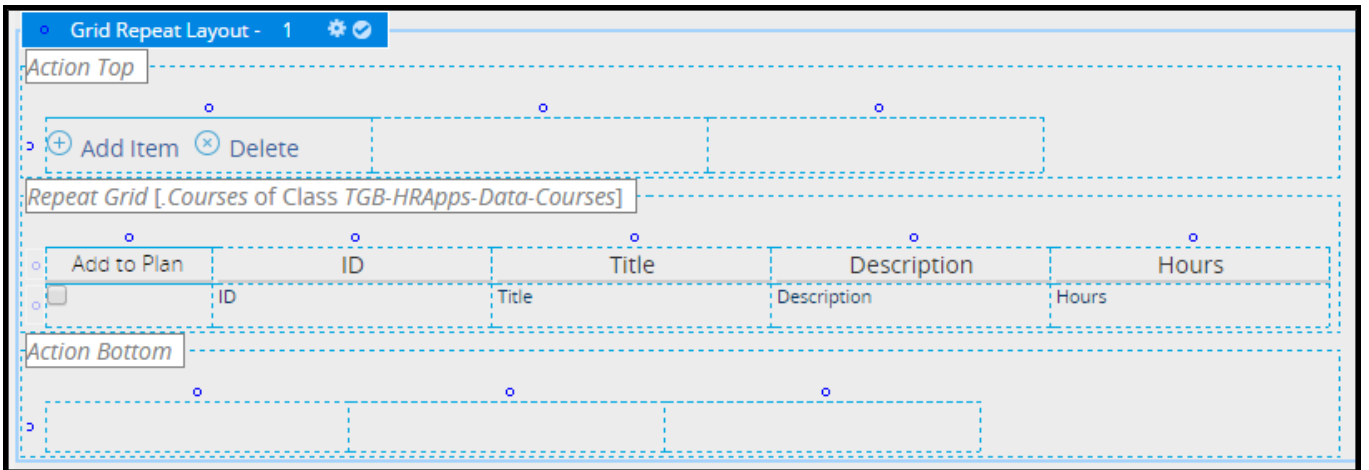
7. Note that the Style field displays the Default layout format.
8. Click **Submit**. The Layout Properties dialog closes.
9. In the Repeat Grid portion of the Grid Repeat layout, click the column selector for the Description column, located above the column. A gear icon is displayed to the right of the column.



10. Click the **Gear** icon. The Column Properties dialog opens.
11. From the **Importance** drop-down list, select **Other**.



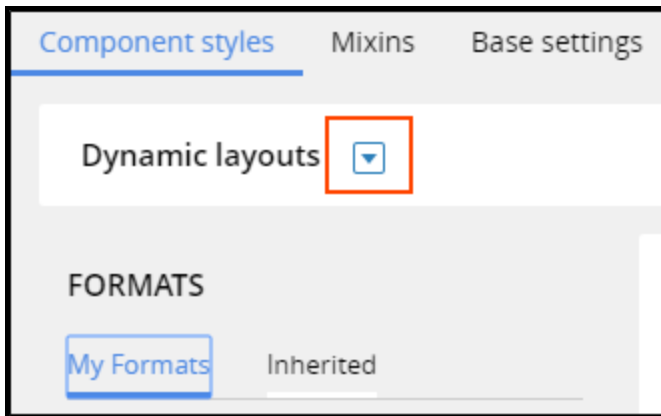
12. Click **Submit**. The Column Properties dialog closes.
13. Click **Save**.



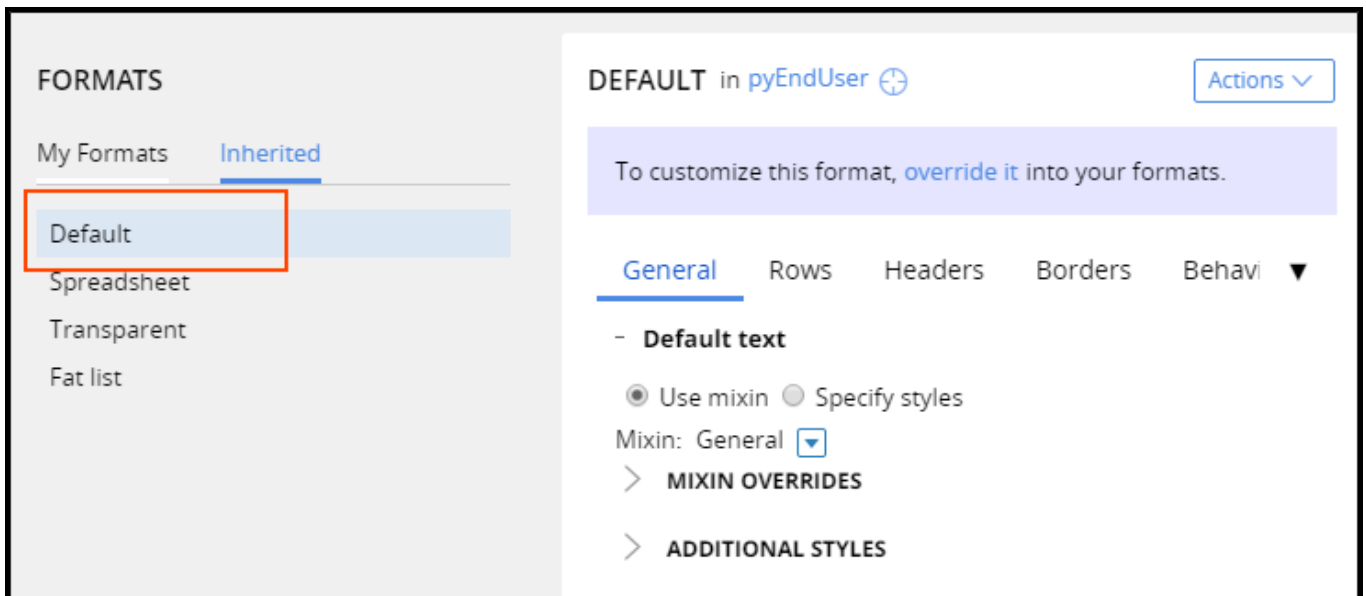
Configure a responsive breakpoint for the layout format

Confirm that the skin rule contains a responsive breakpoint defined at 1024 pixels. Verify that this breakpoint is configured to drop any column with importance set to Other.

1. From the application menu, select **Open application skin**. The HR skin rule opens.
2. On the **Component styles** tab, click the **Down arrow** icon to open the style format menu.



3. From the **Style format menu** tab, under **Layouts**, select **Trees & grids**. The skin rule displays the Trees & Grids style format.
4. Under **Trees & Grids**, click the **Inherited** tab.
5. On the **Inherited** tab, select the **Default** style. The Default style format options are displayed on the skin rule form.

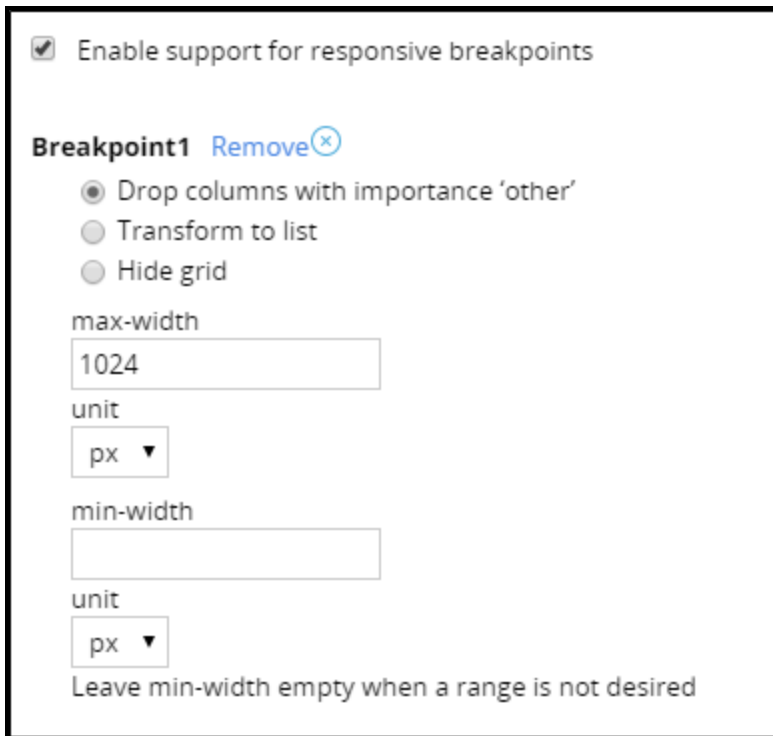


Note: The Default style format is the style selected in the Layout Properties panel for the Grid Repeat layout that you configured earlier in the exercise.

6. On the **General** tab, under **Additional styles**, click the **Enable support for responsive breakpoints** check box. A responsive breakpoint is displayed below the check box.



7. Under **Breakpoint1**, verify that **Drop columns with importance 'other'** is selected. This is the default setting.
8. The breakpoint is set to 1024 pixels by default. In the **max-width** field, verify that the value is **1024**.
9. Click **Save**.



Test your changes

Test the responsive behavior of the orientation courses grid by previewing the section and varying the screen size:

1. Click the **SelectOrientationPlan** tab. Designer Studio displays the Select Orientation Plan section.
2. From the **Actions** menu, select **Preview**. The section is displayed in the Preview: Select Orientation Plan window.
3. Expand the window until the Description column is displayed in the repeating grid.

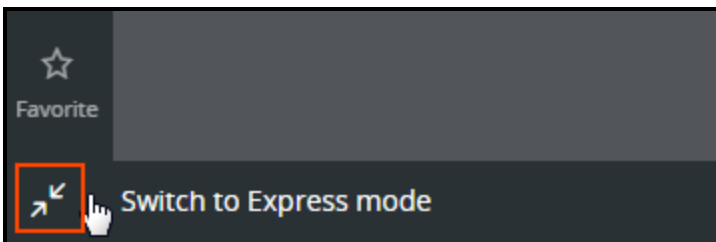
Add to Plan	ID	Title	Description	Hours
<input type="checkbox"/>	ENG-001	Engineering Orientation	Learn the basic organization of the Engineering group	2
<input type="checkbox"/>	GEN-001	Company orientation	Learn about the company's history and corporate structure	1
<input type="checkbox"/>	GEN-002	Time Off Management	Review the time off reporting system	0.5
<input type="checkbox"/>	GEN-003	Benefits Presentation	Information session on the various company-sponsored benefits	1
<input type="checkbox"/>	GEN-004	Insurance Options	Information session on the company-sponsored insurance plans	1.5
<input type="checkbox"/>	GEN-005	Retirement Planning	Information session on the company's retirement plan, including eligibility requirements and vesting	2
<input type="checkbox"/>	MGT-001	Conflict Resolution Workshop	Learn effective strategies for resolving conflicts	4
<input type="checkbox"/>	MKT-001	Marketing Orientation	Learn the basic organization of the Marketing group	2
<input type="checkbox"/>	SAL-001	Sales Orientation	Learn the basic organization of the Sales group	2
<input type="checkbox"/>	SAL-002	Effective Selling	Sales workshop focusing on effective techniques for closing sales	2.5

4. Resize the preview window and verify that the Description column is dropped from the layout when the window width drops below 1024 px.

Add to Plan	ID	Title	Hours
<input type="checkbox"/>	ENG-001	Engineering Orientation	2
<input type="checkbox"/>	GEN-001	Company orientation	1
<input type="checkbox"/>	GEN-002	Time Off Management	0.5
<input type="checkbox"/>	GEN-003	Benefits Presentation	1
<input type="checkbox"/>	GEN-004	Insurance Options	1.5
<input type="checkbox"/>	GEN-005	Retirement Planning	2
<input type="checkbox"/>	MGT-001	Conflict Resolution Workshop	4
<input type="checkbox"/>	MKT-001	Marketing Orientation	2
<input type="checkbox"/>	SAL-001	Sales Orientation	2
<input type="checkbox"/>	SAL-002	Effective Selling	2.5

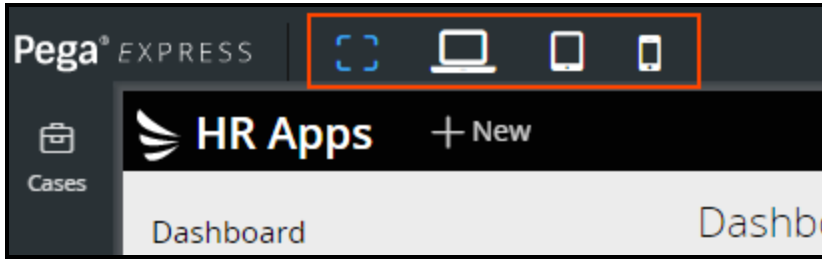
Tip: You can also use Pega Express to preview your changes. To preview the Select Orientation Plan form with Pega Express, perform the following steps.

5. Note the case ID for the Onboarding case you created.
6. In the lower left corner of Designer Studio, click the **Switch to Express mode** icon. Pega switches from the Designer Studio to the Pega Express portal.



7. In the Pega Express portal, under Recent select the onboarding case you created.
8. In the upper left corner of the Pega Express portal, click the display mode icons to preview the

onboarding case at different display sizes.



Note: If the display mode icons are not available, you must enable editing mode. To enable editing mode, navigate to the lower right corner of the Pega Express portal and click **Turn editing on**.

9. In the lower left corner of the Pega Express portal, click the **Switch to Designer Studio** icon to return to the Designer Studio.



Designing a dynamic UI

Exercise: Creating the coverage selection UIs

Scenario

During the benefit enrollment process, new employees have the option of waiving healthcare coverage plans. For each type of coverage — medical, dental, and vision — the employee completes a form by either selecting one of the listed options or waiving coverage. If the new employee elects to waive any type of healthcare coverage, the options for selecting that particular plan should not appear on the form. If the employee selects a coverage plan, the details of that plan should appear on screen, and the total cost of benefits should update accordingly.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Configure the three coverage selection forms for benefits enrollment cases. To do this:

- Create three true/false properties to identify if a user intends to waive coverage for each type of insurance: Waive Medical, Waive Dental, and Waive Vision.
- Add a check box for each property to the corresponding insurance selection section form: SelectMedicalCoverage_0, SelectDentalCoverage_0, and SelectVisionCoverage_0.
- Add a section include on each insurance selection form to include the HealthcareBenefit section in the HRPlan data class.

Note: Another system architect created the HRPlan data class for insurance plan data, and created the HealthcareBenefit section to present this information. You must incorporate this section into the forms you create using a section include, then configure your forms to pass the insurance type (medical, dental, or vision) to the section include using a parameter.











- Configure an action set on each coverage selection section to update the display of the section whenever the user clicks the check box to waive insurance coverage.
- Update the page properties for medical, dental, and vision plans to pass a parameter to only display plan information for the corresponding type of insurance plan.

Detailed steps

Create properties to capture waived coverage options

Create three Boolean properties to allow users to choose whether to waive each type of coverage.

1. In the Cases Explorer, select **Benefits Enrollment**. The Benefits Enrollment case type opens in the Case Designer.
2. Click the **Data model** tab. The Case Designer displays the properties used in the Benefits Enrollment case type.
3. Click **Add field**. A row is added to the Data model tab.

Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent 
Marital status	MaritalStatus	Picklist	Drop down  
Total benefit cost	TotalBenefitCost	Currency	Calculated  
Medical plan	MedicalPlan	Field group	Data type: HR Plans 
Dental plan	DentalPlan	Field group	Data type: HR Plans 
Vision plan	VisionPlan	Field group	Data type: HR Plans 
<input type="text"/>	<input type="text"/>	Text (single line) ▼	 

[+Add field](#)

4. Under Name, enter **Waive medical**
5. Under Type, from the drop-down list select **Boolean**.
6. Click **Add field**.
7. Under Name, enter **Waive dental**.
8. Under Type, from the drop-down list select **Boolean**.
9. Click **Add field**.
10. Under Name, enter **Waive vision**.
11. Under Type, from the drop-down list select **Boolean**.
12. Click **Save**.

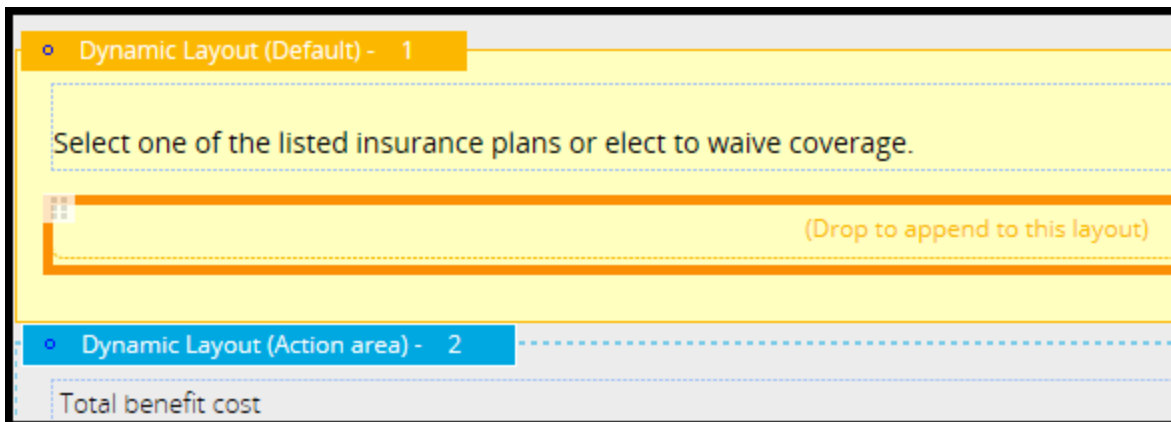
Name	ID	Type	Options
Dependents	Dependents	Field group (list)	Data type: Dependent
Marital status	MaritalStatus	Picklist	Drop down
Total benefit cost	TotalBenefitCost	Currency	Calculated
Medical plan	MedicalPlan	Field group	Data type: HR Plans
Dental plan	DentalPlan	Field group	Data type: HR Plans
Vision plan	VisionPlan	Field group	Data type: HR Plans
Waive medical	WaiveMedical	Boolean	
Waive dental	WaiveDental	Boolean	
Waive vision	WaiveVision	Boolean	

+ Add field

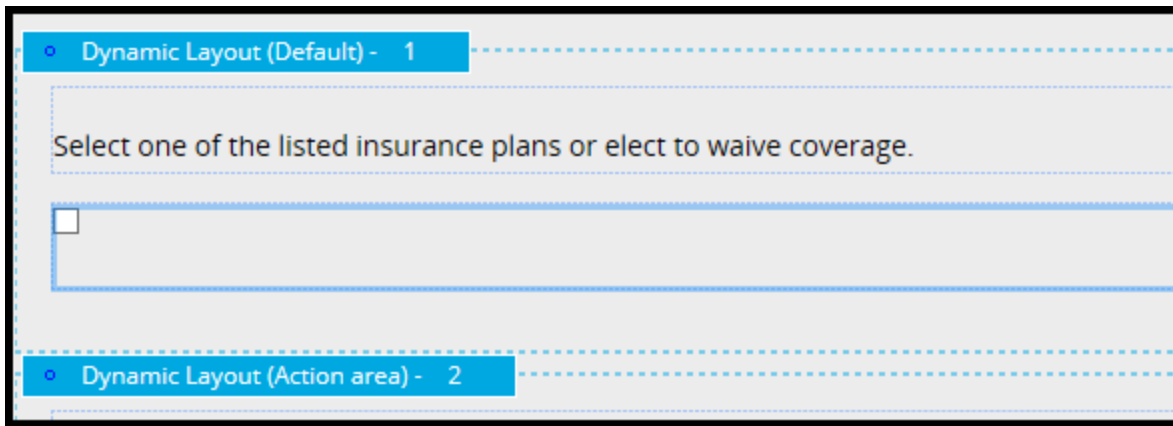
Add each waive coverage property to the coverage selection forms

Add the Boolean properties for waiving coverage to the corresponding coverage selection form.

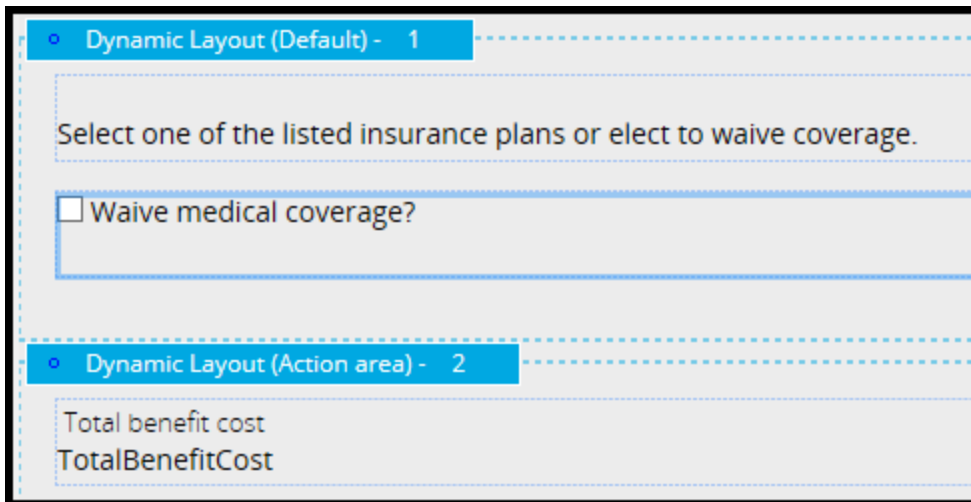
1. In the Application Explorer, expand **Benefits Enrollment > User Interface > Section**.
2. Click **SelectMedicalCoverage_0** to open the Select Medical Coverage section.
3. In the Application Explorer, expand **Benefits Enrollment > Data Model > Property**.
4. Click and hold the selection handle for the **WaiveMedical** property.
5. Drag the property onto the Select Medical Coverage section, below the instruction paragraph.



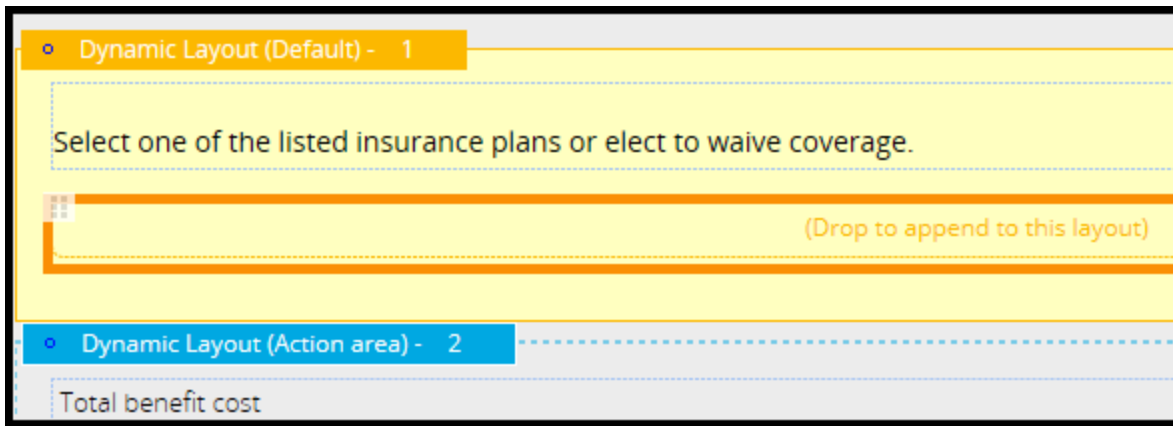
6. Release the mouse button to add the property to the highlighted layout. An unlabeled check box appears in the layout.



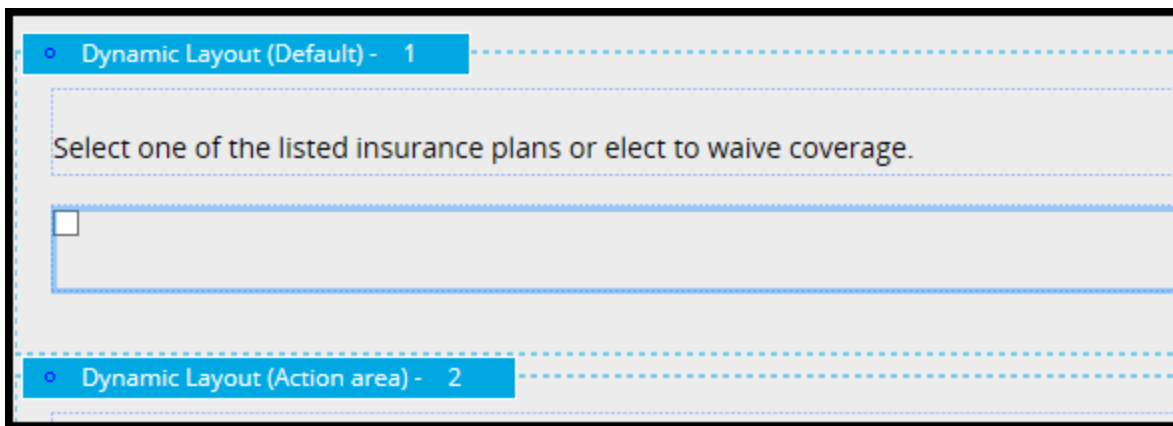
7. Click the **Gear** icon to the right of the cell containing the check box. The Cell Properties panel opens.
8. In the **Checkbox caption** field, enter **Waive medical coverage?**.
9. Click **Submit**. The Cell Properties dialog closes.



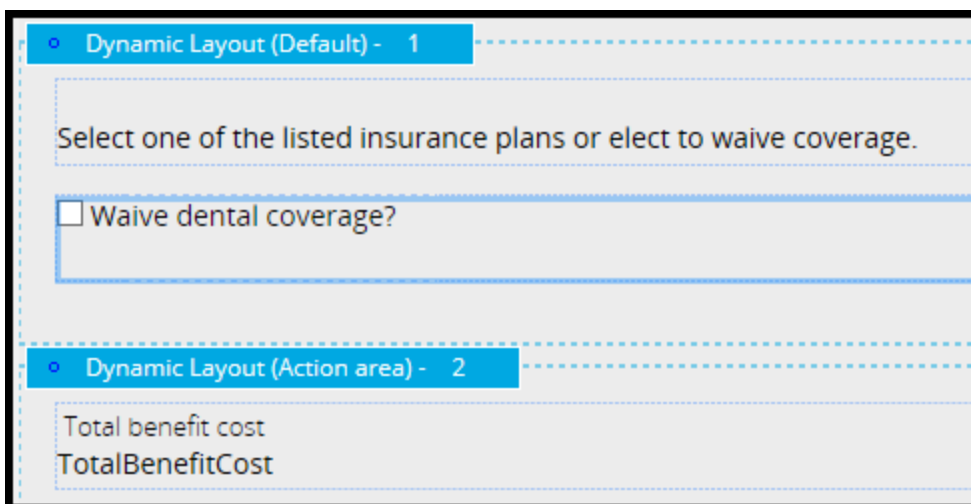
10. Click **Save** to commit your changes to the Select Medical Coverage form.
11. In the Application Explorer, under **Benefits Enrollment > User Interface > Section** click **SelectDentalCoverage_0** to open the Select Dental Coverage section.
12. In the Application Explorer, under **Benefits Enrollment > Data Model > Property** click and hold the selection handle for the **WaiveDental** property.
13. Drag the property onto the Select Medical Coverage section, below the instruction paragraph.



14. Release the mouse button to add the property to the highlighted layout. An unlabeled check box appears in the layout.

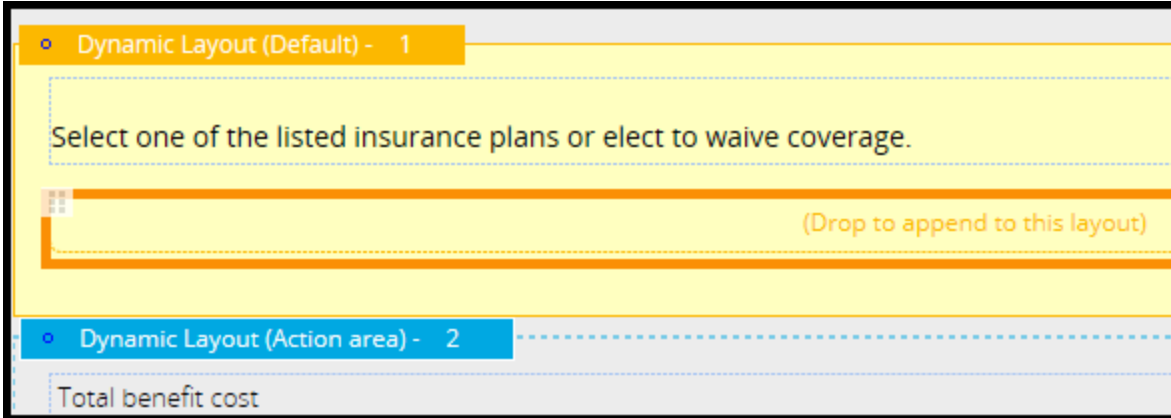


15. Click the **Gear** icon to the right of the cell containing the check box. The Cell Properties dialog opens.
16. In the **Checkbox caption** field, enter **Waive dental coverage?**.
17. Click **Submit**. The Cell Properties dialog closes.

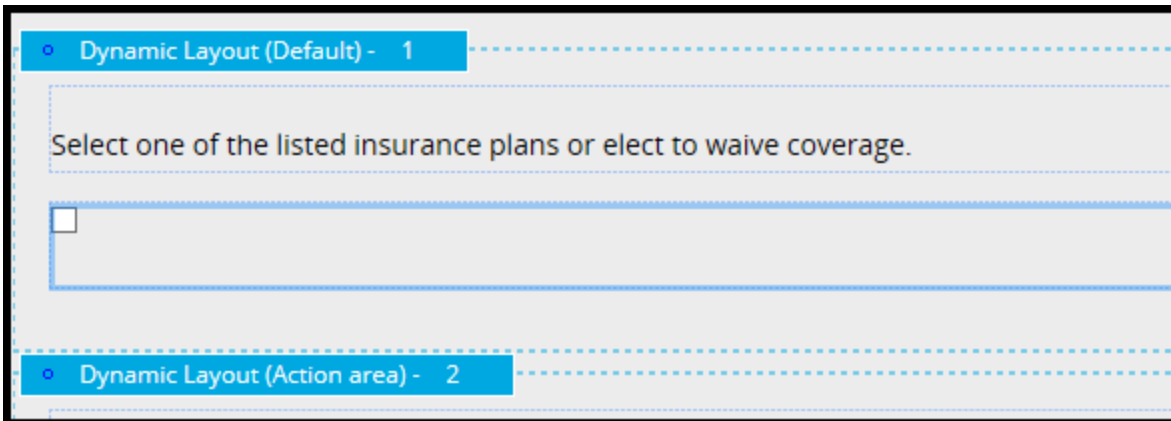


18. Click **Save** to commit your changes to the Select Dental Coverage form.

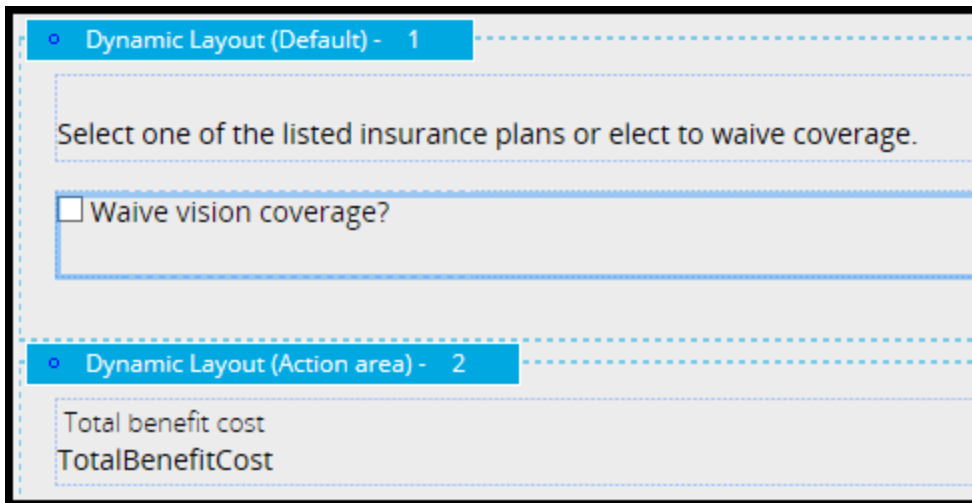
19. In the Application Explorer, under **Benefits Enrollment > User Interface > Section** click **SelectVisionCoverage_0** to open the Select Vision Coverage section.
20. In the Application Explorer, under **Benefits Enrollment > Data Model > Property** click and hold the selection handle for the **WaiveVision** property.
21. Drag the property onto the Select Medical Coverage section, below the instruction paragraph.



22. Release the mouse button to add the property to the highlighted layout. An unlabeled check box appears in the layout.



23. Click the **Gear** icon to the right of the cell containing the check box. The Cell Properties dialog opens.
24. In the **Checkbox caption** field, enter **Waive vision coverage?**.
25. Click **Submit**. The Cell Properties dialog closes.

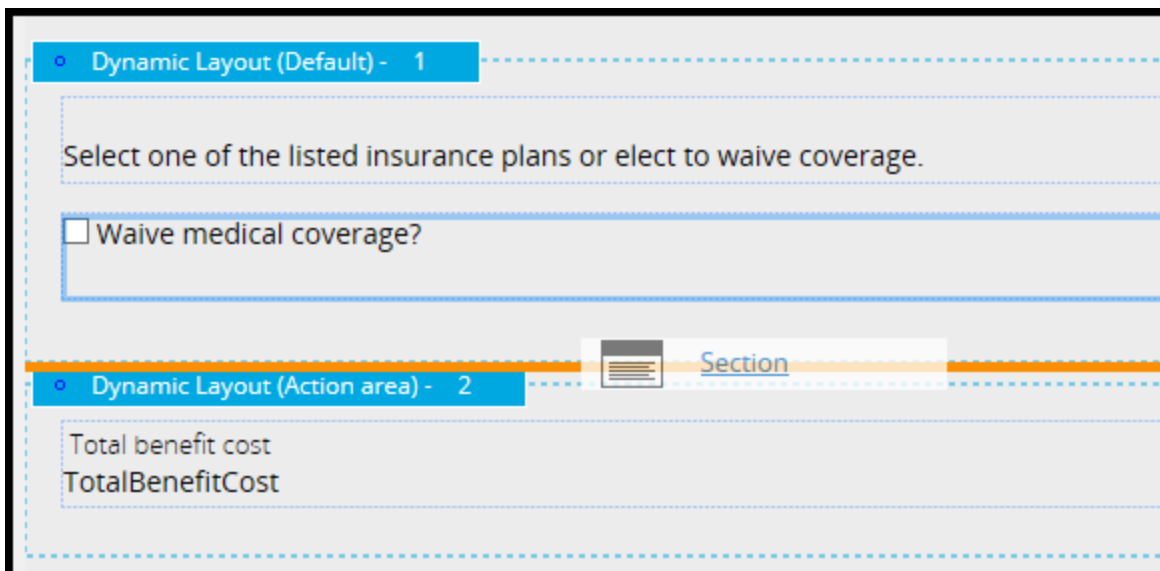


26. Click **Save** to commit your changes to the Select Vision Coverage form.

Add the Healthcare Benefit section to each of the coverage selection forms by using a section include

Add a section include to each coverage selection form to reference the Healthcare Benefit section in the TGB-HRApps-Data-HRPlan class. Configure each section include to reference the clipboard page used to store data for the corresponding coverage plan. Specify the value of the Type parameter to filter the list of coverage options and return data for either medical, dental, or vision coverage plans.

1. Click the **SelectMedicalCoverage_0** tab in the Designer Studio. The Select Medical Coverage section regains focus.
2. From the Layout menu, drag the Section layout onto the Select Medical Coverage section.



3. With the cursor positioned between the two layouts, release the mouse button. The Section Include dialog appears.

Section Include ×

Provide the section to be included

Page context ▼

Class

Section* ▼

4. From the **Page context** drop-down list, select **Use clipboard page**. The Section Include dialog updates to reflect the fields needed to reference a clipboard page.
5. In the **Class** field, enter or select **TGB-HRApps-Data-HRPlan**.
6. In the **Clipboard page** field, enter or select **.MedicalPlan**.
7. In the text field to the right of the **By name** list, enter or select **HealthcareBenefit**. The Section Include dialog displays a parameter table.

Section Include ×

Provide the section to be included

Page context ▼

Class

Clipboard page*

Section* ▼

SECTION PARAMETERS

PARAMETER	VALUE
Type	<input type="text"/>

8. In the **Value** field, enter "Medical".

Section Include

Provide the section to be included

Page context Use clipboard page

Class TGB-HRApps-Data-HRPlan

Clipboard page* .MedicalPlan

Section* By name HealthcareBenefit

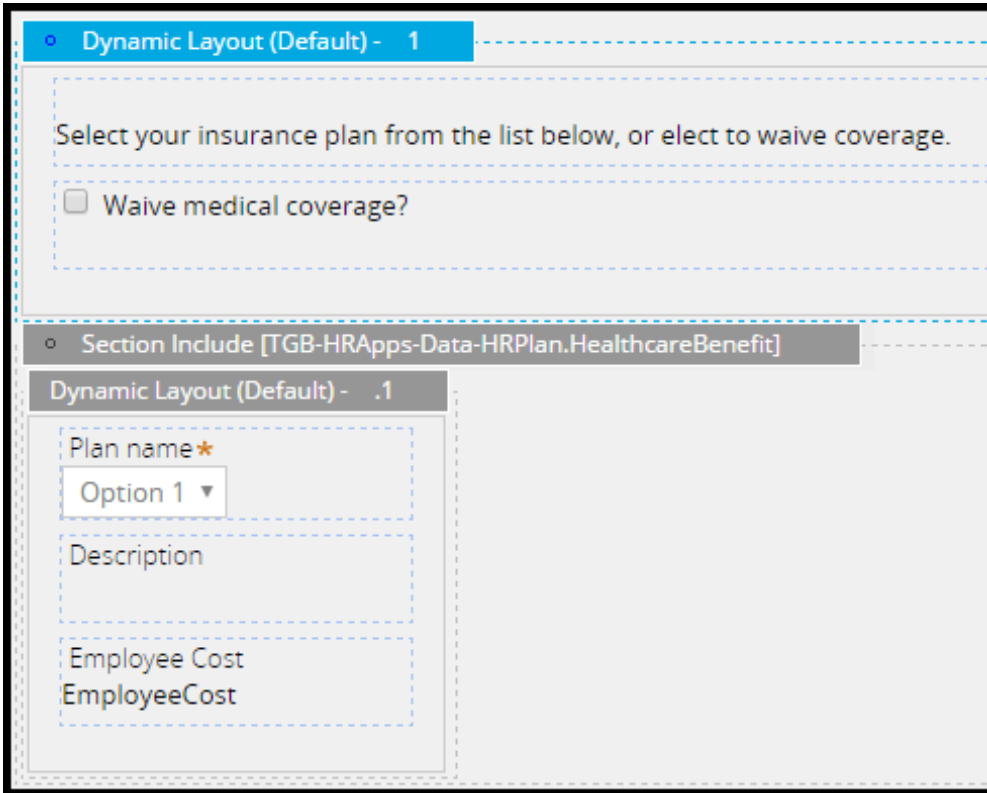
SECTION PARAMETERS

PARAMETER	VALUE
Type	"Medical"

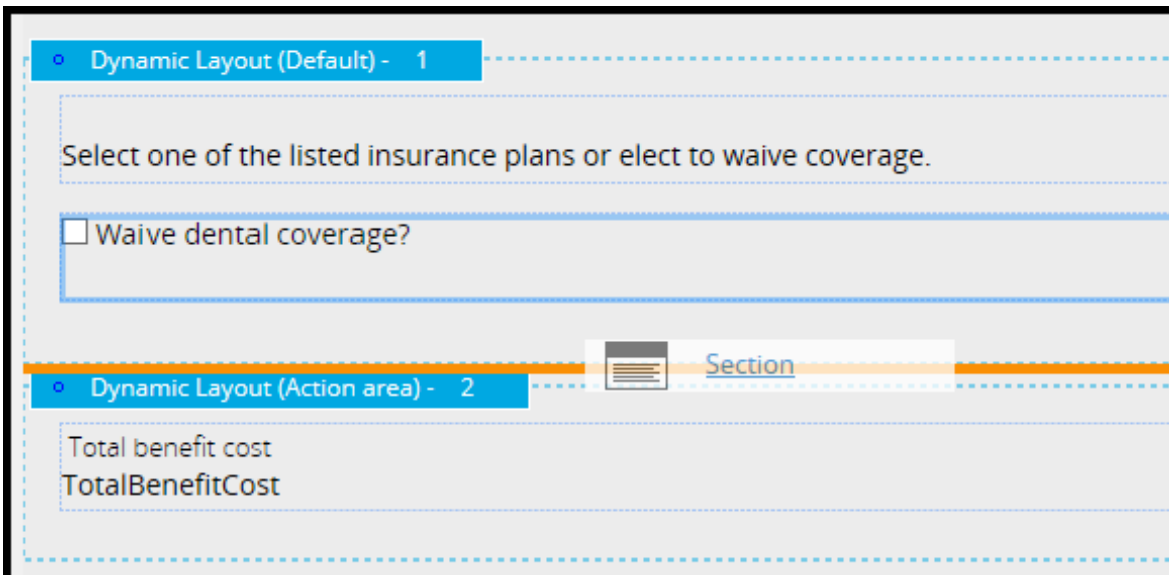
Cancel OK

9. Click **OK**. The section include is displayed on the section.

10. Click **Save** to commit your changes to the Select Medical Coverage form.



11. Click the **SelectDentalCoverage_0** tab in the Designer Studio. The Select Dental Coverage section regains focus.
12. From the Layout menu, drag the Section layout onto the Select Dental Coverage section.



13. With the cursor positioned between the two layouts, release the mouse button. The Section Include dialog appears.

Section Include

Provide the section to be included

Page context: Use current page context

Class: TGB-HRApps-Work-BenefitsEnrollment

Section*: By name

Cancel OK

14. From the **Page context** drop-down list, select **Use clipboard page**. The Section Include dialog updates to reflect the fields needed to reference a clipboard page.
15. In the **Class** field, enter or select **TGB-HRApps-Data-HRPlan**.
16. In the **Clipboard page** field, enter or select **.DentalPlan**.
17. In the text field to the right of the **By name** list, enter or select **HealthcareBenefit**. The Section Include dialog displays a parameter table.

Section Include

Provide the section to be included

Page context: Use clipboard page

Class: TGB-HRApps-Data-HRPlan

Clipboard page*: .DentalPlan

Section*: By name HealthcareBenefit

SECTION PARAMETERS

PARAMETER	VALUE
Type	

Cancel OK

18. In the **Value** field, enter "Dental".

Section Include

Provide the section to be included

Page context Use clipboard page

Class TGB-HRApps-Data-HRPlan

Clipboard page* .DentalPlan

Section* By name HealthcareBenefit

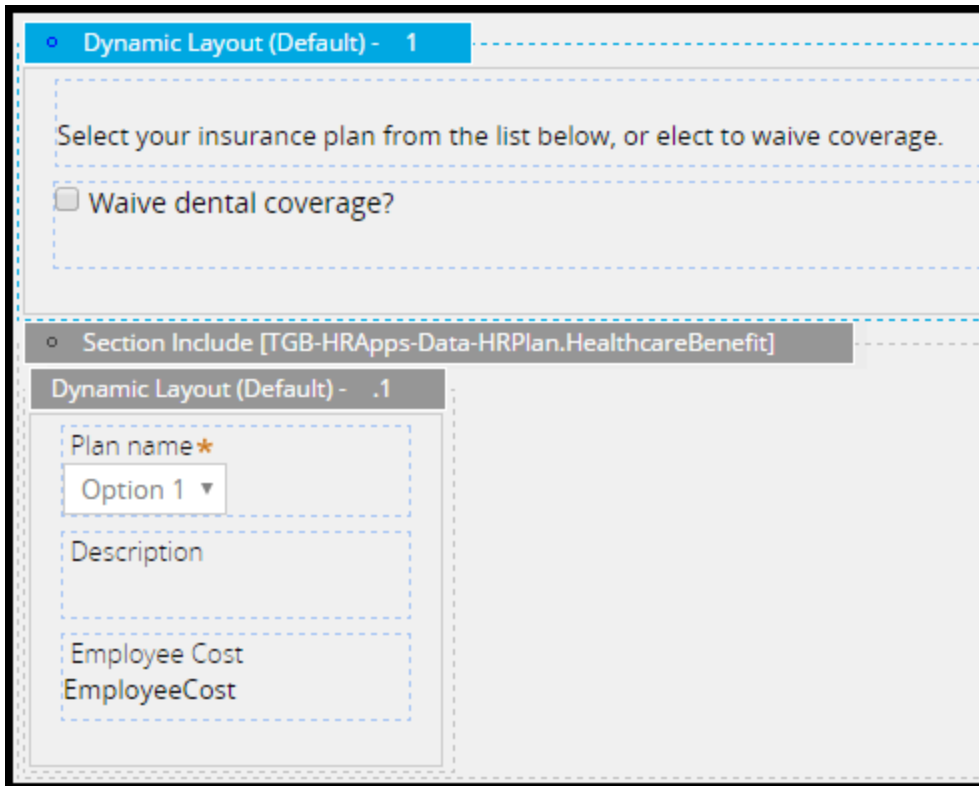
SECTION PARAMETERS

PARAMETER	VALUE
Type	"Dental"

Cancel OK

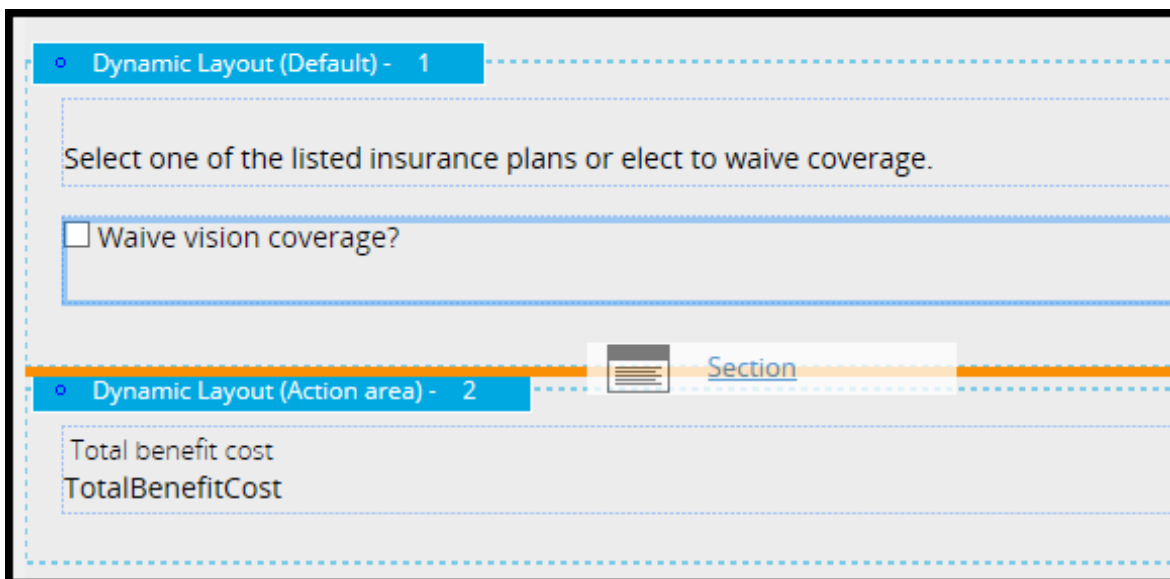
19. Click **OK**. The section include is displayed on the section.

20. Click **Save** to commit your changes to the Select Dental Coverage form.



21. Click the **SelectVisionCoverage_0** tab in the Designer Studio. The Select Vision Coverage section regains focus.

22. From the Layout menu, drag the Section layout onto the Select VisionCoverage section.



23. With the cursor positioned between the two layouts, release the mouse button. The Section Include dialog appears.

Section Include ×

Provide the section to be included

Page context ▼

Class

Section* ▼

24. From the **Page context** drop-down list, select **Use clipboard page**. The Section Include dialog updates to reflect the fields needed to reference a clipboard page.
25. In the **Class** field, enter or select **TGB-HRApps-Data-HRPlan**.
26. In the **Clipboard page** field, enter or select **.VisionPlan**.
27. In the text field to the right of the **By name** list, enter or select **HealthcareBenefit**. The Section Include dialog displays a parameter table.

Section Include ×

Provide the section to be included

Page context ▼

Class

Clipboard page*

Section* ▼

SECTION PARAMETERS

PARAMETER	VALUE
Type	<input type="text"/>

28. In the **Value** field, enter "Vision".

Section Include

Provide the section to be included

Page context Use clipboard page

Class TGB-HRApps-Data-HRPlan

Clipboard page* .VisionPlan

Section* By name HealthcareBenefit

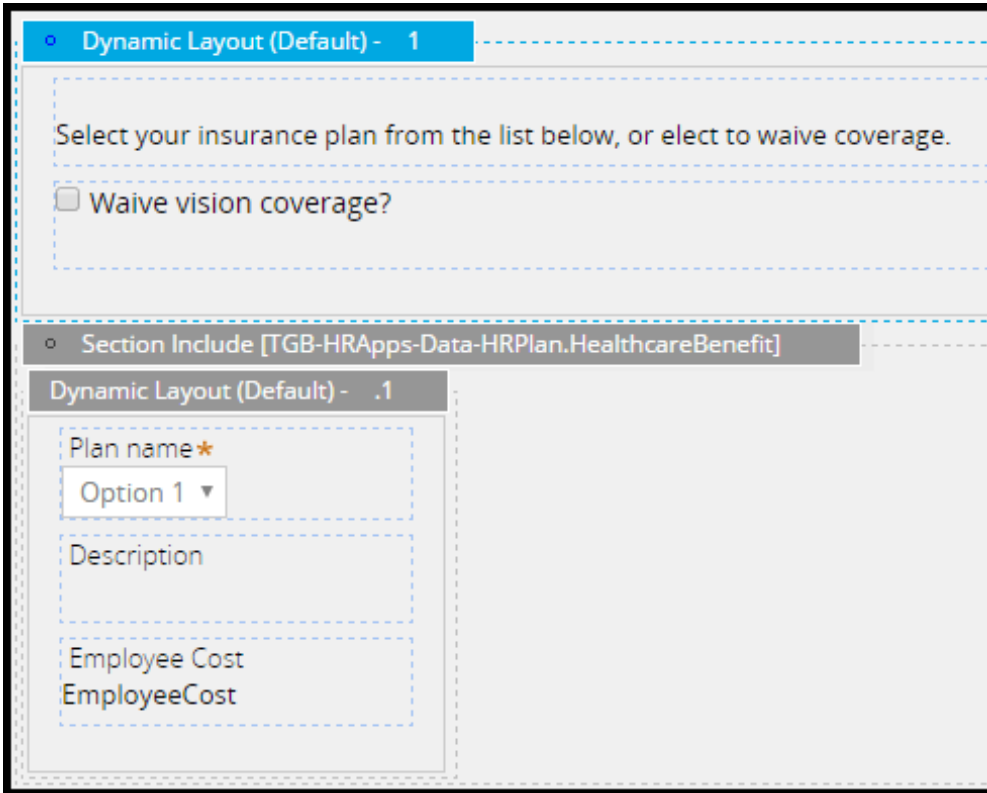
SECTION PARAMETERS

PARAMETER	VALUE
Type	"Vision"

Cancel OK

29. Click **OK**. The section include is displayed on the section.

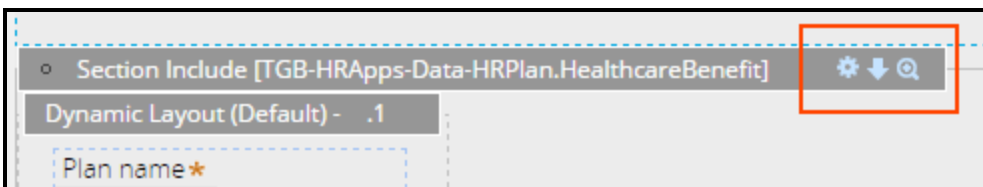
30. Click **Save** to commit your changes to the Select Vision Coverage form.



Add a visible when condition to the HealthcareBenefit section

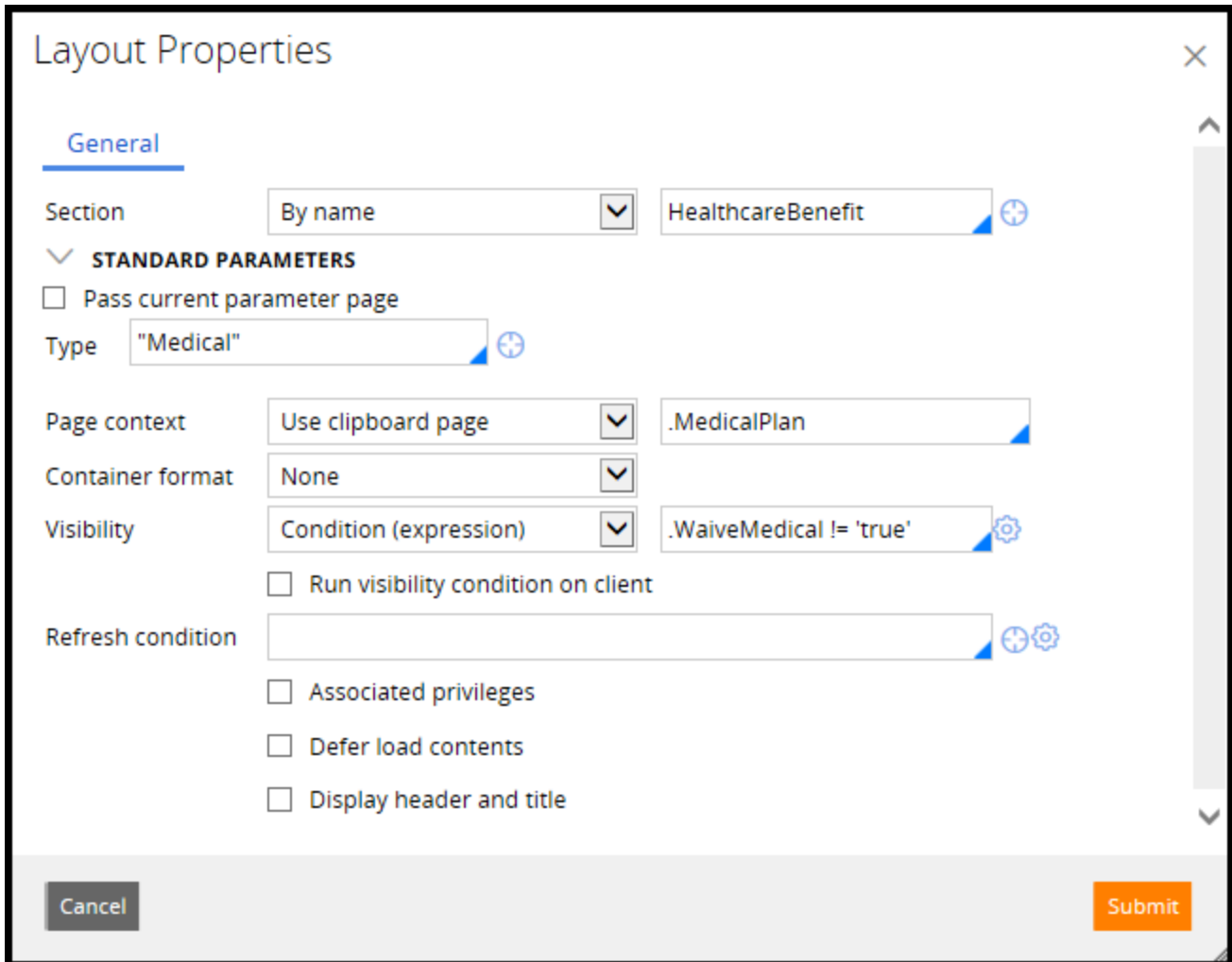
Add a visible when condition to each of the section includes for the HealthcareBenefit section. If the visible when condition is true, the HealthcareBenefit section is displayed. Configure the visible when condition to return a result of true whenever the check box is not checked.

1. Click the **SelectMedicalCoverage_0** tab in the Designer Studio. The Select Medical Coverage section regains focus.
2. Click the header for the section include for the HealthcareBenefit layout. Three icons appear on the header.

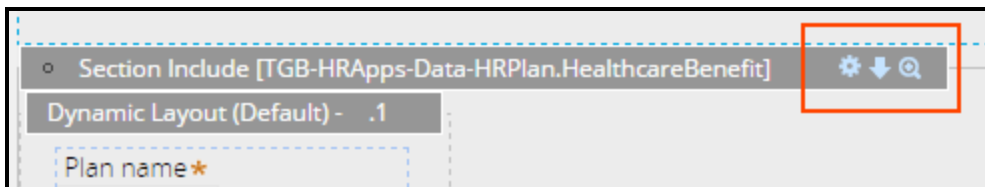


3. Click the **Gear** icon to open the Layout Properties dialog for the HealthcareBenefit layout.
4. From the **Visibility** list, select **Condition (expression)**. A field appears to the right of the drop-down list.

5. In the field to the right of the **Condition (expression)** list, enter `.WaiveMedical != 'true'`.



6. Click **Submit**. The Layout Properties dialog closes.
7. Click **Save** to commit your changes to the Select Medical Coverage form.
8. Click the **SelectDentalCoverage_0** tab in the Designer Studio. The Select Dental Coverage section regains focus.
9. Click the header for the section include for the HealthcareBenefit layout. Three icons appear on the header.



10. Click the **Gear** icon to open the Layout Properties dialog for the HealthcareBenefit layout.
11. From the **Visibility** list, select **Condition (expression)**. A field appears to the right of the drop-down list.

12. In the field to the right of the **Condition (expression)** list, enter **.WaiveDental !='true'**.

Layout Properties

General

Section By name HealthcareBenefit

STANDARD PARAMETERS

Pass current parameter page

Type "Dental"

Page context Use clipboard page .Dental

Container format None

Visibility Condition (expression) .WaiveDental !='true'

Run visibility condition on client

Refresh condition

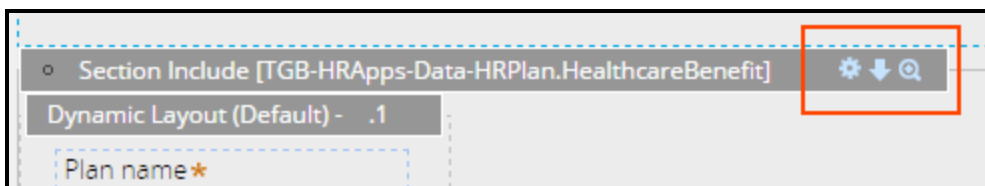
Associated privileges

Defer load contents

Display header and title

Cancel Submit

13. Click **Submit**. The Layout Properties dialog closes.
14. Click **Save** to commit your changes to the Select Dental Coverage form.
15. Click the **SelectVisionCoverage_0** tab in the Designer Studio. The Select Vision Coverage section regains focus.
16. Click the header for the section include for the HealthcareBenefit layout. Three icons appear on the header.



17. Click the **Gear** icon to open the Layout Properties dialog for the HealthcareBenefit layout.
18. From the **Visibility** list, select **Condition (expression)**. A field appears to the right of the drop-down list.

19. In the field to the right of the **Condition (expression)** list, enter `.WaiveVision !='true'`.

Layout Properties

General

Section By name HealthcareBenefit

STANDARD PARAMETERS

Pass current parameter page

Type "Vision"

Page context Use clipboard page .Vision

Container format None

Visibility Condition (expression) .WaiveVision !='true'

Run visibility condition on client

Refresh condition

Associated privileges

Defer load contents

Display header and title

Cancel Submit

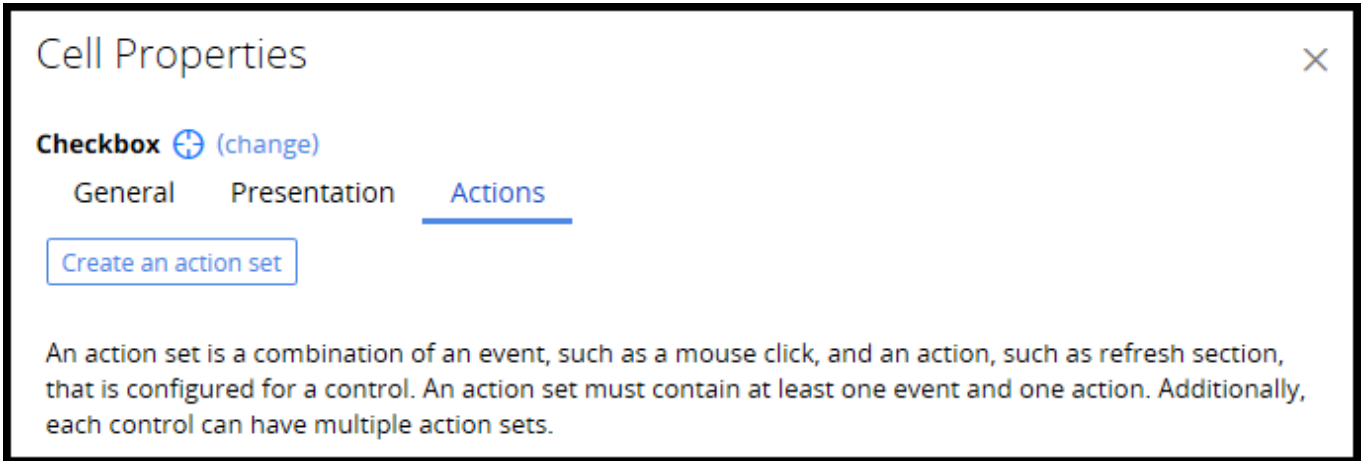
20. Click **Submit**. The Layout Properties dialog closes.
21. Click **Save** to commit your changes to the Select Vision Coverage form.

Add an action set to the waive coverage check box

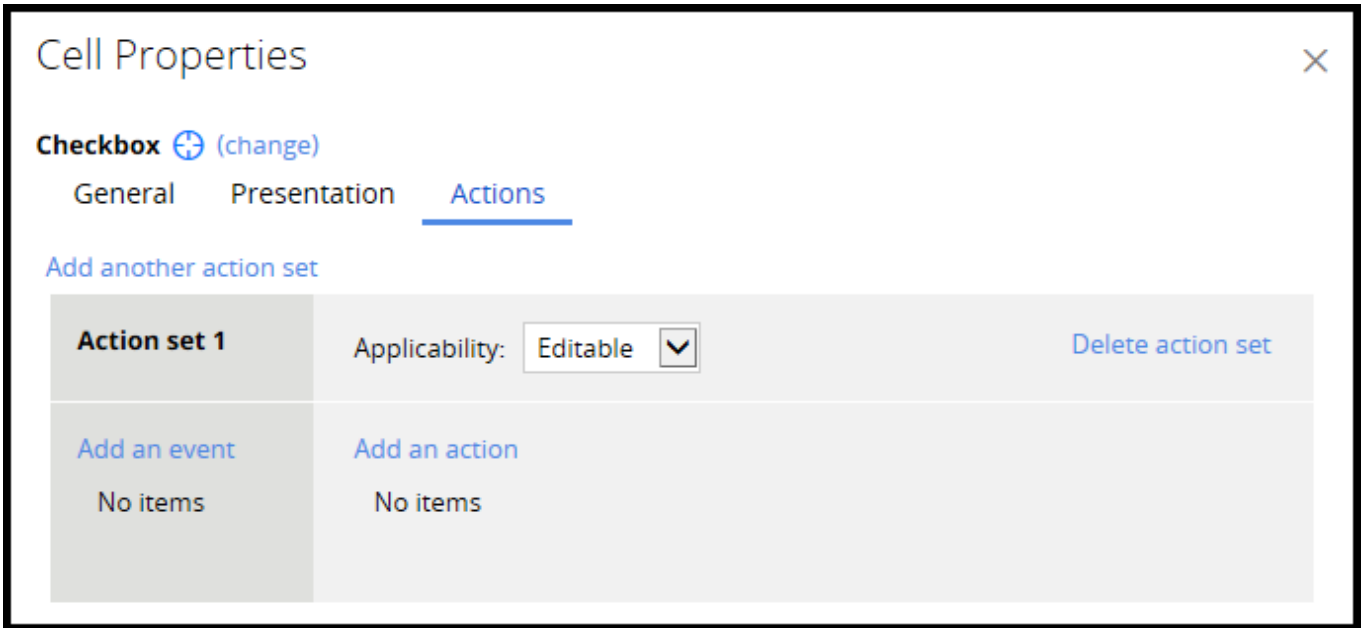
Add an action set to the waive coverage check box on each form, to refresh the section whenever a user clicks the check box. This updates the form to hide the insurance coverage details when the user decides to waive coverage, or display the insurance coverage details when user declines to waive coverage.

1. Click the **SelectMedicalCoverage_0** tab in the Designer Studio. The Select Medical Plan section regains focus.
2. Click the layout cell that contains the **Waive medical coverage?** check box.
3. Click the **Gear** icon to the right of the cell. The Cell Properties panel appears.

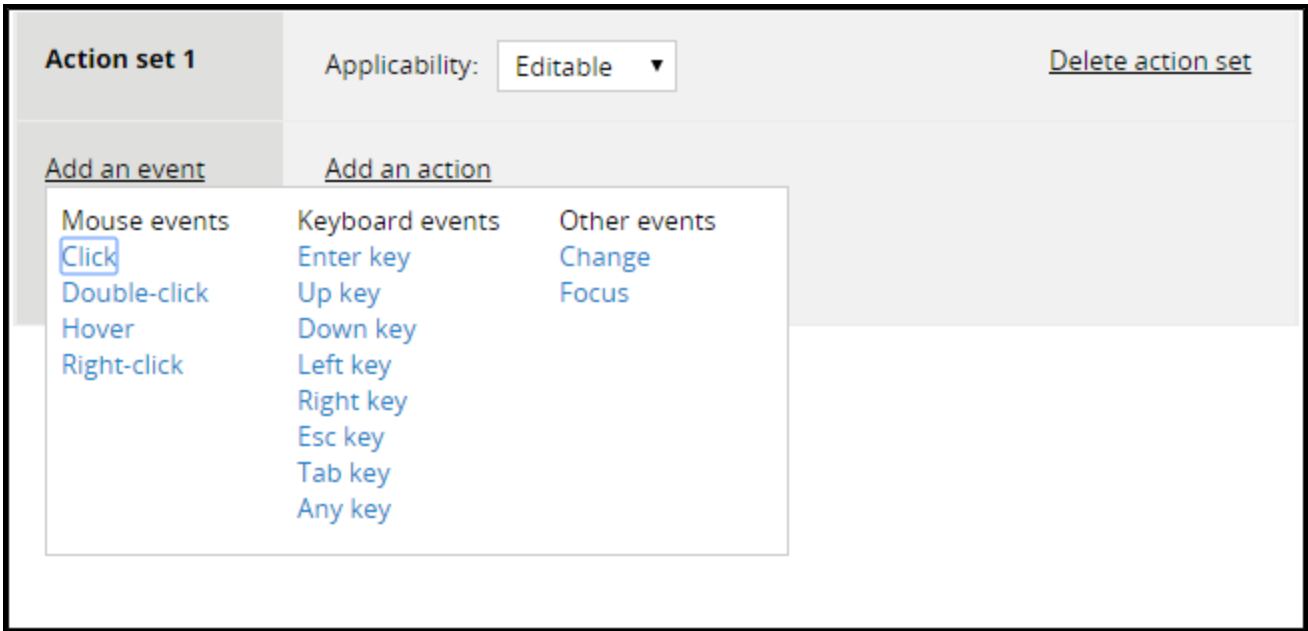
4. In the **Cell Properties** dialog, click **Actions**.



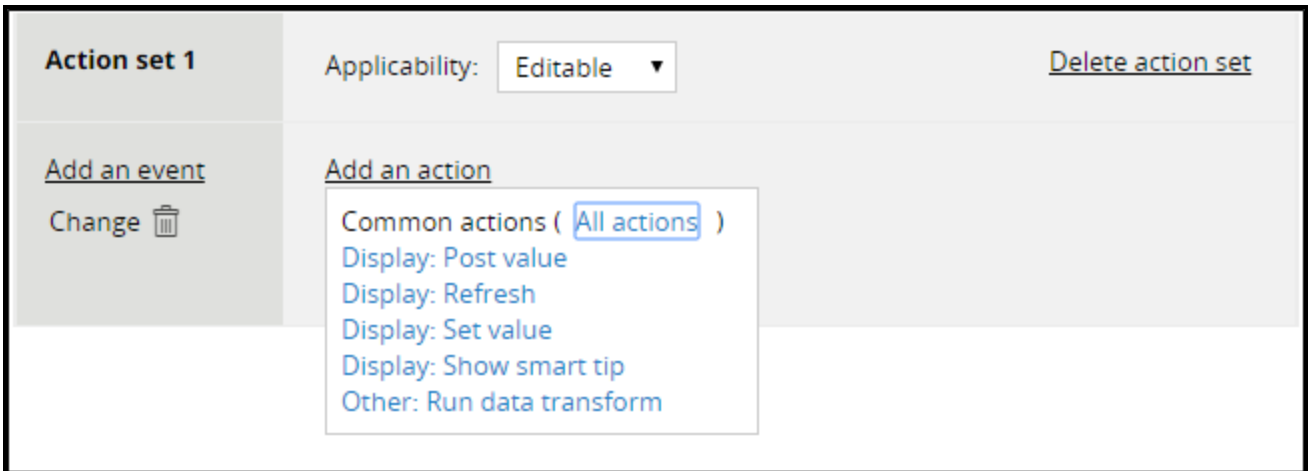
5. Click **Create an action set**. An empty action set appears on the Cell Properties dialog.



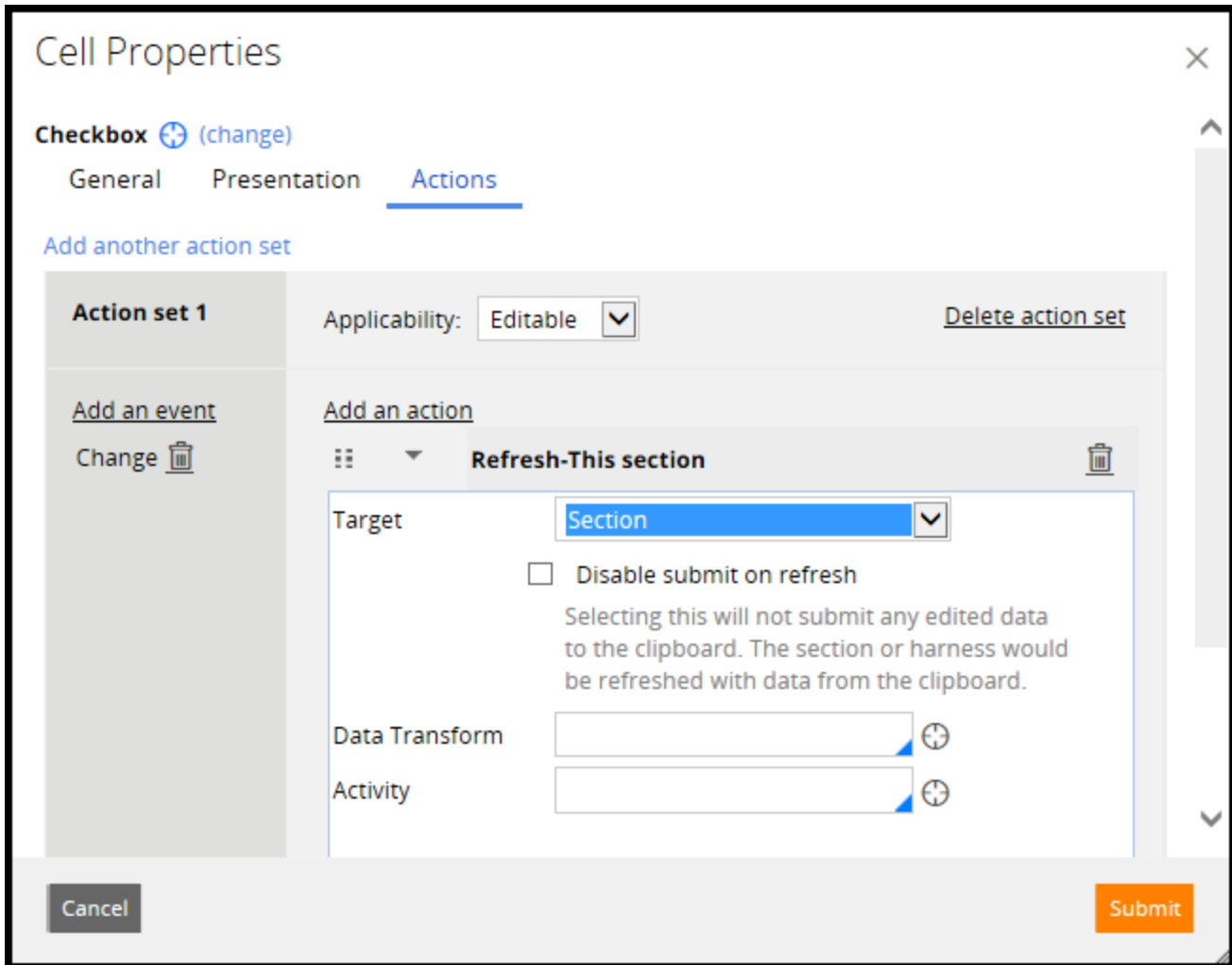
6. Under Action set 1, click **Add an event**. A pop-up window is displayed.



7. In the pop-up window, under Other events, click **Change**.
8. Click **Add an action**. A pop-up window is displayed.



9. In the pop-up window, click **Display: Refresh**.



10. Click **Submit**. The Cell Properties dialog closes.

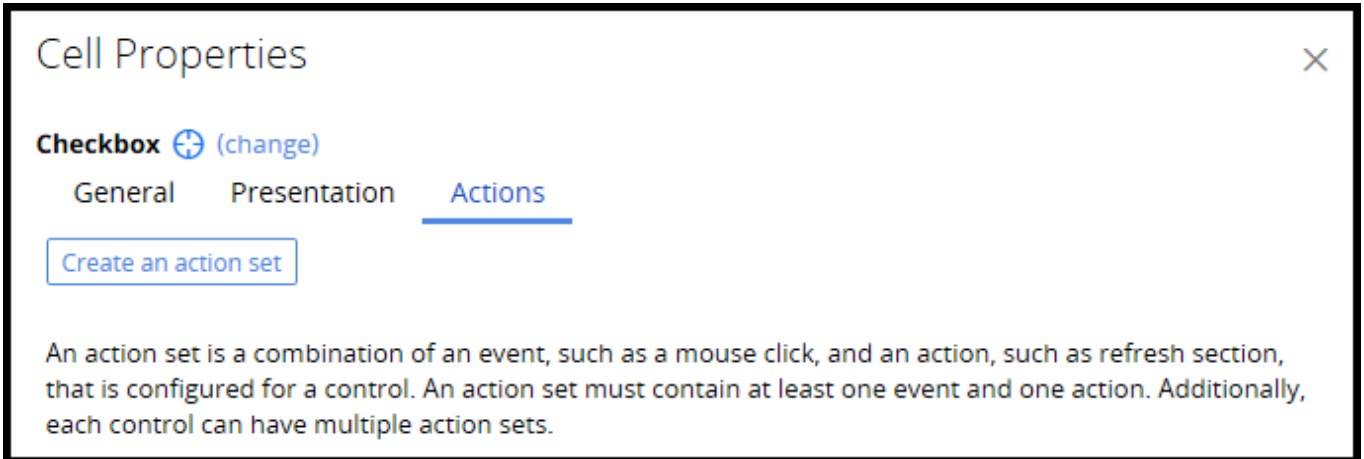
11. Click **Save** to commit your changes to the Select Medical Coverage form.

12. Click the **SelectDentalCoverage_0** tab in the Designer Studio. The Select Dental Coverage section regains focus.

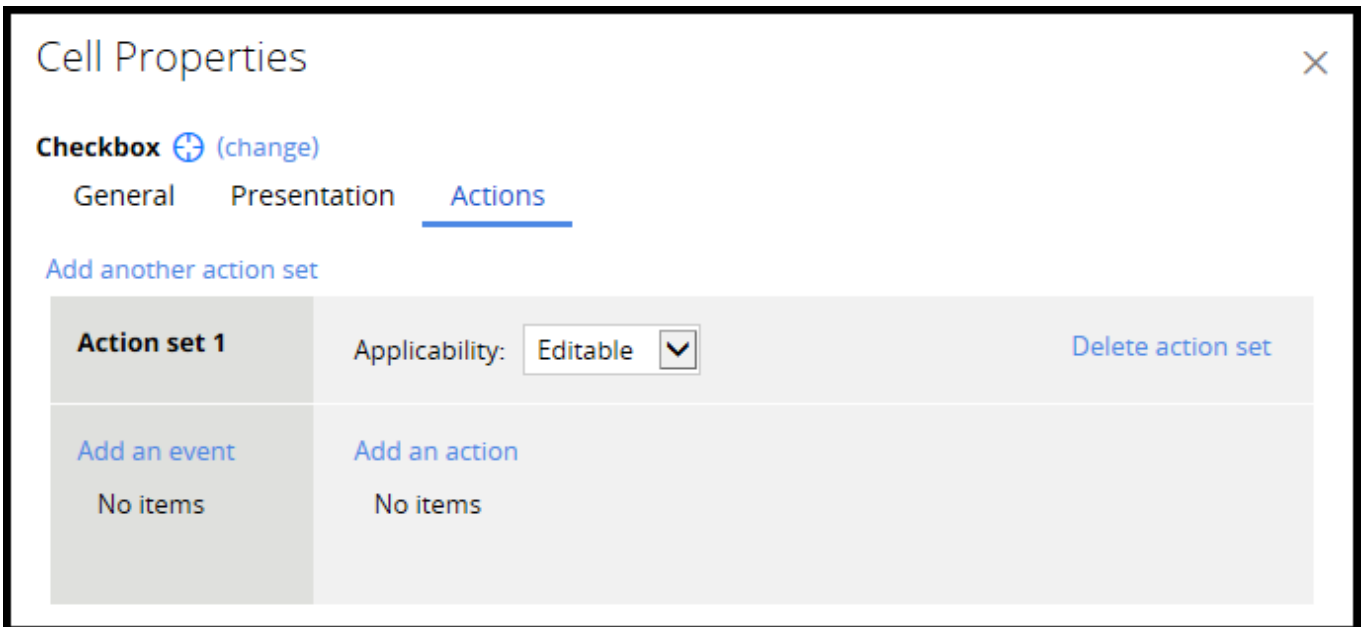
13. Click the layout cell that contains the **Waive dental coverage?** check box.

14. Click the **View properties** icon to the right of the cell. The Cell Properties panel appears.

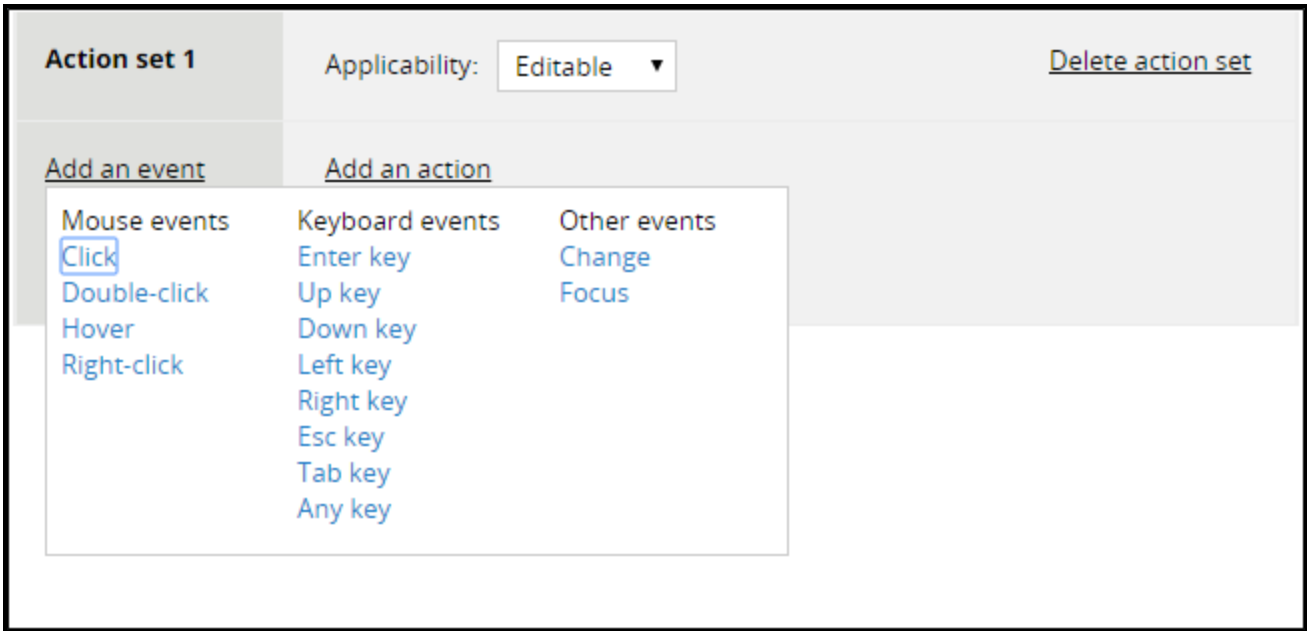
15. In the **Cell Properties** dialog, click **Actions**.



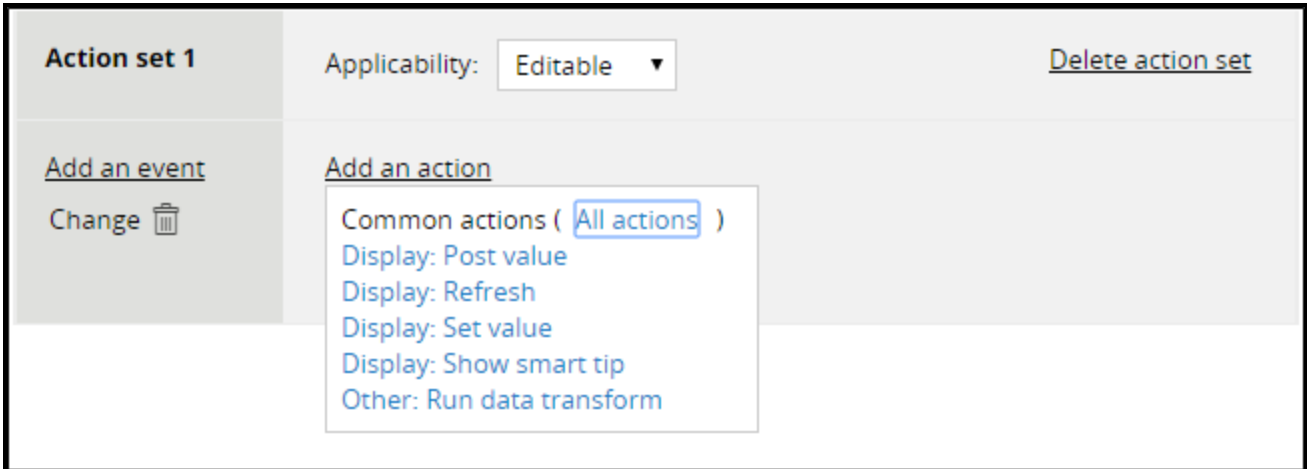
16. Click **Create an action set**. An empty action set appears on the Cell Properties dialog.



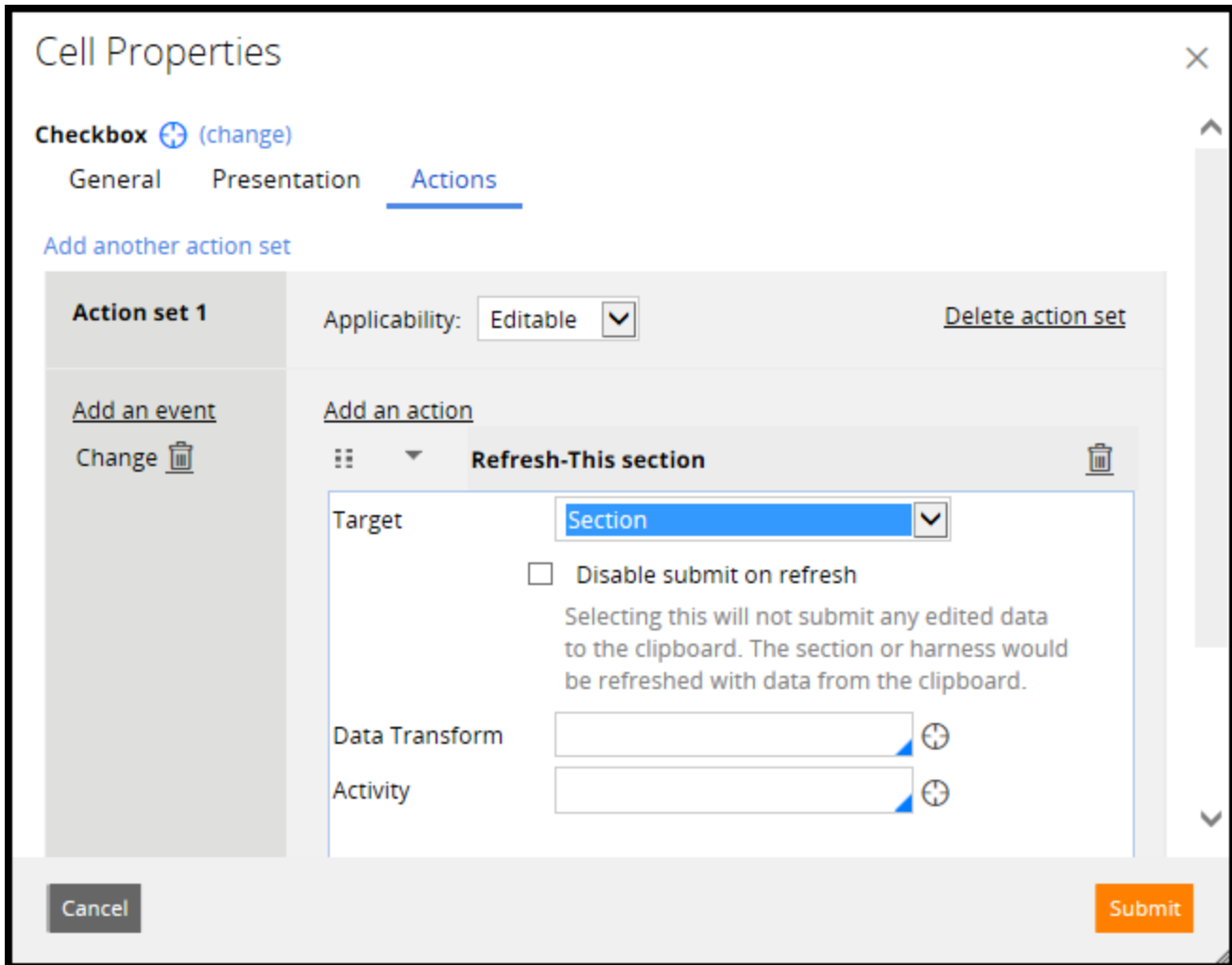
17. Under Action set 1, click **Add an event**. A pop-up window is displayed.



18. In the pop-up window, under Other events, click **Change**.
19. Click **Add an action**. A pop-up window is displayed.



20. In the pop-up window, click **Display: Refresh**.



21. Click **Submit**. The Cell Properties dialog closes.

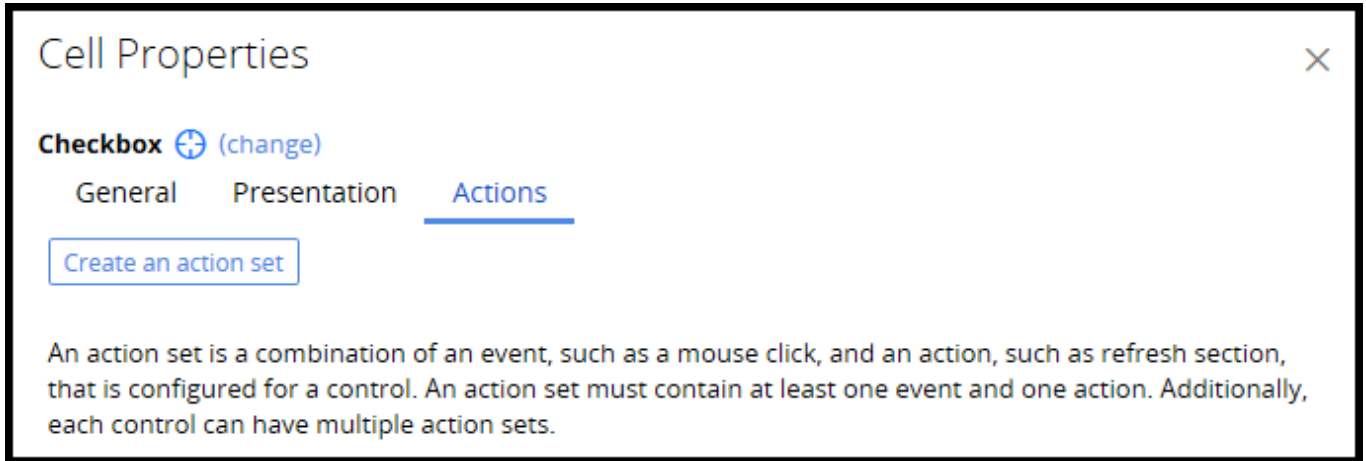
22. Click **Save** to commit your changes to the Select Dental Coverage form.

23. Click the **SelectVisionCoverage_0** tab in the Designer Studio. The Select Vision Coverage section regains focus.

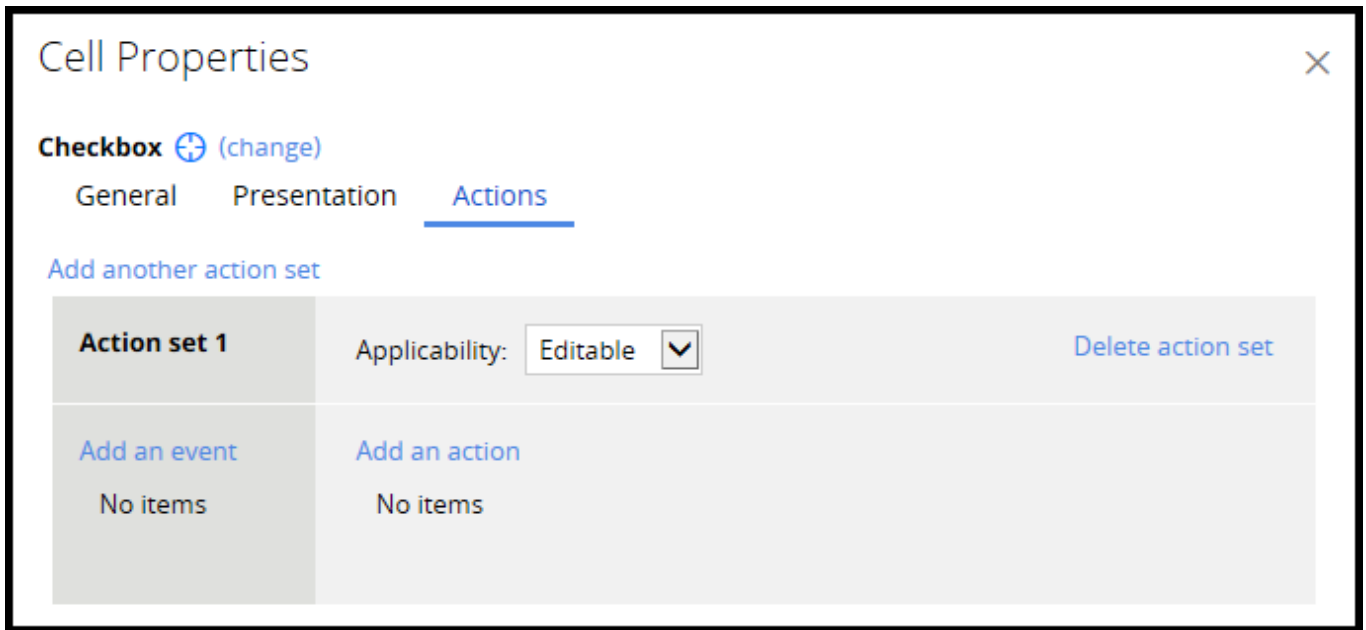
24. Click the layout cell that contains the **Waive vision coverage?** check box.

25. Click the **View properties** icon to the right of the cell. The Cell Properties dialog opens.

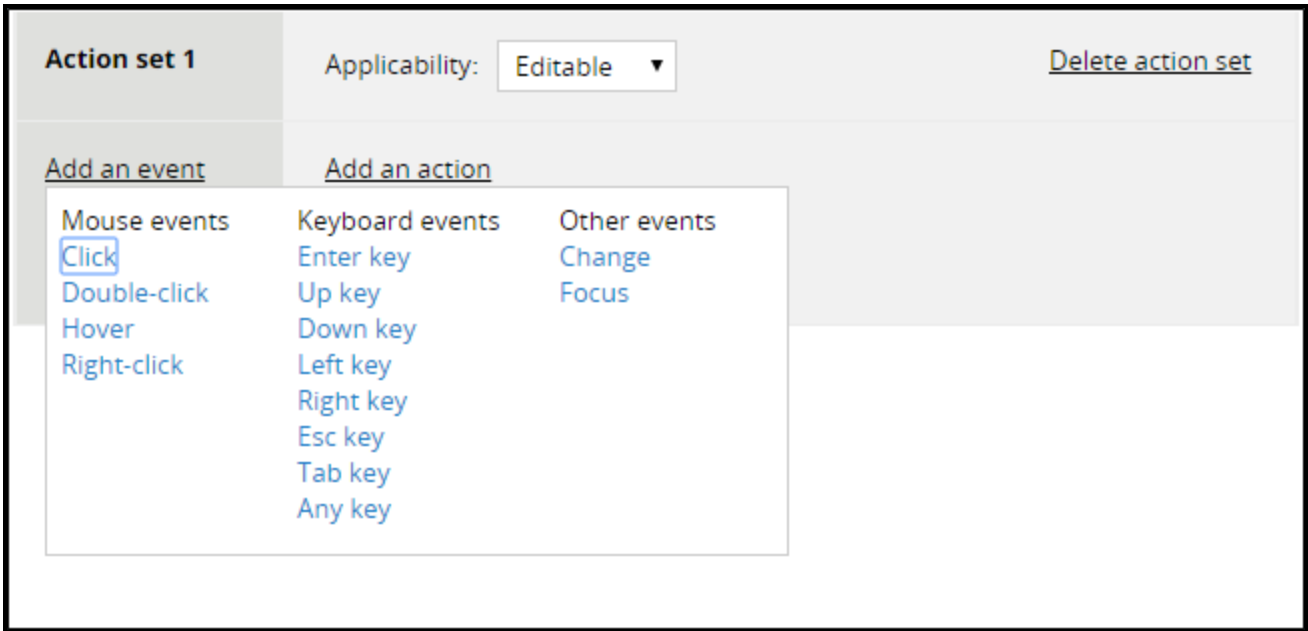
26. In the **Cell Properties** dialog, click **Actions**.



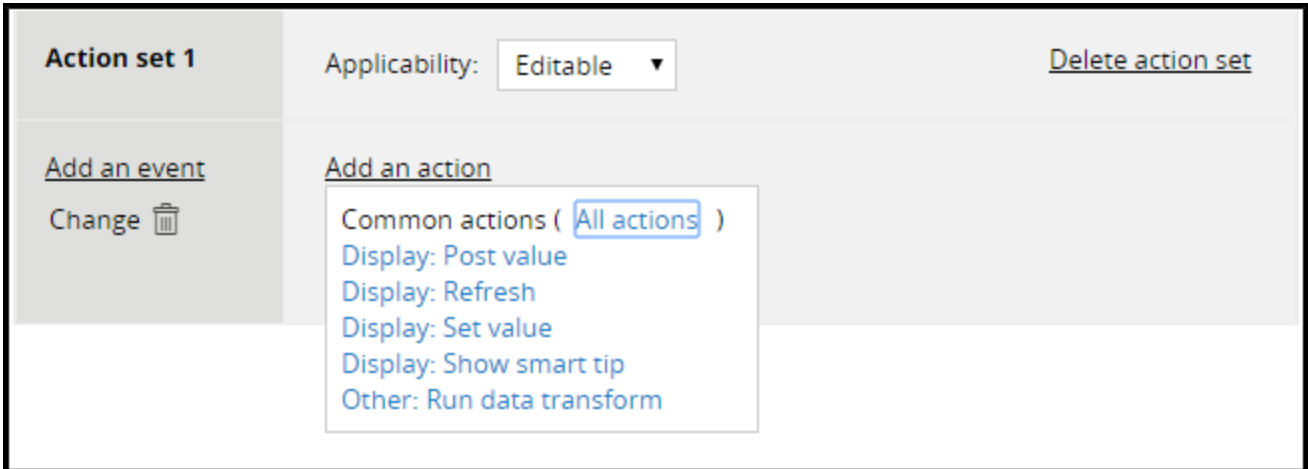
27. Click **Create an action set**. An empty action set appears on the Cell Properties dialog.



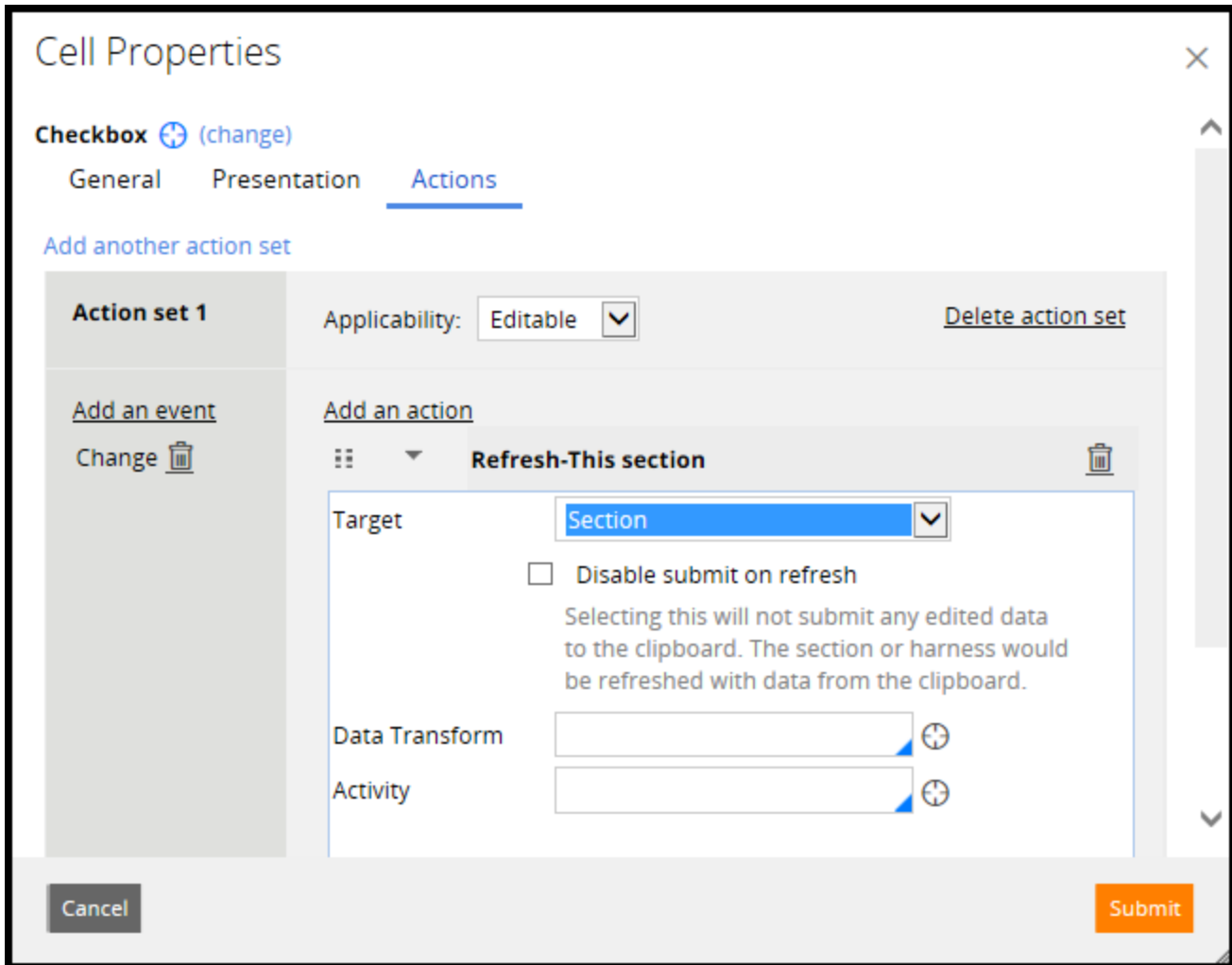
28. Under Action set 1, click **Add an event**. A pop-up window is displayed.



29. In the pop-up window, under Other events, click **Change**.
30. Click **Add an action**. A pop-up window is displayed.



31. In the pop-up window, click **Display: Refresh**.



32. Click **Submit**. The Cell Properties dialog closes .

33. Click **Save** to commit your changes to the Select Vision Coverage form.

Update the plans page properties to read data from a data page

Configure the Medical plan, Dental plan, and Vision plan properties to copy data from a data page. This data page caches the list of available insurance coverage plans. Provide a parameter to filter the results from the data page to return only the appropriate insurance coverage options for each property.

1. In the Application Explorer, under **Benefits Enrollment > Data Model > Property**, click **MedicalPlan**.
2. Under **Data Access**, select **Copy data from a data page**. The Data page field appears.

Note: The design of each coverage selection form requires use of a Clipboard page called a data page to obtain information about a specific type of insurance plan (medical, dental, or vision). In an upcoming lesson, you learn how to configure data pages.

3. In the **Data page** field, enter or select **D_HRPlanLookup**. Under Parameters, the ID field appears.
4. In the **ID** field, enter **.MedicalPlan.ID**.

5. Click **Save** to commit your changes to the Select Medical Coverage form.

Data access

Manual

Refer to a data page

Copy data from a data page

When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property. Interactions with the property happen on the copied data.

Data Page: *

D_HRPlanLookup TGB-HRApps-Data-HRPlan

PARAMETERS

ID * .MedicalPlan.ID

Optional Data Mapping:

PARAMETERS

No parameters to set.

Note: The design of the three coverage selection forms uses a Clipboard page called a data page to obtain information about a specific type of insurance plan. In an upcoming lesson, you learn how to configure data pages.

6. In the Application Explorer, under **Benefits Enrollment > Data Model > Property**, click **DentalPlan**.
7. Under **Data Access**, select **Copy data from a data page**. The Data page field appears.
8. In the **Data page** field, enter or select **D_HRPlanLookup**. Under Parameters, the ID field appears.
9. In the **ID** field, enter **.DentalPlan.ID**.

- Click **Save** to commit your changes to the Select Dental Coverage form.

Data access

Manual
 Refer to a data page
 Copy data from a data page

When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property.
Interactions with the property happen on the copied data.

Data Page: *
D_HRPlanLookup TGB-HRApps-Data-HRPlan

PARAMETERS

ID * .DentalPlan.ID

Optional Data Mapping:

PARAMETERS
No parameters to set.

- In the Application Explorer, under **Benefits Enrollment > Data Model > Property**, click **VisionPlan**.
- Under **Data Access**, select **Copy data from a data page**. The Data page field appears.
- In the **Data page** field, enter or select **D_HRPlanLookup**. Under Parameters, the ID field appears.
- In the **ID** field, enter **.VisionPlan.ID**.
- Click **Save** to commit your changes to the Select Vision Coverage form.

Data access

Manual
 Refer to a data page
 Copy data from a data page

When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property.
Interactions with the property happen on the copied data.

Data Page: *
D_HRPlanLookup TGB-HRApps-Data-HRPlan

PARAMETERS

ID * .VisionPlan.ID

Optional Data Mapping:

PARAMETERS
No parameters to set.

Test your changes

1. Click the **Benefits Enrollment** tab in Designer Studio. The Benefits Enrollment case life cycle regains focus.
2. Click **Run**. The New Benefits Enrollment form is displayed.
3. Click **Submit**. The Identify Dependents form is displayed.
4. Click **Submit**. The Select Medical Coverage form is displayed.
5. Click the **Waive medical coverage?** check box. Verify that the fields for the medical coverage plan are hidden whenever the check box is checked.
6. Click **Submit**. The Select Dental Coverage form is displayed.
7. Click the **Waive dental coverage?** check box. Verify that the fields for the dental coverage plan are hidden whenever the check box is checked.
8. Click **Submit**. The Select Vision Coverage form is displayed.
9. Click the **Waive vision coverage?** check box. Verify that the fields for the vision coverage plan are hidden whenever the check box is checked.

Validating user data

Exercise: Validating user entries on forms

Scenario

To avoid processing delays for onboarding and benefits enrollment cases, the human resources (HR) department asks you to ensure that users provide accurate data when processing an onboarding request. To avoid invalid user entries, HR requests that you configure the fields so that users must enter data in the fields. You must also replace some of the text fields in the application with lists. Finally, HR wants to ensure that the start date for a new hire is entered correctly as a future date.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Ensure that users enter values for the following properties by requiring the listed fields:

- On the Collect Employee Info form — First name, Last name, Start date, Manager, and Email
- On the Identify Home Office form — Office

Replace the text field on the Identify Home Office form with a drop-down list of office locations. To do this:

- Change the control for the Office property on the form to **Dropdown**.
- Add a placeholder prompt for the list that tells the user to select an office.
- Source the list from data on the clipboard by referencing the data page D_OfficeList.

Validate the start date for a new employee to ensure that users can only enter a future date. To do this:

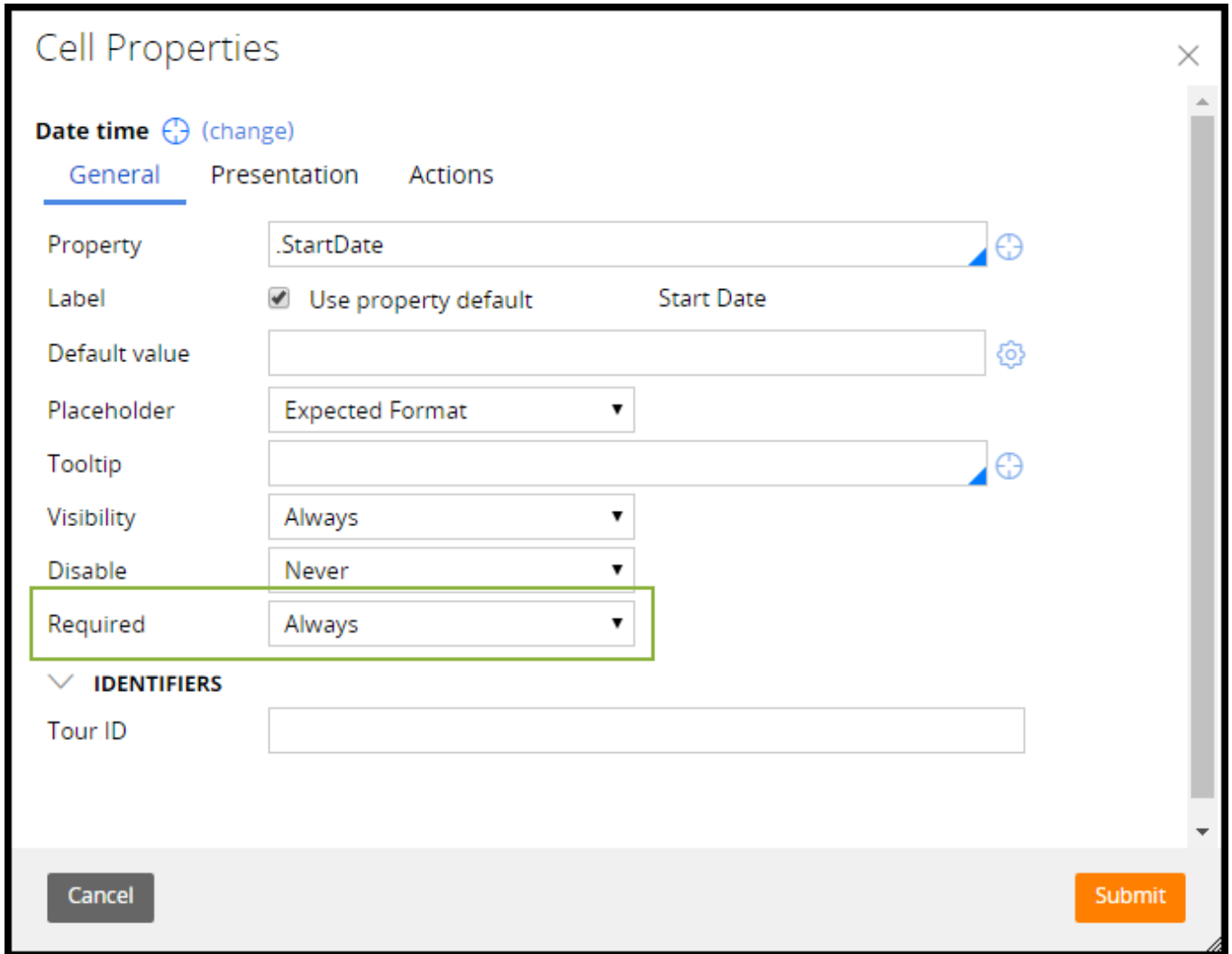
- Create a validate rule to apply the edit validate rule *IsFutureDate* to the employee's start date (.StartDate).
- Configure the Collect Employee Info flow action to call the validate rule when the user submits the form.

Detailed steps

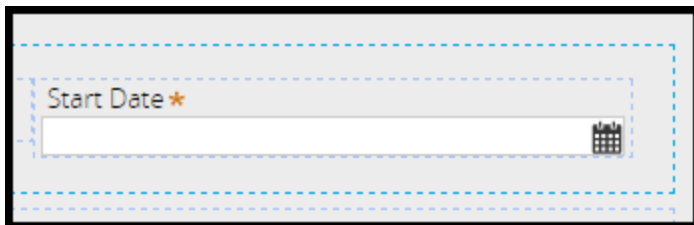
Configure the required fields on the Collect Employee Info Form

Add required fields to the Collect Employee Info form. When users submit the form, the application verifies that the required fields contain data. If one or more fields are empty, the application prevents submission of the form.

1. In the Application Explorer, expand **Onboarding > User Interface > Section**.
2. Click the **CollectEmployeeInfo_0** section.
3. Click the **Start date** field.
4. To the right of the **Calendar** icon in the field, click the **Gear** icon. The Cell Properties panel is displayed.
5. From the Required list, select **Always**.



6. Click **Submit**. The Cell Properties panel disappears and an asterisk appears next to the label of the Start Date field to indicate that this is a required entry.



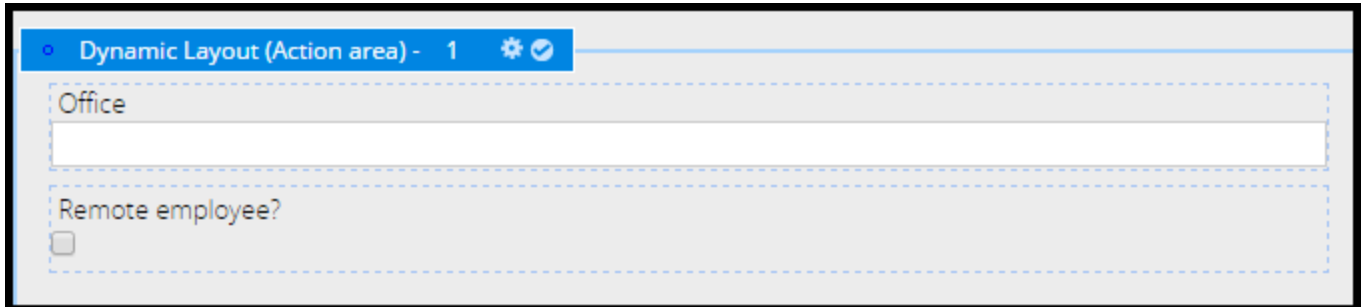
7. Repeat steps 6-9 for the First name, Last name, Manager, and Email fields.

8. Click **Save**.

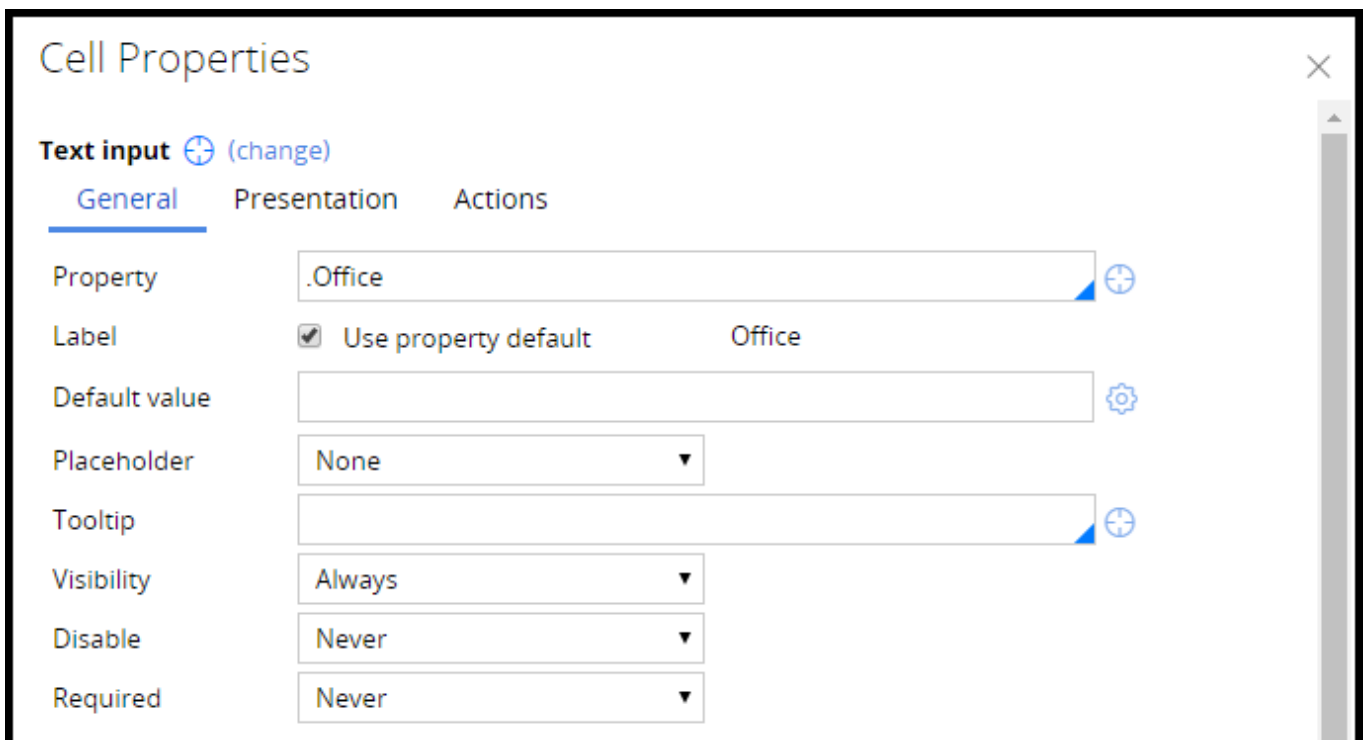
Create a drop-down list for the Office field

Replace the Office field with a drop-down list to ensure that users provide a valid value for the Office property.

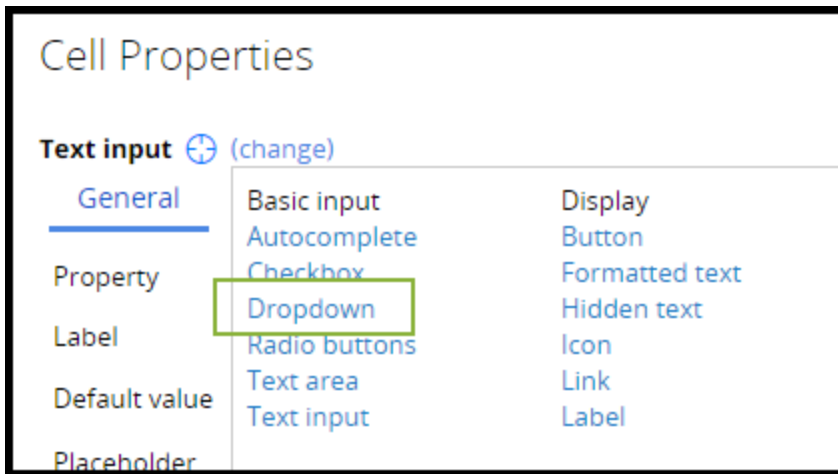
1. In the Application Explorer, under **Onboarding > User Interface > Section**, click **IdentifyHomeOffice_0**.



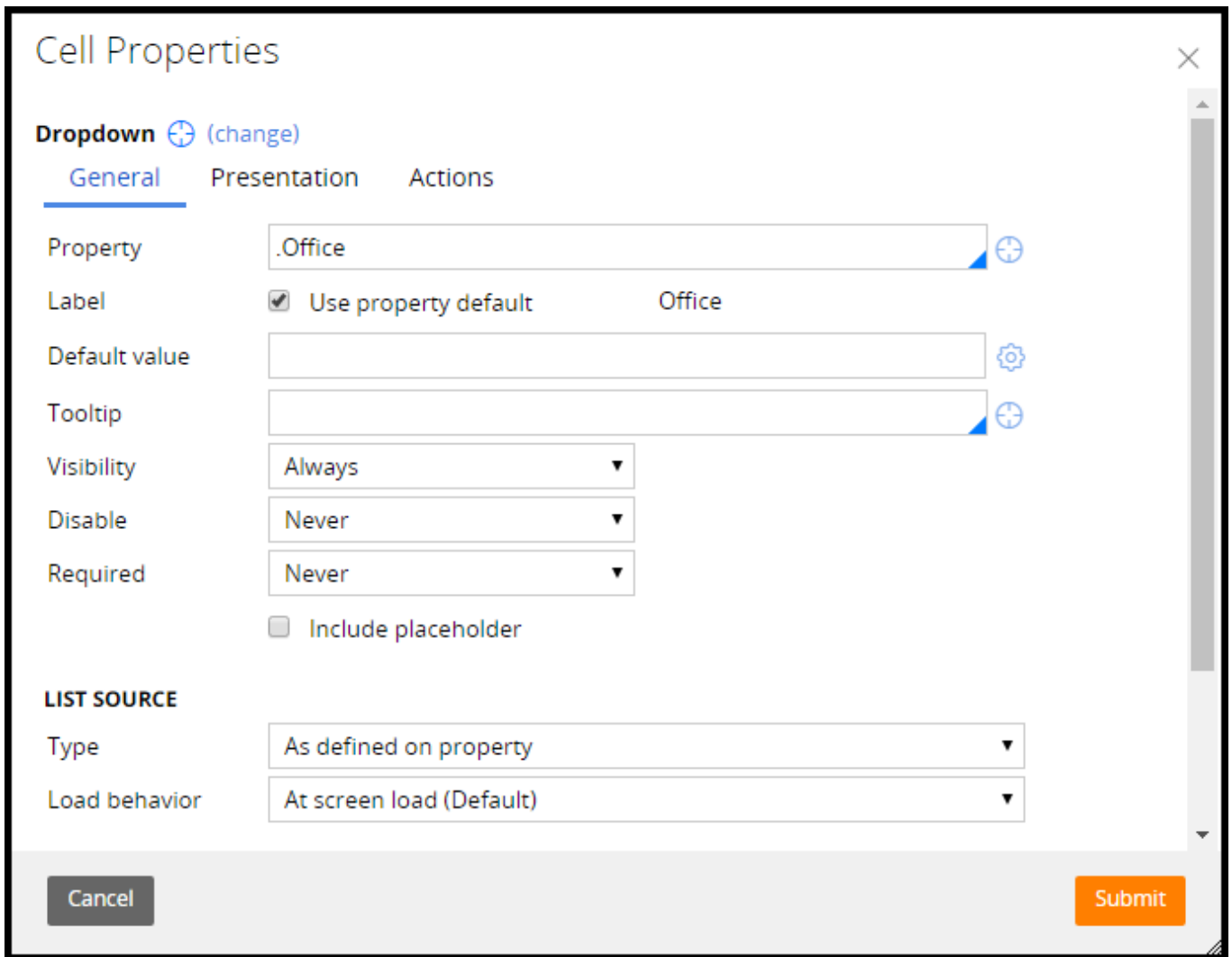
2. Click the **Office** field. The Cell Properties panel is displayed.



3. To the right of the **Target** icon next to Text input, click **change**. A pop-up window containing four lists of controls is displayed.
4. On the General tab of the Cell Properties form, under **Basic input**, click **Dropdown**.



- In the Cell Properties panel, notice that the options change to match your selection of a drop-down list.



- Click the **Include placeholder** check box. A field is displayed to the right of the Include placeholder check box.

7. In the blank field, enter "Select a home office..."

Source the Office drop-down list from a data page

The list of office locations is available from a data page on the clipboard. Use this data page to populate the drop-down list with values.

1. Under **List Source**, from the **Type** list, select **Data Page**.
2. In the **Data page** field, enter or select **D_OfficeList**.
3. In the **Property for value** field, enter or select **.Name**.

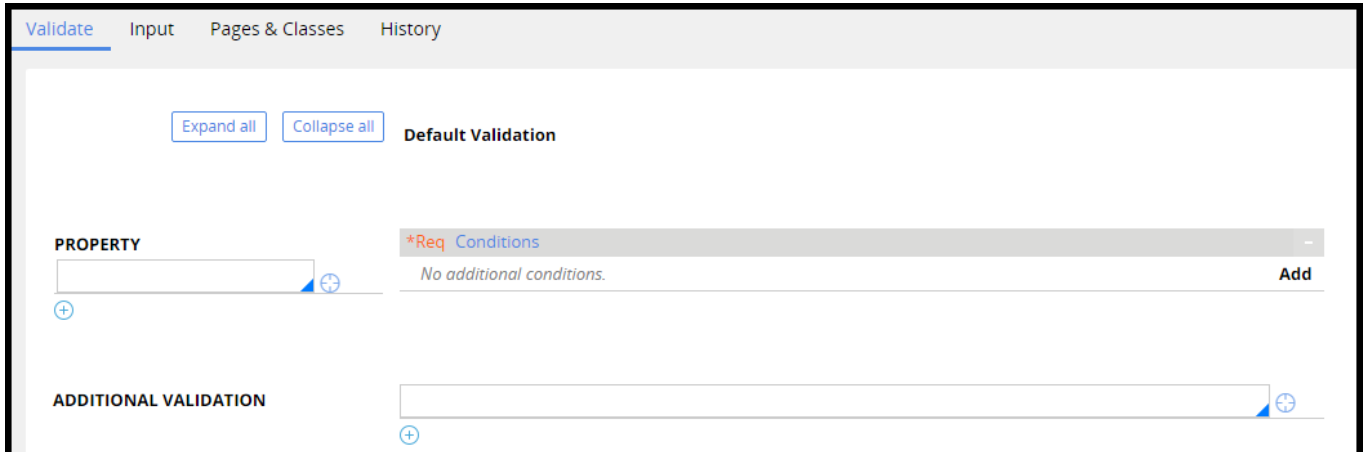
4. From the **Required** list, select **Always**.
5. Click **Submit**. The Cell Properties panel disappears.

6. Click **Save** to commit your changes to the section.

Create a validate rule to test the value of the Start Date property

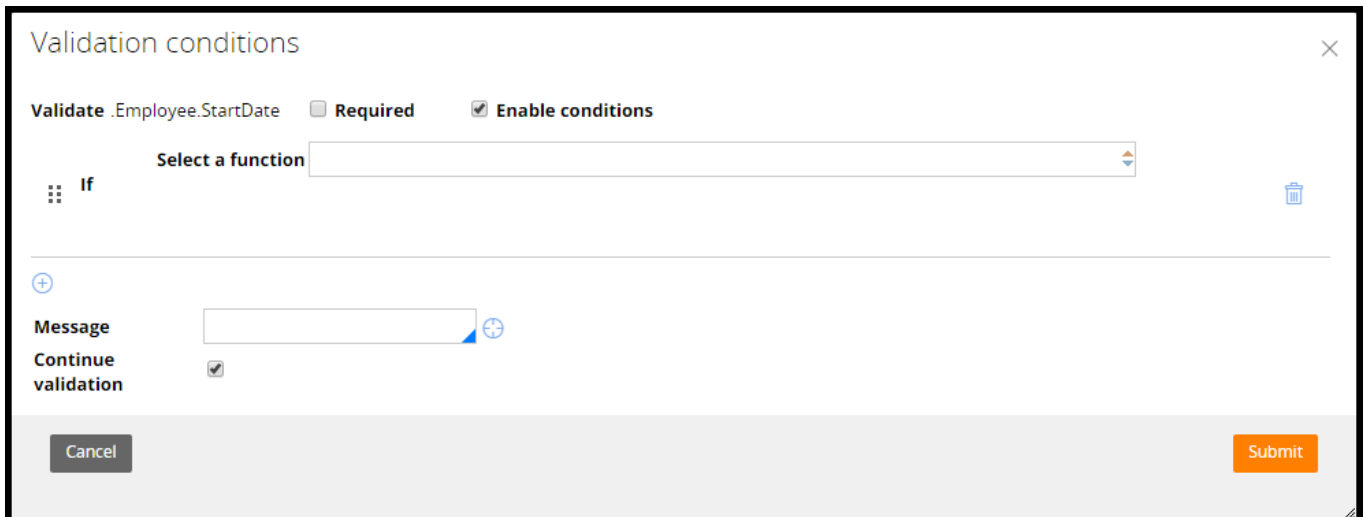
For an onboarding case, the start date for the employee must be a date in the future. For other business processes, this date must be in the past. While the standard *IsFutureDate* edit validate rule performs the appropriate validation, it must be called from the process, rather than the property to satisfy the different requirements for each business process. Create a validate rule to call the *IsFutureDate* edit validate rule during the Create Employee Record process.

1. In the Application Explorer, under **Onboarding**, right-click **Process** and select **Create > Validate**.
2. In the **New Record** form, in the **Label** field, enter **Start date is future date**.
3. Click **Create and open**. The Validate rule form opens.



The screenshot shows the 'Validate' form in the application explorer. The form has tabs for 'Validate', 'Input', 'Pages & Classes', and 'History'. Under the 'Validate' tab, there are buttons for 'Expand all' and 'Collapse all', and a section titled 'Default Validation'. Below this, there is a 'PROPERTY' field with a dropdown menu and a plus sign. To the right of the property field, there is a section for '*Req Conditions' with a text area containing 'No additional conditions.' and an 'Add' link. At the bottom, there is an 'ADDITIONAL VALIDATION' section with a text area and a plus sign.

4. In the **Property** field, select or enter **.Employee.StartDate**.
5. To the right of the **Property** field, click the **Add** link to open the Validate conditions dialog.



The screenshot shows the 'Validation conditions' dialog box. The dialog has a title bar with a close button. Inside, there is a 'Validate' section with a dropdown menu showing '.Employee.StartDate'. There are checkboxes for 'Required' (unchecked) and 'Enable conditions' (checked). Below this, there is a 'Select a function' dropdown menu. To the left of the dropdown, there is a 'If' label and a plus sign. At the bottom, there is a 'Message' field with a plus sign, a 'Continue validation' checkbox (checked), and 'Cancel' and 'Submit' buttons.

6. In the **Select a function** field, enter or select **Validation of [Property Name] using [Edit Validate Name] fails**.

7. In the **Validation of** field, enter or select **.Employee.StartDate**.
8. In the **using** field, enter or select **IsFutureDate**.

9. In the **Message** field, enter **Must be a future date**.

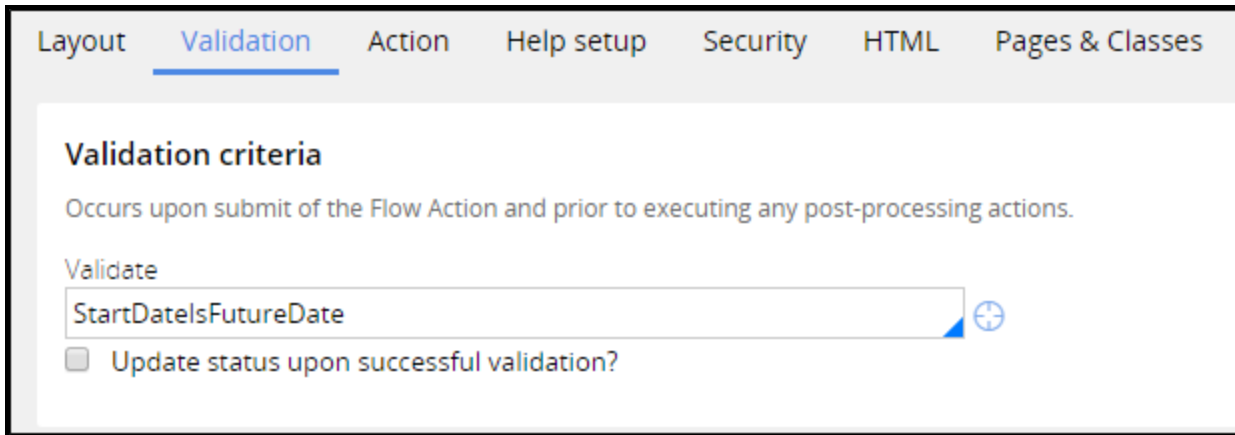
10. Click **Submit**. The Validation conditions dialog disappears.
11. Click **Save**. The completed condition appears on the form.

Add the validate rule to the to the Create Employee Record process

Configure the Create Employee Record process to call the validate rule when the user submits the Collect Employee Info form.

1. In the Cases Explorer, click **Onboarding**. The Onboarding Case type opens in the Case Designer.
2. On the **Life cycle** tab, select the **Create Employee Record** process.

3. In the properties panel, click **Open process**. The Create Employee Record flow opens on the Diagram tab.
4. Right-click the connector labeled **Collect Employee Info** and select **Open Flow Action**. The Collect Employee Info flow action opens.
5. On the Collect Employee Info flow action, click the **Validation** tab.
6. In the **Validate** field, select **StartDateIsFutureDate**.
7. Click **Save** to commit your change to the Collect Employee Info flow action.



Test your changes

Review your changes by creating an onboarding case. Verify that the application directs users to provide data on the Collect Employee Info form, including a start date that is in the future.

1. From the **+Create** menu, select **New>Onboarding** to create a new onboarding case.
2. On the **Collect Employee Info** form, click **Submit**. Verify that you are unable to submit the form until you provide entries in the required fields.
3. In the **Start date** field, enter or select today's date.
4. Enter information in the remaining required fields.
5. Click **Submit**. Verify that the Start date field is flagged with a message indicating that the entered date must be in the future.
6. Correct the error by selecting tomorrow's date.
7. Click **Submit**. The Identify Home Office form is displayed.
8. On the **Identify Home Office** form, verify that you are unable to submit the form without selecting a home office.
9. From the **Office** list, select one of the values.
10. Click **Submit**. The application displays Select Orientation Plan form.

Tip: During development, you can update the *pyDefault* data transform to automatically provide values for required fields to save time when testing your application. If you do, remember to remove these initial property values from the *pyDefault* data transform before your application is released.

REPORT DESIGN

Creating reports

Exercise: Create a report to return available seating locations

Scenario

When processing an onboarding case, the facilities manager assigns each new employee a seating location in one of the five TGB offices. The requirement is to use a report definition that identifies the open seats in each office location. However, when a case is processed, the results should include only the available seats for an employee's home office. The data source for this report is maintained in the Facilities department database. The database lists all of the seating locations in each office by ID number, and indicates whether the seat is available or not available.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create a report to list all of the open seating locations for a specified office.

Create a report definition in the Seating class (TGB-HRApps-Data-Seating). The report returns one column, ID (.id), that is subject to two filter conditions:

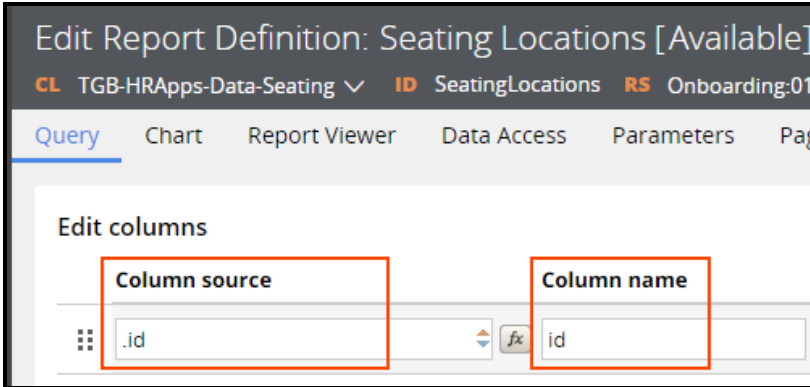
- Only include seating locations for which the status (.status) is "open".
- Only include seating locations for which the location (.location) matches the employee's home office (.Office).

Note: In this exercise, you create the report to return the needed data from the Facilities database. In a subsequent exercise, you incorporate this data into the application.

Detailed steps

1. In the Application Explorer, select **TGB-HRApps-Data-Seating** in the autocomplete field.
2. In the explorer, right-click the class name and select **Create > Reports > Report Definition**.
3. Create a report definition named Seating Locations.

4. In the **Column source** field, enter **.id**. The property name **id** appears in the Column name field.



5. Click **Save**.

6. In the report definition header, right-click **Actions** and select **Run** to generate the report. Note that the results include 50 records.

ID
ATL-0201
ATL-0202
ATL-0203
ATL-0501
ATL-0502
ATL-0503
ATL-0504
BER-0201
BER-0202
BER-0203
BER-0204
BER-0205
BER-0206
BER-0207
BER-0208
BER-0209

Create the filter conditions

- In the **Edit filters** area, do the following:
 - In the **Column source** column, enter **.status**.
 - In the **Relationship** column, enter **Is equal**.
 - In the **Value** column, enter **"Open"**.

- d. Create another row.
- e. In the **Column source** column, enter **.office**.
- f. In the **Relationship** column, enter **Is equal**.
- g. In the **Value** column, enter **pyWorkPage.Office**.

When you are finished, the form looks like the following image.

Edit filters

Filter conditions to apply

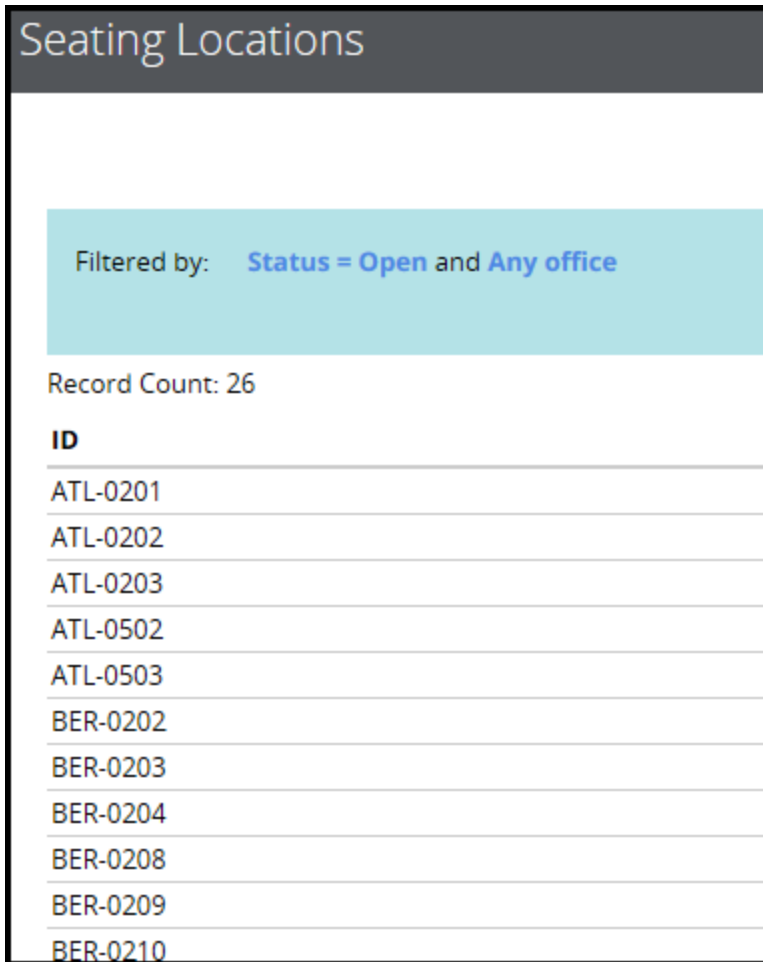
A AND B

Condition	Caption	Column source		Relationship		Value
A		.status	fx	Is equal	v	"Open"
B		.office	fx	Is equal	v	pyWorkPage.Office

You have created filter conditions that produce a report showing only available (open) seats in the employee's office location (identified in the employee's work page on the clipboard).

- 2. Map pyWorkPage to the Onboarding class.
 - a. Open the **Pages & Classes** tab.
 - b. In the **Page Name** field, enter **pyWorkPage**.
 - c. In the **Class** field, enter **TGB-HRApps-Work-Onboarding**.
- 3. Click **Save**.

4. Click **Actions > Run** to generate the report.



Seating Locations

Filtered by: **Status = Open** and **Any office**

Record Count: 26

ID
ATL-0201
ATL-0202
ATL-0203
ATL-0502
ATL-0503
BER-0202
BER-0203
BER-0204
BER-0208
BER-0209
BER-0210

The text in the blue header indicates that the filter for .status is in effect. Note that the filtered results now show 26 records, compared to the unfiltered results of 50. However, the .office values are not filtered because no work page on the clipboard exists when you run the report.

5. Verify that the office filter works as expected.
 - a. In the report header, click the **Any office** link.
 - b. In the empty field next to **is equal**, enter **Atlanta**.

Filtered by: **Status = Open** and **Any office**

Edit filter

office is equal ▼ Atlanta fx [Select values](#)

Filter Caption

Use null if empty

Ignore case

[Apply Changes](#) [Cancel](#)

c. Click **Apply Changes**.

The report results change to reflect your filter.

Filtered by: **Status = Open** and **office = Atlanta**

Record Count: 5

ID
ATL-0201
ATL-0202
ATL-0203
ATL-0502
ATL-0503

Optimizing report data

Exercise: Reporting on unresolved onboarding cases

Caution: Performing this exercise in a cloud environment may lead to issues reading database data in other exercises. If you are performing exercises by clicking the **Open Exercise System** link on the exercise page, we recommend that you skip this exercise.

Scenario

The human resources (HR) department wants to ensure that onboarding cases are processed promptly. To help track open onboarding cases, HR requests a report that lists each unresolved onboarding case, grouped by the manager responsible for the case. The report must display the case ID, home office, start date of the new employee, and current stage for each case returned.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Create a report that displays:

- The manager responsible for the onboarding case (.Employee.Manager)
- The case ID (.pyID)
- The home office of the employee (.Office)
- The start date of the employee (.Employee.StartDate)
- The current stage of the onboarding case (.pxCurrentStageLabel)

Add a filter to the report to skip resolved Onboarding cases.

Group the report results by manager.

Optimize properties to resolve any performance warnings identified for the report.

Detailed steps

1. In the Onboarding class, create a new report definition rule named **Open onboarding cases by manager and office**.
2. In the Edit Columns section of the report definition rule form, under **Column source**, select or enter **.Employee.Manager**.
3. Click **Add column** to create four additional columns.

- Add the following properties to the columns you created in step 3: **.pyID**, **.Office**, **.Employee.StartDate**, and **.pxCurrentStageLabel**.

Column source	Column name	Summarize	Sort type	Sort order
.Employee.Manager	Manager	<blank>	<blank>	
.pyID	Case ID	<blank>	<blank>	
.Office	Office	<blank>	<blank>	
.Employee.StartDate	Start Date	<blank>	<blank>	
.pxCurrentStageLabel	Current stage	<blank>	<blank>	

[+ Add column](#)

- In the Edit Filters section, under **Column Source**, select or enter **.pyStatusWork**.
- For the filter you created in the previous step, from the **Relationship** list, select **Does not start with**. In the **Value** field, enter **"Resolved"**.

Condition	Caption	Column source	Relationship	Value
A		.pyStatusWork	Does not start with	"Resolved"

[+ Add filter](#)

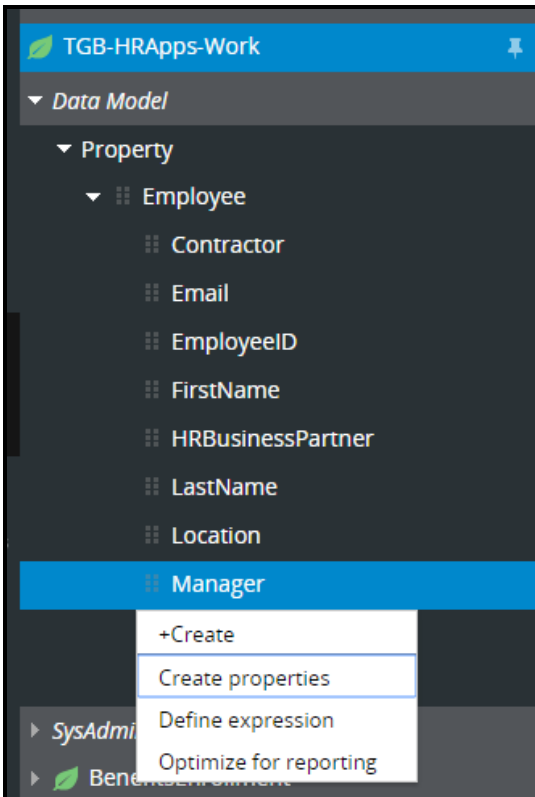
- On the **Report Viewer** tab, enable the **Group results** option in the Grouping section.
By default, the report only groups results by the first column, which is sufficient for this exercise. To group by additional columns, edit the upper limit once it appears on screen.

Grouping

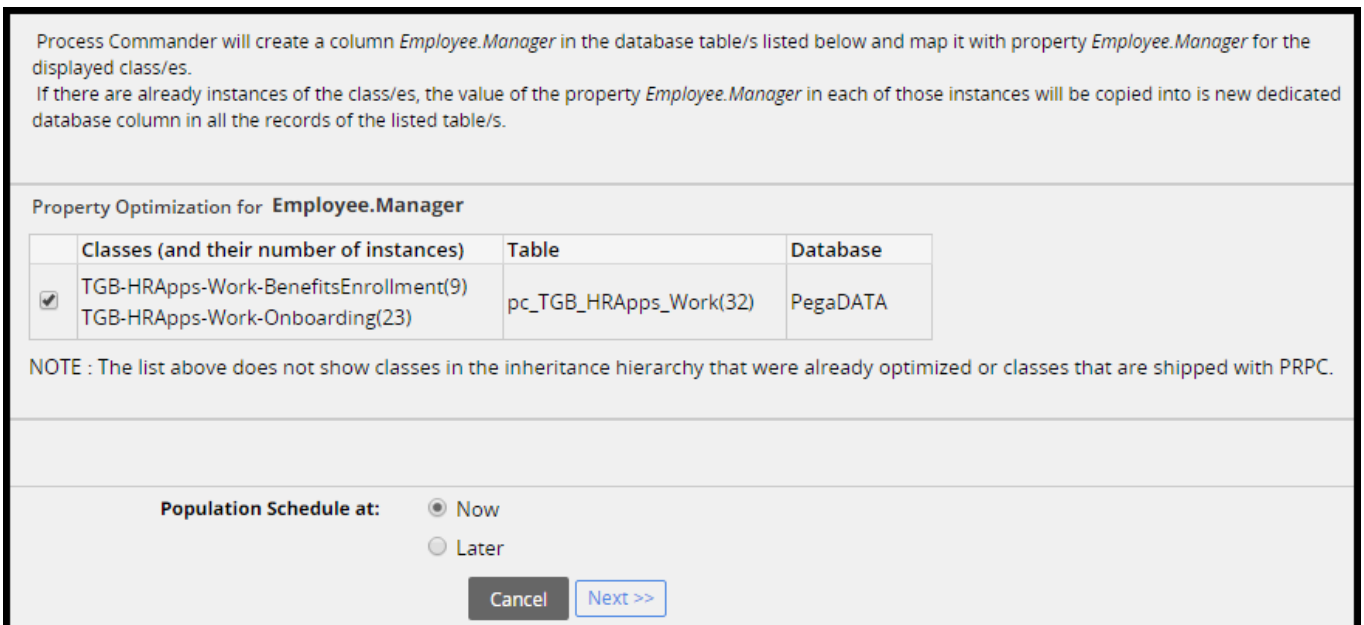
Group results and display values in sort columns 1 - 1 as group headings

- Save the report. A message appears on the report, indicating two unreviewed warnings.
- In the report header, click **(review/edit)** to view the rule warnings. The first warning indicates that three properties are not optimized, while the second warning indicates that the report filter may impact report performance.
- Under the Informational warning about the report filter, click **Add justification**. In the field that appears, enter **Report must filter out resolved cases**.
- Click **OK**. Note that the number of unreviewed warnings decreases to one.
- In the navigation area of the Designer Studio, open the App Explorer.
- Verify that the class in the class picker is **TGB-HRApps-Work**.

- Expand **Data Model > Property > Employee**. Right-click the **Manager** property, then select **Optimize for reporting**.



- The Property Optimization tool opens. The first screen indicates the property to optimize, and the number of cases affected.



- Click **Next**. The second screen of the tool confirms the selection.
- Click **Next**. This begins the optimization process.

To monitor the optimization process, open the **Column Population Jobs Dashboard**. The optimization is complete once the Processed % column reaches 100.

18. Repeat steps 14-17 to optimize the remaining properties mentioned in the rule warning.
19. Return to the report. Save the report and verify that the warning no longer appears.

DATA MANAGEMENT

Caching data with data pages

Exercise: Creating a data page to populate a list of seating locations

Scenario

During the onboarding process, new employees are assigned a seating location in one of TGB's five offices. To ensure that users select a valid seating assignment, HR wants to access a list of seating locations maintained by the Facilities department. This information should be presented as a drop-down list, allowing users to select an open seating location in the appropriate office.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Use the Seating Locations report you created in a previous exercise to populate a data page with the open seating locations in the selected home office. Then update the Select Seating Locations form to display the open seating locations in a drop-down list.

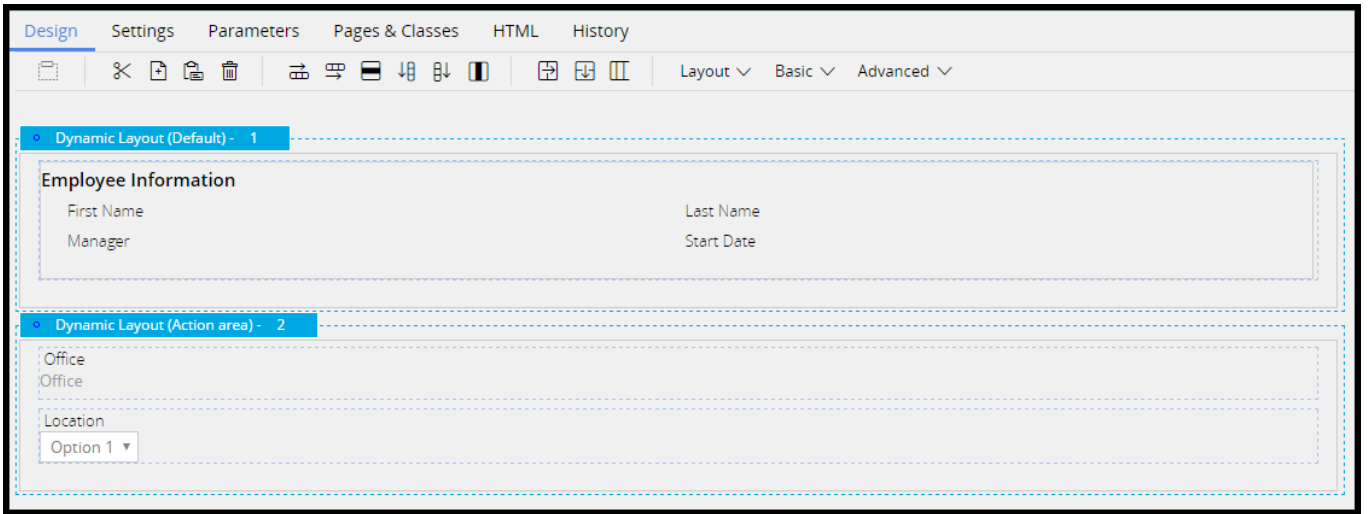
Detailed steps

To accomplish this task you will:

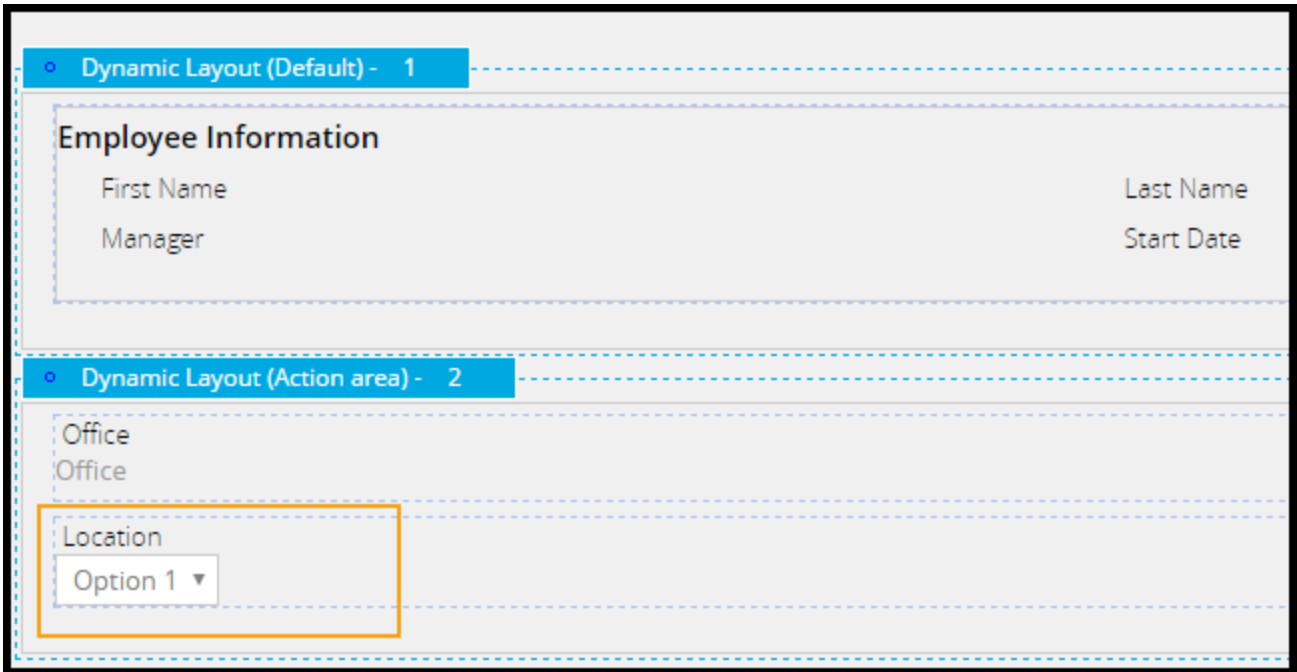
- Configure the Location drop-down list to use a data page as a source.
- Create a data page named D_SeatingLocations and source the page using the SeatingLocations report.
- Use the seating location property (.id) on the drop-down list as the value to display and as the value to set.

Configure the Location drop-down list on the Select Seating Location form to source data from a data page

1. In the Application Explorer, expand **Onboarding > User Interface > Section**.
2. Click the **SelectSeatingLocation_0** section. The section form opens.



3. In the Select Seating Location section form, select the **Location** drop-down list.



4. To the right of the cell containing the Location drop-down list, click the **gear** icon to open the Properties panel for the cell.

Cell Properties

Dropdown ⊕ (change)

General Presentation Actions

Property ⊕

Label Use property default Location

Default value ⚙️

Tooltip ⊕

Visibility ▼

Disable ▼

Required ▼

Include placeholder

LIST SOURCE

Type ▼

Load behavior ▼

- In the List source section, from the Type drop-down list, select **Data Page**. When you select Data Page, additional fields display on the form.
- In the Data Page field, enter **D_SeatingLocation**.

LIST SOURCE

Type ▼

Data page * ⚠️ ⊕

Property for value * ⊕

Property for display text ⊕

Property for tooltip ⊕

Group items

Note: A warning may appear on the Data Page field in the List Source section. This warning informs you that the data page does not exist. Ignore this warning, as this issue is resolved in the next set of steps.

Configure a data page to read data from the appropriate database table

1. Click the **crosshair** icon to the right of the Data page field.
2. On the New Record form, in the **Apply To** field, enter or select **TGB-HRApps-Data-Seating**.
3. Click **Create and open**. The data page rule form appears.
4. In the Data page definition section, from the Structure drop-down list, select **List**.
5. In the Data sources section, from the Source drop-down list, select **Report Definition**.
6. In the Name field, enter or select **SeatingLocations**.

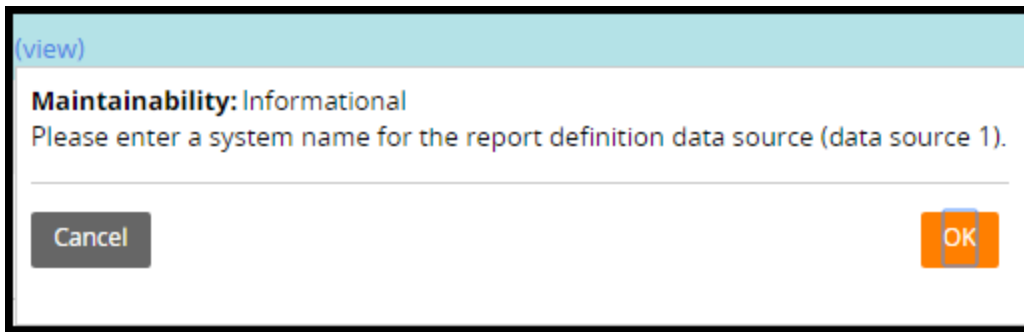
The screenshot shows the 'Data page definition' form with the following configuration:

- Structure:** List
- Object type:** TGB-HRApps-Data-Seating
- Edit mode:** Read Only
- Scope:** Thread

The 'Data sources' section shows:

- System name:** Seating locations table
- Source:** Report Definition
- Name:** SeatingLocations
- Response Data Transform:** (Empty field)

7. Click **Save** to save the data page. A warning appears in the rule header.
8. In the rule header, click **view** to view the warning.



9. In the Data sources section, in the **System name** field, enter **Seating Locations table**.
10. Click **Save** to save the data page. The warning disappears from the rule header.

Configure the contents of the Location drop-down list

1. Close the data page form. The Designer Studio returns to the Select Seating Location section, with the properties panel for the Location cell open.
2. In the Property for value field, enter **.id**.
3. In the Property for display field, enter **.id**.
4. Above the List source section, click the **Include placeholder** check box.
5. In the field that appears to the right of the check box label, enter **Select a seating location**.

6. Click **Submit** to close the properties panel.
7. Click **Save** to save the Select Seating Locations section.

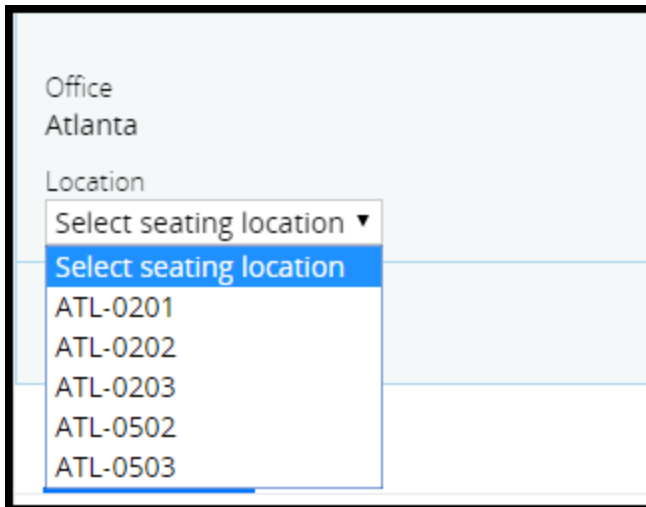
Test your changes

1. From the Actions menu, select **Preview**. The Preview window opens.
2. Verify that the Locations drop-down contains a list of open offices.

Note: In the Preview window, the list of open offices is not filtered by home office, since the report relies on the value of the .Office property on pyWorkPage. To fully test the configuration, you must run the Onboarding process and populate pyWorkPage with data.

3. Create a new Onboarding request.
4. On the Identify Home Office form, from the **Office** drop-down list, select a home office.
5. Advance to the Select Seating Location step.

6. Verify that the application only returns a list of seating locations for the selected home office.



Managing reference data

Exercise: Creating reference data for Facilities and IT setup

Scenario

During the onboarding process, Human Resources (HR) prepares requests for the Facilities and IT departments on behalf of the new employee. HR has requested that you create selectable lists for facilities assets, hardware assets, and software assets for HR partners to complete. HR can then forward the lists to the Facilities and IT departments to prepare for a new employee's first day at TGB.

The table below provides the credentials you need to complete the exercise.

Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Configure data records for the IT and Facilities assets requested for new employees during the onboarding process. To do this:

- Create an Assets data type.
- Configure a source for the Assets data type with properties to describe IT and Facilities department assets.
 - ID (text)
 - Name (text)
 - Type (picklist)
- Add records to the source for each asset available to new employees from either the Facilities or IT departments.

ID	Asset type	Asset name
F1	Facilities	Cubicle
F2	Facilities	Office
F3	Facilities	Phone
H1	Hardware	Laptop

ID	Asset type	Asset name
H2	Hardware	Desktop
H3	Hardware	Mouse
H4	Hardware	Monitor
H5	Hardware	Docking station
S1	Software	Office productivity suite
S2	Software	Graphics design suite
S3	Software	Virus protection

- Configure forms for the Select Office Equipment, Select Hardware, and Select Software steps in the onboarding case type to display lists of available assets for selection.

Detailed steps

Create a data type for IT and Facilities department assets

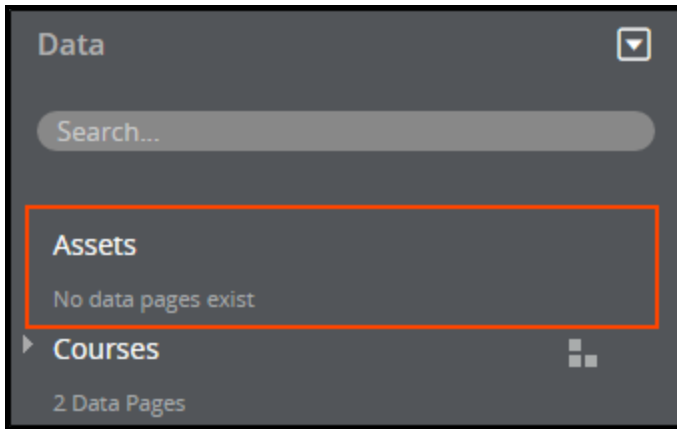
Create the Assets data type, to define the lists of Facilities and IT assets in the application.

1. In the Designer Studio, open the Data Explorer.
2. From the Data Explorer menu, select **Add data type**. The Add data type dialog opens.
3. In the Add data type dialog, in the **Label** field, enter **Assets**.
4. In the Description field, enter **IT and Facilities assets**.
5. Expand **Advanced**. An additional field is added to the dialog to specify the parent class.
6. In the **Parent class** field, enter **TGB-HRApps-Data** to configure the data type for use in the HR application.

The screenshot shows the 'Add Data Type' dialog box with the following configuration:

- Radio buttons:** New Data Type, Existing Data Type
- Label*:** Assets
- Description*:** IT and Facilities assets
- ADVANCED:**
 - Parent class:** TGB-HRApps-Data
- Identifier:** TGB-HRApps-Data-Assets (with an Edit button)

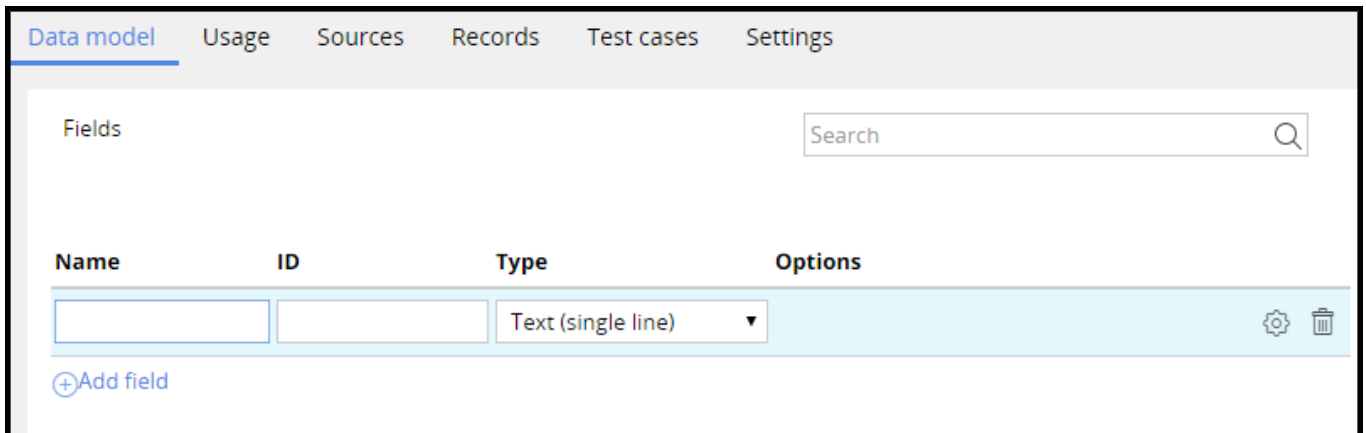
- Click **Submit**. The Add data type dialog closes and the Assets data type is added to the Data Explorer and a tab opens for the Assets data type.









Create properties for the Asset data type

Create three properties for the Asset data type: ID, Asset type, and Asset name. Configure Asset type as a picklist with three entries: Facilities, Hardware, and Software.

- On the Assets data type form, click the **Data model** tab.
- On the Data model tab, click **Add field**. A row of empty fields is added to the Data model tab.



- Under **Name**, enter **ID**.
- Click **Add field** to add a second row of fields.
- Under **Name**, enter **Asset name**.
- Click **Add field** to add a third row of fields.
- Under **Name**, enter **Asset type**.
- From the **Type** drop-down list, select **Picklist**.
- Click the **Gear** icon in the Asset type row to open the Edit options dialog.

Name	ID	Type	Options
ID	ID	Text (single line)	 
Asset name	AssetName	Text (single line)	 
Asset type	AssetType	Picklist	Drop down  

[+Add field](#)


10. In the Edit options dialog, under **List choices** enter **Facilities**.
11. Click **+Add choice**.
12. Under **List choices** enter **Hardware**.
13. Click **+Add choice**.
14. Under **List choices**, enter **Software**.


Edit options


DISPLAY AS

Drop-down list

LIST CHOICES

Facilities 

Hardware 

Software 

[+ Add choice](#)

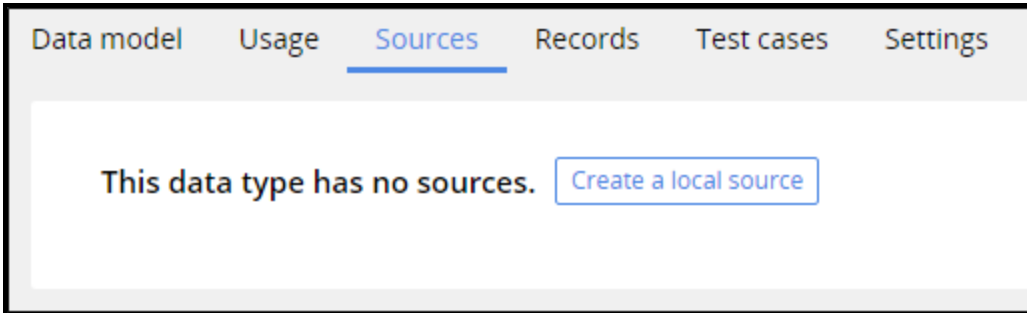
15. Click **Submit** to commit your changes and populate a list of values for Asset type.

Add a local data source to the Assets data type

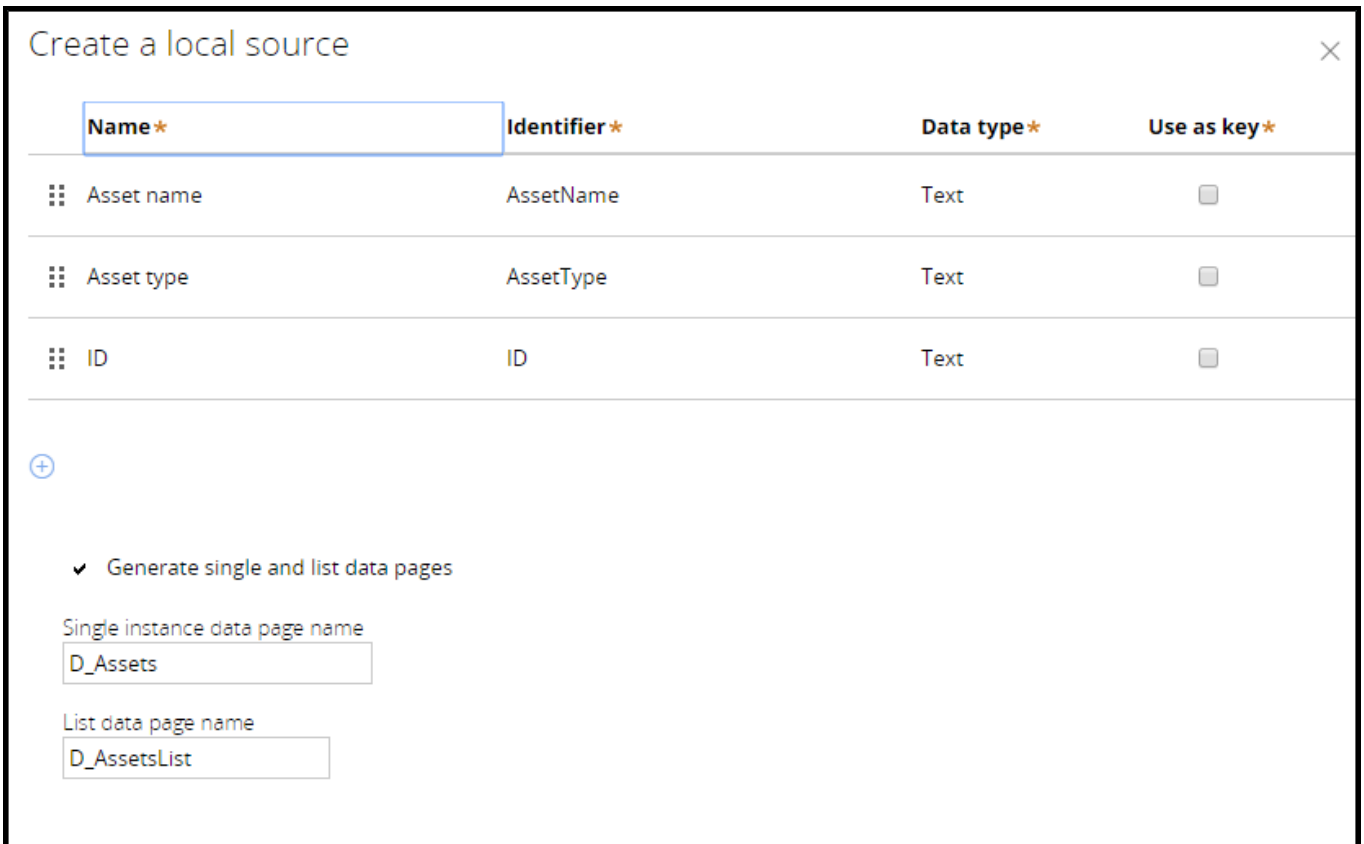
Configure the data source for the Assets data type. Organize the fields for data entry and create data pages to cache the asset lists on the clipboard.

Create a local data source to store asset records and define the properties used to describe each asset.

1. On the Assets data type, click the **Sources** tab.



2. Click **Create a local source**. The Local Data Storage wizard opens to the Create a local source step.



3. Position the mouse cursor over the selection handle for the **ID** field.
4. Click and hold the mouse button, then drag the selection handle above Asset name.
5. In the ID row, click the **Use as key** check box to configure the ID field as the key for the data source.

Create a local source ✕

Name*	Identifier*	Data type*	Use as key*
☰ ID	ID	Text	<input checked="" type="checkbox"/>
☰ Asset name	AssetName	Text	<input type="checkbox"/>
☰ Asset type	AssetType	Text	<input type="checkbox"/>

+

- Position the mouse cursor over the selection handle for the **Asset type** field.
- Click and hold the mouse button, then drag the selection handle above Asset name.

Create a local source ✕

Name*	Identifier*	Data type*	Use as key*
☰ ID	ID	Text	<input checked="" type="checkbox"/>
☰ Asset type	AssetType	Text	<input type="checkbox"/>
☰ Asset name	AssetName	Text	<input type="checkbox"/>

+

- Click **Next**. The wizard advances to the Review step.

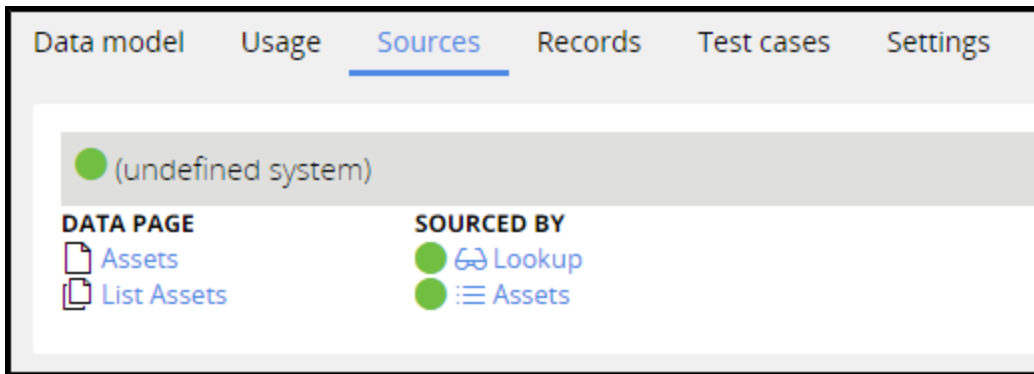
Review ✕

Property Name	Description	Type	Use as key	value for first record
ID	ID	Text	✓	
AssetType	Asset type	Text		
AssetName	Asset name	Text		

View Details

Close

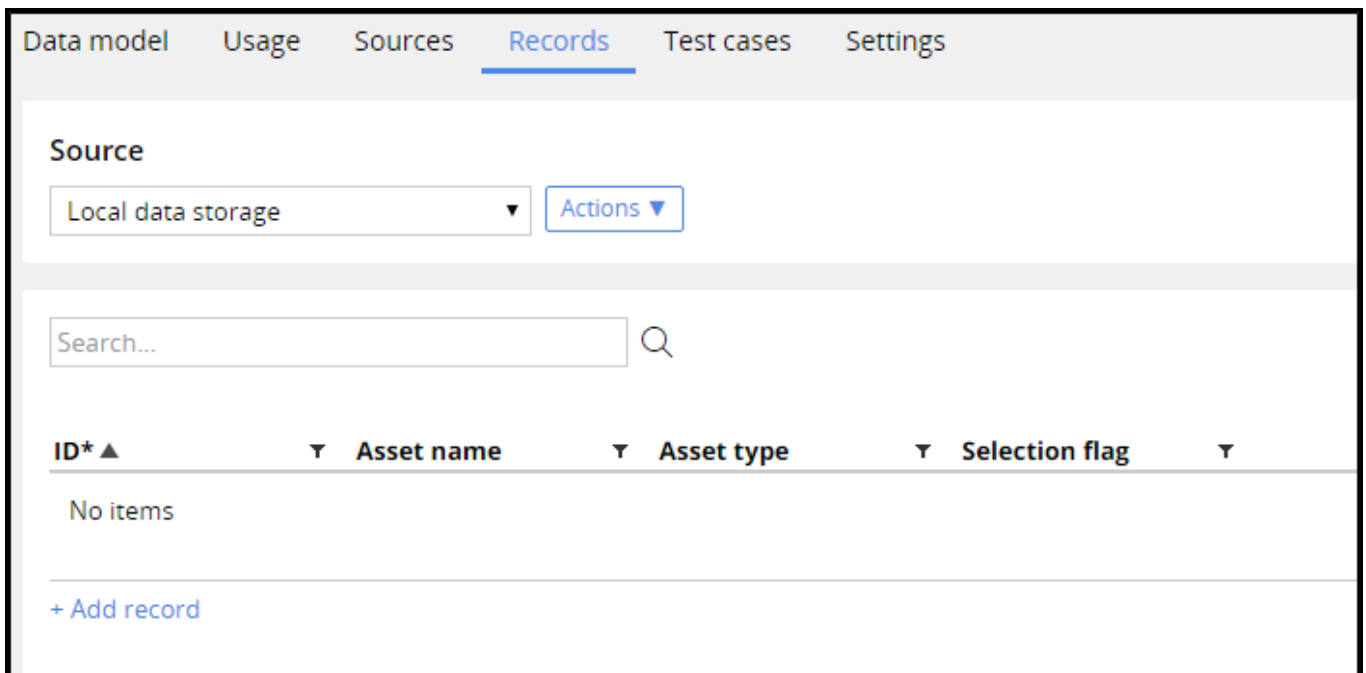
- Click **Close** to complete the wizard and commit your changes to the data model for the Assets data type.



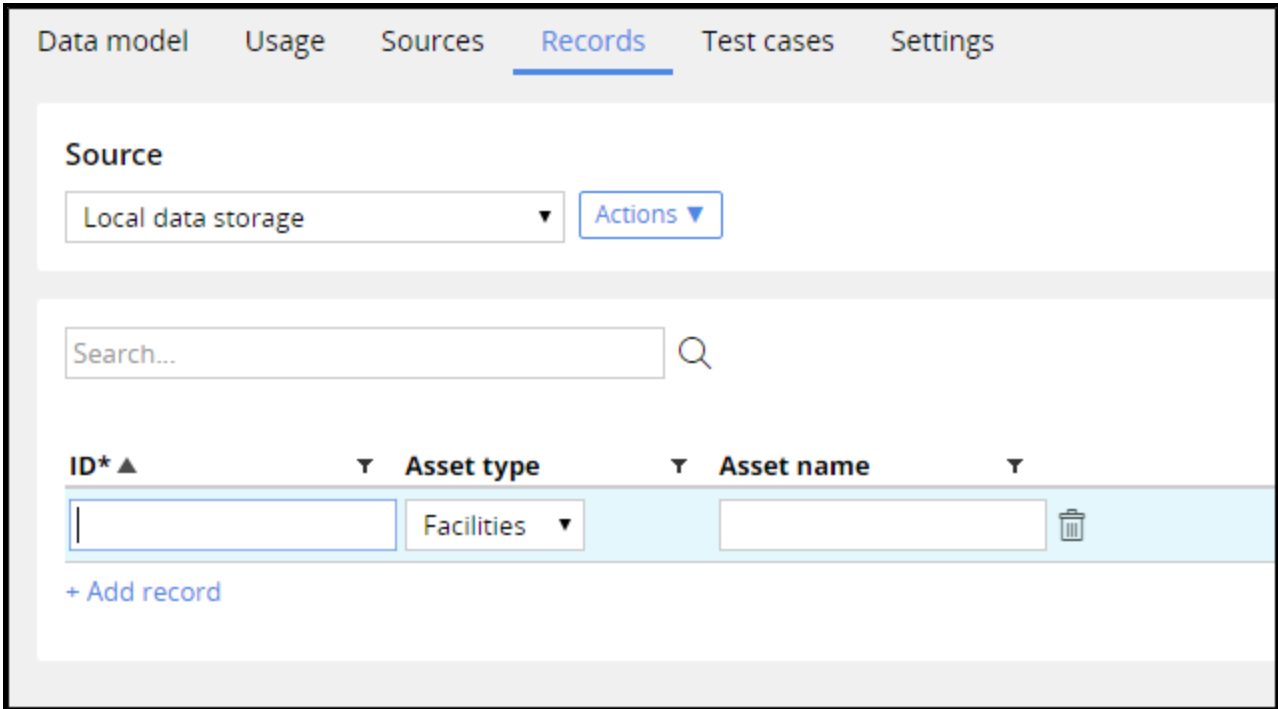
Create asset records for IT and Facilities assets

Create the records for IT and Facilities assets, to populate selection lists in onboarding cases.

1. On the Assets data type, click the Records tab.














2. Click **Add record**. An empty row of fields is added to the Records tab.



3. Under **ID**, enter **F1**.
4. Under **Asset name**, enter **Cubicle**.
5. Click **+Add record** to add a second row.
6. In the second row, under **ID**, enter **F2**.
7. Under **Asset name**, enter **Office**.
8. Using the contents of the following table, create records for the remaining Facilities and IT assets.

ID	Asset type	Asset name
F3	Facilities	Phone
H1	Hardware	Laptop
H2	Hardware	Desktop
H3	Hardware	Mouse
H4	Hardware	Monitor
H5	Hardware	Docking station
S1	Software	Office productivity suite
S2	Software	Graphics design suite
S3	Software	Virus protection

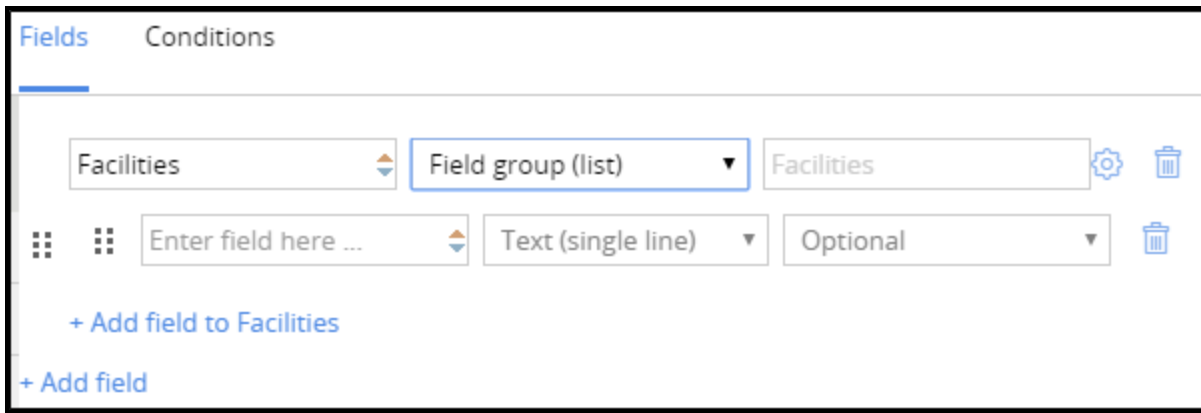
ID* ▲	▼ Asset type	▼ Asset name	▼
F1	Facilities	Cubicle	
F2	Facilities	Office	
F3	Facilities	Phone	
H1	Hardware	Laptop	
H2	Hardware	Desktop	
H3	Hardware	Mouse	
H4	Hardware	Monitor	
H5	Hardware	Docking station	
S1	Software	Office productivity suite	
S2	Software	Graphic design suite	
S3	Software	Virus protection	

+ Add record

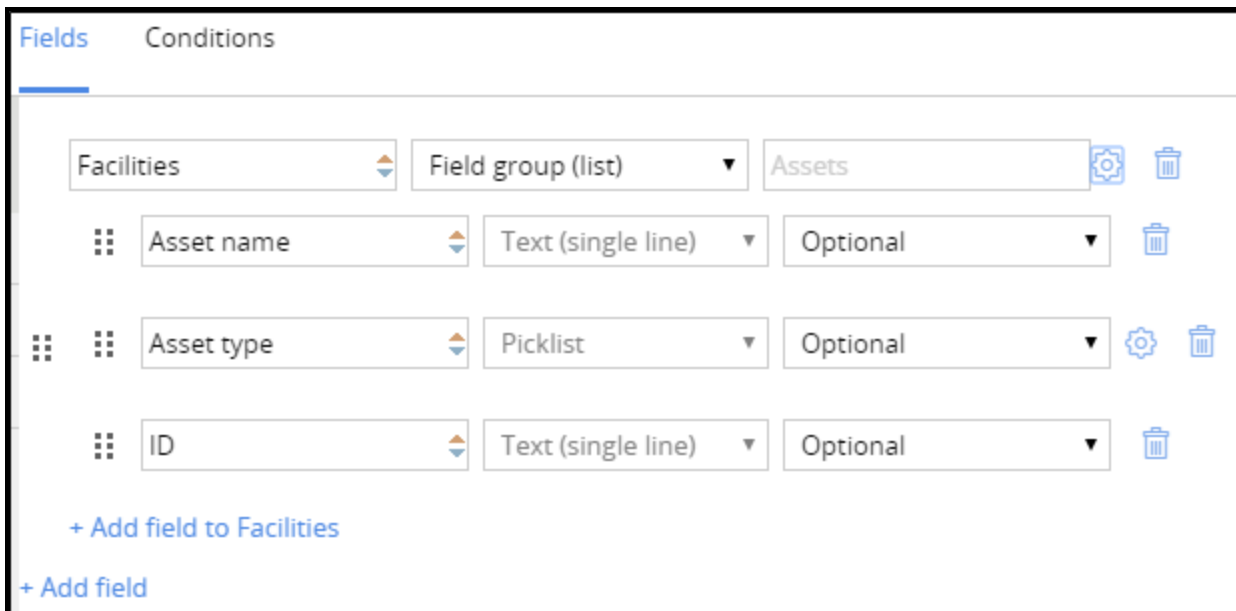
Create the Select Office Equipment form

Configure the Select Office Equipment form to present a list of selectable office equipment to include in the onboarding case.

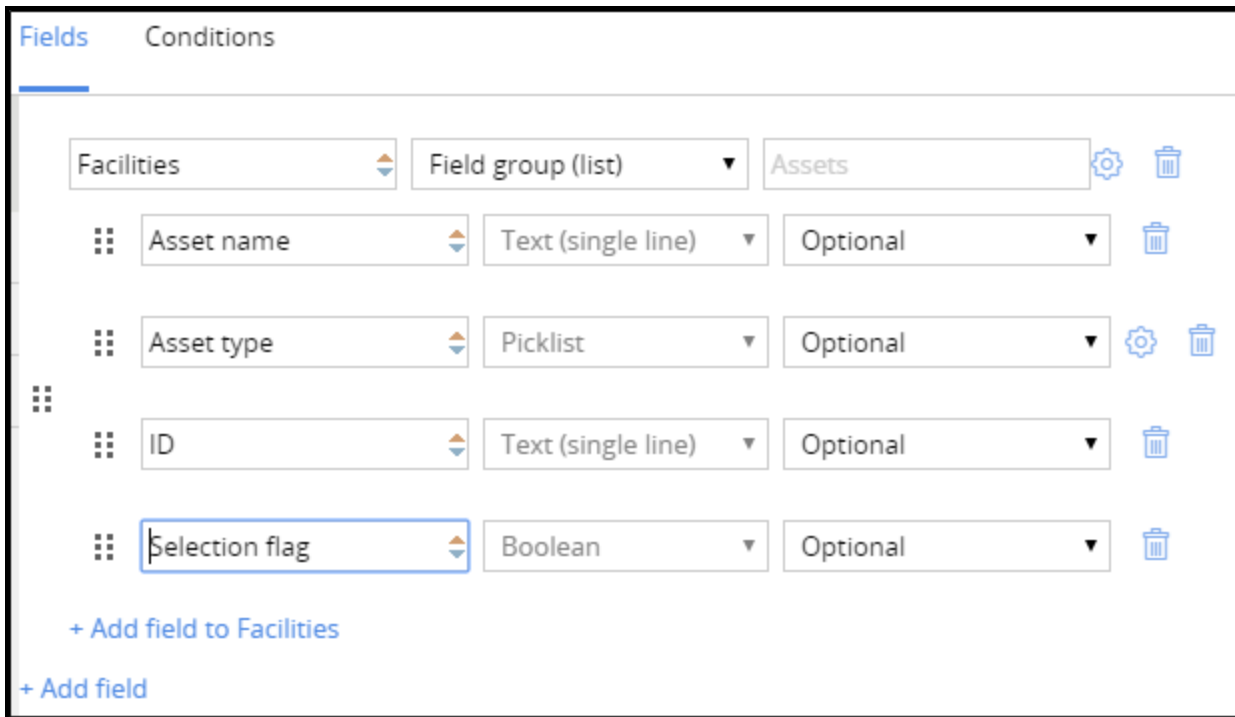
1. In the Cases Explorer, click **Onboarding** to open the Onboarding case type.
2. On the **Life cycle** tab of the Onboarding case type, select the **Select Office Equipment** step. The properties panel for the step opens to the right of the case life cycle.
3. In the properties panel, click **Configure view** to open the View configuration dialog.
4. Under Fields, enter **Facilities**.
5. Press **Tab** to exit the field.
6. From the **Type** drop-down list, select **Field group (list)**. The View configuration dialog updates to a row fields under Facilities.



7. Click the **Gear** icon to the right of the row for Facilities. The Data Type popup opens.
8. Under **Data Type**, enter or select **Assets**.
9. Click **Submit**. The Data Type popup closes and the View configuration dialog updates to display the data elements for the Assets data type.



10. Click **+Add field to Facilities** to add a fourth data element to the field group list.
11. Under **Fields**, enter **Selection flag**.



12. Position the mouse cursor over the selection handle for **Selection flag**.
13. Click and hold the mouse button, then drag the selection handle above the Asset name row.
14. Release the mouse button to update the order of the list.
15. Position the mouse cursor over the selection handle for **ID**.
16. Click and hold the mouse button, then drag the selection handle above the Asset name row.
17. Release the mouse button to update the order of the list.
18. Position the mouse cursor over the selection handle for **Asset type**.
19. Click and hold the mouse button, then drag the selection handle above the Asset name row.
20. Release the mouse button to update the order of the list.

Fields Conditions

Facilities	Field group (list)	Assets
Selection flag	Boolean	Optional
ID	Text (single line)	Optional
Asset type	Picklist	Optional
Asset name	Text (single line)	Optional

+ Add field to Facilities

+ Add field

21. In the ID row, from the **Optional** drop-down list, select **Read-only**.
22. In the Asset type row, from the **Optional** drop-down list, select **Read-only**.
23. In the Asset name row, from the **Optional** drop-down list, select **Read-only**.

Fields Conditions

Facilities	Field group (list)	Assets
Selection flag	Boolean	Optional
ID	Text (single line)	Read-only
Asset type	Picklist	Read-only
Asset name	Text (single line)	Read-only

+ Add field to Facilities

+ Add field

24. Click **Submit** to commit your changes to the Select Office Equipment form.
25. Click **Save** to commit your changes to the Onboarding case type.
26. In the Application Explorer, expand **Onboarding > Data Model > Property**.

27. Under **Property**, select **Facilities** to open the Facilities page list property created by Pega when you added the Facilities field group to the Select Office Equipment form.
28. On the Facilities property rule form, under **Data access**, select **Copy data from a data page** to populate the page list with values from the Assets data type. The rule form updates to display a Data Page field.

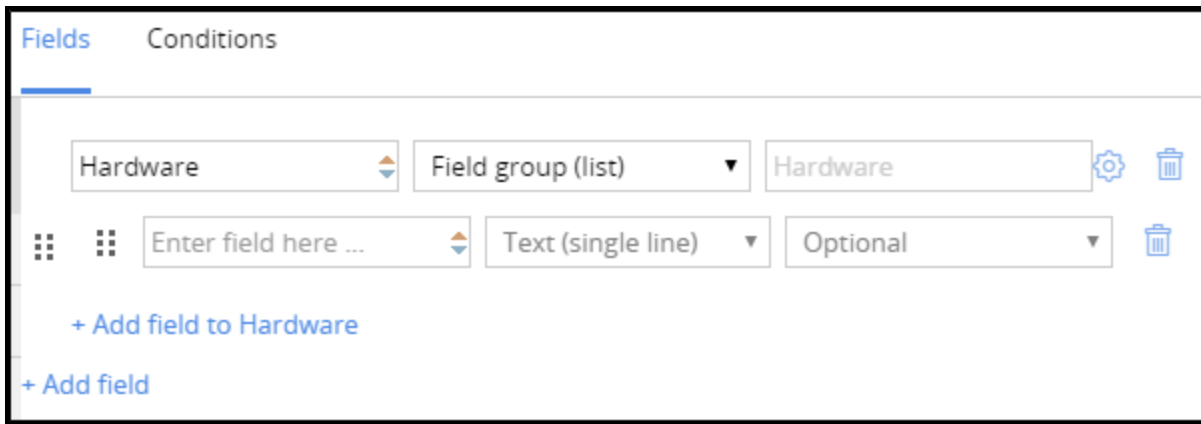
The screenshot shows the 'General' tab of a Pega rule form for a Property type. The 'Property type' is 'Page List' and the 'Page definition' is 'TGB-HRApps-Data-Assets'. In the 'Data access' section, the 'Copy data from a data page' radio button is selected. Below this, there is a 'Data Page' field which is currently empty.

29. In the **Data Page** field, enter or select **D_AssetsList**.
30. Click **Save** to commit your changes to the Facilities page list.

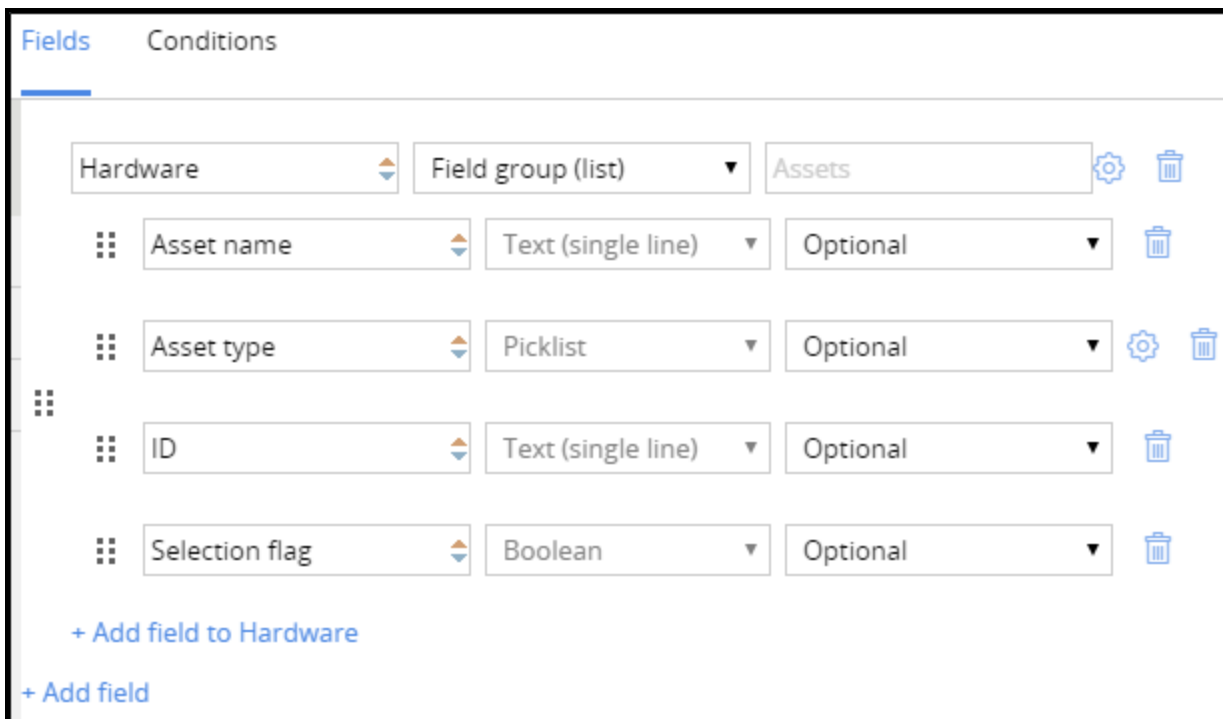
Create the Select Hardware form

Configure the Select Hardware form to present a list of selectable IT hardware to include in the onboarding case.

1. Return to the Onboarding case type in the Case Designer.
2. On the **Life cycle** tab of the Onboarding case type, select the **Select Hardware** step. The properties panel for the step opens to the right of the case life cycle.
3. In the properties panel, click **Configure view** to open the View configuration dialog.
4. Under Fields, enter **Hardware**.
5. Press **Tab** to exit the field.
6. From the **Type** drop-down list, select **Field group (list)**. The View configuration dialog updates to a row fields under Hardware.



7. Click the **Gear** icon to the right of the row for Hardware. The Data Type popup opens.
8. Under **Data Type**, enter or select **Assets**.
9. Click **Submit**. The Data Type popup closes and the View configuration dialog updates to display the data elements for the Assets data type.



10. Position the mouse cursor over the selection handle for **Selection flag**.
11. Click and hold the mouse button, then drag the selection handle above the Asset name row.
12. Release the mouse button to update the order of the list.
13. Position the mouse cursor over the selection handle for **ID**.
14. Click and hold the mouse button, then drag the selection handle above the Asset name row.
15. Release the mouse button to update the order of the list.
16. Position the mouse cursor over the selection handle for **Asset type**.
17. Click and hold the mouse button, then drag the selection handle above the Asset name row.

18. Release the mouse button to update the order of the list.

The screenshot shows the 'Fields' configuration interface for 'Hardware'. At the top, there are tabs for 'Fields' and 'Conditions'. Below the tabs, there is a header row with 'Hardware', 'Field group (list)', and 'Assets'. The main area contains a list of fields with their respective data types and visibility settings. The 'Optional' dropdown for the 'ID' field is highlighted.

Field	Data Type	Visibility
Selection flag	Boolean	Optional
ID	Text (single line)	Optional
Asset type	Picklist	Optional
Asset name	Text (single line)	Optional

+ Add field to Hardware
+ Add field

19. In the ID row, from the **Optional** drop-down list, select **Read-only**.

20. In the Asset type row, from the **Optional** drop-down list, select **Read-only**.

21. In the Asset name row, from the **Optional** drop-down list, select **Read-only**.

The screenshot shows the 'Fields' configuration interface for 'Hardware' after the changes. The 'Optional' dropdown for the 'ID' field is now set to 'Read-only', and the 'Optional' dropdown for the 'Asset type' field is also set to 'Read-only'. The 'Optional' dropdown for the 'Asset name' field is also set to 'Read-only'.

Field	Data Type	Visibility
Selection flag	Boolean	Optional
ID	Text (single line)	Read-only
Asset type	Picklist	Read-only
Asset name	Text (single line)	Read-only

+ Add field to Hardware
+ Add field

22. Click **Submit** to commit your changes to the Select Hardware form.

23. Click **Save** to commit your changes to the Onboarding case type.

24. In the Application Explorer, from the Application Explorer menu select **Refresh App Explorer** to update the contents of the Application Explorer.
25. In the Application Explorer, expand **Onboarding > Data Model > Property**.
26. Under **Property**, select **Hardware** to open the Hardware page list property created by Pega when you added the Hardware field group to the Select Hardware form.
27. On the Hardware property rule form, under **Data access**, select **Copy data from a data page** to populate the page list with values from the Assets data type. The rule form updates to display a Data Page field.

The screenshot shows a configuration window for a Property type. It has three tabs: General, Advanced, and History. The 'General' tab is active. Under 'Property type', the 'Page List' section is expanded, showing a 'Page definition' field with the value 'TGB-HRApps-Data-Assets'. Below this, the 'Data access' section has three radio button options: 'Manual', 'Refer to a data page', and 'Copy data from a data page'. The 'Copy data from a data page' option is selected. To the right of these options is explanatory text: 'When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property. Interactions with the property happen on the copied data.' There is also an unchecked checkbox for 'Load each page in this page list individually'. At the bottom, there is a 'Data Page' field which is currently empty.

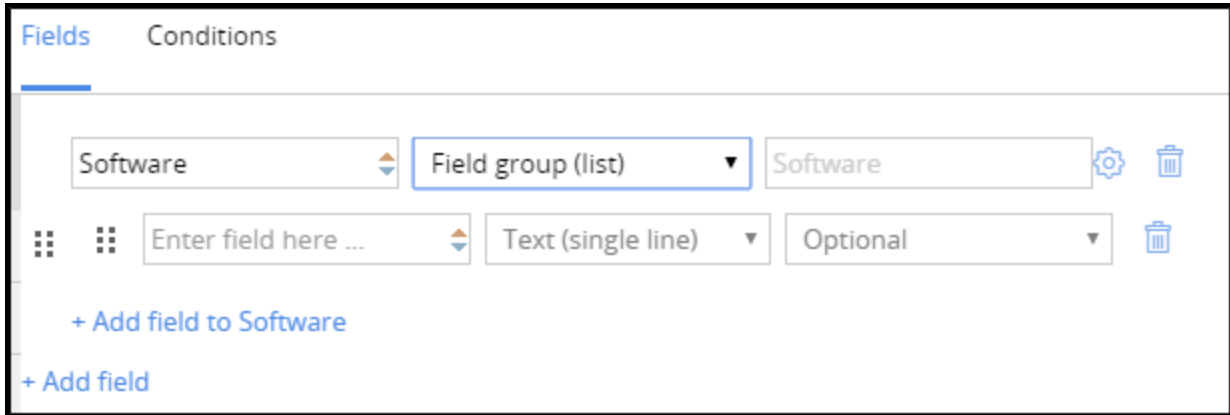
28. In the **Data Page** field, enter or select **D_AssetsList**.
29. Click **Save** to commit your changes to the Hardware page list.

Create the Select Software form

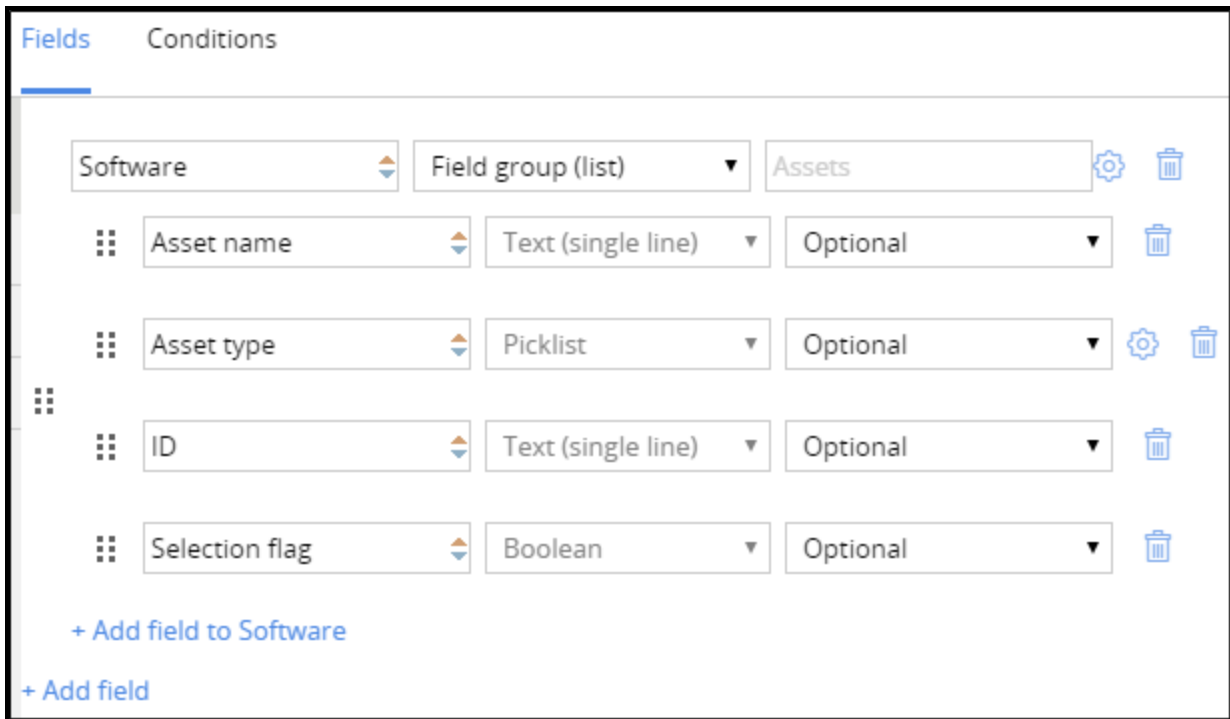
Configure the Select Software form to present a list of selectable software applications to include in the onboarding case.

1. Return to the Onboarding case type in the Case Designer.
2. On the **Life cycle** tab of the Onboarding case type, select the **Select Software** step. The properties panel for the step opens to the right of the case life cycle.
3. In the properties panel, click **Configure view** to open the View configuration dialog.
4. Under Fields, enter **Software**.
5. Press **Tab** to exit the field.
6. From the **Type** drop-down list, select **Field group (list)**. The View configuration dialog updates to a

row fields under Software.



7. Click the **Gear** icon to the right of the row for Software. The Data Type popup opens.
8. Under **Data Type**, enter or select **Assets**.
9. Click **Submit**. The Data Type popup closes and the View configuration dialog updates to display the data elements for the Assets data type.



10. Position the mouse cursor over the selection handle for **Selection flag**.
11. Click and hold the mouse button, then drag the selection handle above the Asset name row.
12. Release the mouse button to update the order of the list.
13. Position the mouse cursor over the selection handle for **ID**.
14. Click and hold the mouse button, then drag the selection handle above the Asset name row.
15. Release the mouse button to update the order of the list.
16. Position the mouse cursor over the selection handle for **Asset type**.

- Click and hold the mouse button, then drag the selection handle above the Asset name row.
- Release the mouse button to update the order of the list.

Fields Conditions

Field Group	Field Name	Field Type	Field Properties	Actions
Software	Selection flag	Boolean	Optional	Settings, Delete
Software	ID	Text (single line)	Optional	Delete
Software	Asset type	Picklist	Optional	Settings, Delete
Software	Asset name	Text (single line)	Optional	Delete

+ Add field to Software

+ Add field

- In the ID row, from the **Optional** drop-down list, select **Read-only**.
- In the Asset type row, from the **Optional** drop-down list, select **Read-only**.
- In the Asset name row, from the **Optional** drop-down list, select **Read-only**.

Fields Conditions

Field Group	Field Name	Field Type	Field Properties	Actions
Software	Selection flag	Boolean	Optional	Settings, Delete
Software	ID	Text (single line)	Read-only	Delete
Software	Asset type	Picklist	Read-only	Settings, Delete
Software	Asset name	Text (single line)	Read-only	Delete

+ Add field to Software

+ Add field

- Click **Submit** to commit your changes to the Select Software form.

23. Click **Save** to commit your changes to the Onboarding case type.
24. In the Application Explorer, from the Application Explorer menu select **Refresh App Explorer** to update the contents of the Application Explorer.
25. In the Application Explorer, expand **Onboarding > Data Model > Property**.
26. Under **Property**, select **Software** to open the Software page list property created by Pega when you added the Software field group to the Select Software form.
27. On the Software property rule form, under **Data access**, select **Copy data from a data page** to populate the page list with values from the Assets data type. The rule form updates to display a Data Page field.

The screenshot shows the 'General' tab of a Pega Property Rule Form. The 'Property type' is 'Page List'. The 'Page definition' field is set to 'TGB-HRApps-Data-Assets'. Under the 'Data access' section, the 'Copy data from a data page' option is selected. The 'Data Page' field is currently empty.

28. In the **Data Page** field, enter or select **D_AssetsList**.
29. Click **Save** to commit your changes to the Facilities page list.

Configure the D_AssetsList data page to return a list of assets filtered by asset type

Update the report used to source the D_AssetsList data page to filter assets by type. Configure the filter to accept a parameter. Configure each of the page list properties to pass a parameter to the data page to return a filtered list of assets to match the page list property.

1. On the Software page list property rule form, to the right of the **Data Page** field click the **crosshair** icon to open the D_AssetsList data page rule.
2. On the data page rule form, under Data sources, click the arrow icon to the right of the **Name** field to open the DataTableEditorReport report definition rule.

Data sources

Simulate data source

System name

1 Source *
 Report Definition

Name *
 DataTableEditorReport
 TGB-HRApps-Data-Assets Parameters

Response Data Transform

3. On the report definition rule form, click the **Parameters** tab to add a parameter to the report to filter report results by asset type.
4. On the Parameters tab, under **Name** enter **Type**.
5. Under Data type, from the drop-down list select **Text**.

Parameters

Name	Description	Data type	Default value
1 Type		Text	

6. Click the **Query** tab.
7. In the Edit filters section, under **Column source** enter or select **.AssetType**.
8. Under **Value**, enter **param.Type** to select the parameter you created on the Parameters tab.

Edit filters

Filter conditions to apply

Condition	Caption	Column source	Relationship	Value
A		.AssetType	Is equal	Param.Type

9. Click **Save** to commit your changes to the report definition.
10. In Designer Studio, click the **D_AssetsList** tab to return to the data page rule form.
11. On the data page, click the **Parameters** tab to add a parameter to the data page.
12. In the **Name** field, enter **Type**.
13. In the **Description** field, enter **Asset type**.

	Name	Description	Data type	Required	In/Out	Default value
1	Type	Asset type	String	No	In	

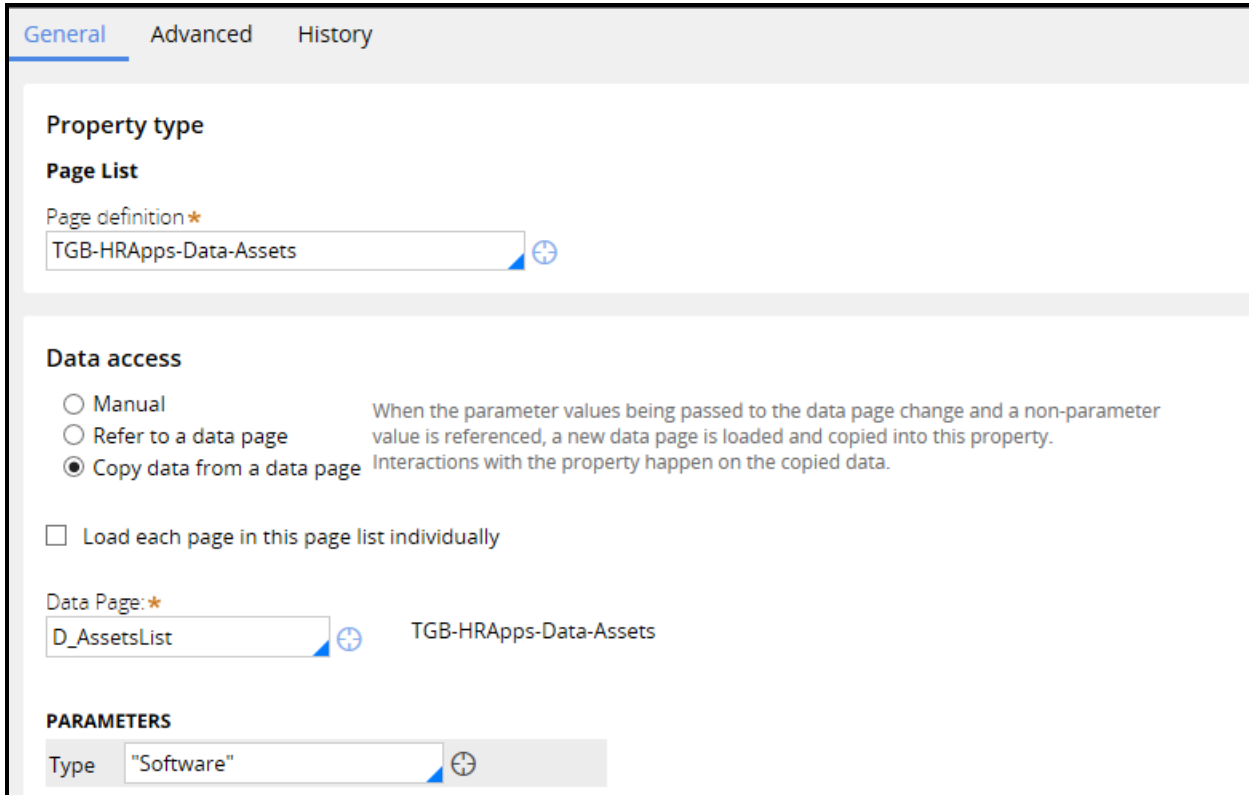
14. Click the **Definition** tab to update the data source to use the parameter you defined.
15. On the Definition tab, in the Data sources section, under the field that contains the report name, click **Parameters** to open the Parameters for DataTableEditorReport dialog.

16. In the Parameters for DataTableEditorReport dialog, in the **Value** field, enter or select **param.Type**.

PARAMETER	VALUE
Type	param.Type

17. Click **Submit** to close the dialog.
18. Click Save to commit your changes to the data page configuration.

19. In Designer Studio, click the **Software** tab to return to the Software page list property.
20. From the **Actions** menu, click **Refresh** to update the property definition. The Parameters section displays below the Data Page field.
21. In the Parameters section, in the **Type** field, enter "**Software**" to pass the text string "Software" to the data page as a parameter to filter the list of results.
22. Click **Save** to commit your changes to the page list property.



23. In Designer Studio, click the **Hardware** tab to return to the Software page list property.
24. From the **Actions** menu, click **Refresh** to update the property definition. The Parameters section displays below the Data Page field.
25. In the Parameters section, in the **Type** field, enter "**Hardware**" to pass the text string "Hardware" to the data page as a parameter to filter the list of results.
26. Click **Save** to commit your changes to the page list property.

General Advanced History

Property type

Page List

Page definition *

TGB-HRApps-Data-Assets

Data access

Manual
 Refer to a data page
 Copy data from a data page

When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property.
 Interactions with the property happen on the copied data.

Load each page in this page list individually

Data Page: *

D_AssetsList TGB-HRApps-Data-Assets

PARAMETERS

Type "Hardware"

Optional Data Mapping:

PARAMETERS

No parameters to set.

27. In Designer Studio, click the **Facilities** tab to return to the Software page list property.
28. From the **Actions** menu, click **Refresh** to update the property definition. The Parameters section displays below the Data Page field.
29. In the Parameters section, in the **Type** field, enter "**Facilities**" to pass the text string "Facilities" to the data page as a parameter to filter the list of results.
30. Click **Save** to commit your changes to the page list property.

General Advanced History

Property type

Page List

Page definition *

TGB-HRApps-Data-Assets

Data access

Manual
 Refer to a data page
 Copy data from a data page

When the parameter values being passed to the data page change and a non-parameter value is referenced, a new data page is loaded and copied into this property. Interactions with the property happen on the copied data.

Load each page in this page list individually

Data Page: *

D_AssetsList TGB-HRApps-Data-Assets

PARAMETERS

Type "Facilities"

Optional Data Mapping:

PARAMETERS

No parameters to set.

Test your changes

Create an onboarding case and verify that the Select Office Equipment, Select Hardware, and Select Software forms each contain a filtered list of Facilities and IT assets.

1. From the **+Create** menu, select **New > Onboarding** to create a new onboarding case.
2. On the Collect Employee Info form, enter values in each of the required fields.
3. Click **Submit** to advance to the Identify Home Office form.
4. On the Identify Home Office form, from the **Office** drop-down list select a home office.
5. Click **Submit** to advance to the Select Orientation Plan form.
6. Click **Submit** to advance to the Select Hardware form.
7. On the Select Hardware form, confirm that only assets of type Hardware are displayed in the list of assets.

Select Hardware
A Administrator

Hardware

+ Add Item × Delete

	Selection flag	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	H1	Hardware	Laptop
2	<input type="checkbox"/> Selection flag	H2	Hardware	Desktop
3	<input type="checkbox"/> Selection flag	H3	Hardware	Mouse
4	<input type="checkbox"/> Selection flag	H4	Hardware	Monitor
5	<input type="checkbox"/> Selection flag	H5	Hardware	Docking station

Cancel
Save
Submit

Note: The selection list contains icons to add and delete items from the list a label for each check box, and a column label for the selection column. These items can all be deleted. To do so, use Live UI to identify and open the section to update.

8. On the Developer toolbar, click **Live UI**. The Live UI panel is displayed on the right side of the Designer Studio.
9. Position the Live UI selection rectangle over the **Selection flag** column label.

Select Hardware
A Administrator

Hardware

+ Label m × Delete

	Selection flag	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	H1	Hardware	Laptop
2	<input type="checkbox"/> Selection flag	H2	Hardware	Desktop
3	<input type="checkbox"/> Selection flag	H3	Hardware	Mouse
4	<input type="checkbox"/> Selection flag	H4	Hardware	Monitor
5	<input type="checkbox"/> Selection flag	H5	Hardware	Docking station

Cancel
Save
Submit

10. Click the mouse button to select the column label.

Select Hardware Administrator

Hardware

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	H1	Hardware	Laptop
2	<input type="checkbox"/> Selection flag	H2	Hardware	Desktop
3	<input type="checkbox"/> Selection flag	H3	Hardware	Mouse
4	<input type="checkbox"/> Selection flag	H4	Hardware	Monitor
5	<input type="checkbox"/> Selection flag	H5	Hardware	Docking station

11. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
12. In the Cell Properties panel, click in the **Value** field and delete the contents of the field.
13. Click **OK** to commit your change to the repeat grid layout.

Select Hardware Administrator

Hardware

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	H1	Hardware	Laptop
2	<input type="checkbox"/> Selection flag	H2	Hardware	Desktop
3	<input type="checkbox"/> Selection flag	H3	Hardware	Mouse
4	<input type="checkbox"/> Selection flag	H4	Hardware	Monitor
5	<input type="checkbox"/> Selection flag	H5	Hardware	Docking station

14. Position the Live UI selection rectangle over the **Selection flag** check box.
15. Click the mouse button to select the check box.
16. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
17. In the Cell Properties panel, click in the **Checkbox caption** field and delete the contents of the field.

18. Click **OK** to commit your change to the repeat grid layout.

	ID	Asset type	Asset name
1 <input type="checkbox"/>	H1	Hardware	Laptop
2 <input type="checkbox"/>	H2	Hardware	Desktop
3 <input type="checkbox"/>	H3	Hardware	Mouse
4 <input type="checkbox"/>	H4	Hardware	Monitor
5 <input type="checkbox"/>	H5	Hardware	Docking station

19. Position the Live UI selection rectangle over the Repeat Grid Layout.

	Selection flag	ID	Asset type	Asset name
1 <input type="checkbox"/>	Selection flag	H1	Hardware	Laptop
2 <input type="checkbox"/>	Selection flag	H2	Hardware	Desktop
3 <input type="checkbox"/>	Selection flag	H3	Hardware	Mouse
4 <input type="checkbox"/>	Selection flag	H4	Hardware	Monitor
5 <input type="checkbox"/>	Selection flag	H5	Hardware	Docking station

20. Click the mouse button to select the Repeat Grid Layout.

Select Hardware A Administrator

Repeat Grid Layout ↑ [Icons]

Hardware

+ Add Item × Delete

	Selection flag	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	H1	Hardware	Laptop
2	<input type="checkbox"/> Selection flag	H2	Hardware	Desktop
3	<input type="checkbox"/> Selection flag	H3	Hardware	Mouse
4	<input type="checkbox"/> Selection flag	H4	Hardware	Monitor
5	<input type="checkbox"/> Selection flag	H5	Hardware	Docking station

Cancel Save Submit

21. In the selection identifier, click the **crosshair** icon to open the section that contains the repeating grid of hardware items.
22. On the section, in the Repeat Grid, select the left cell in the Action Top section.

Grid Repeat Layout - 1

Hardware

Action Top

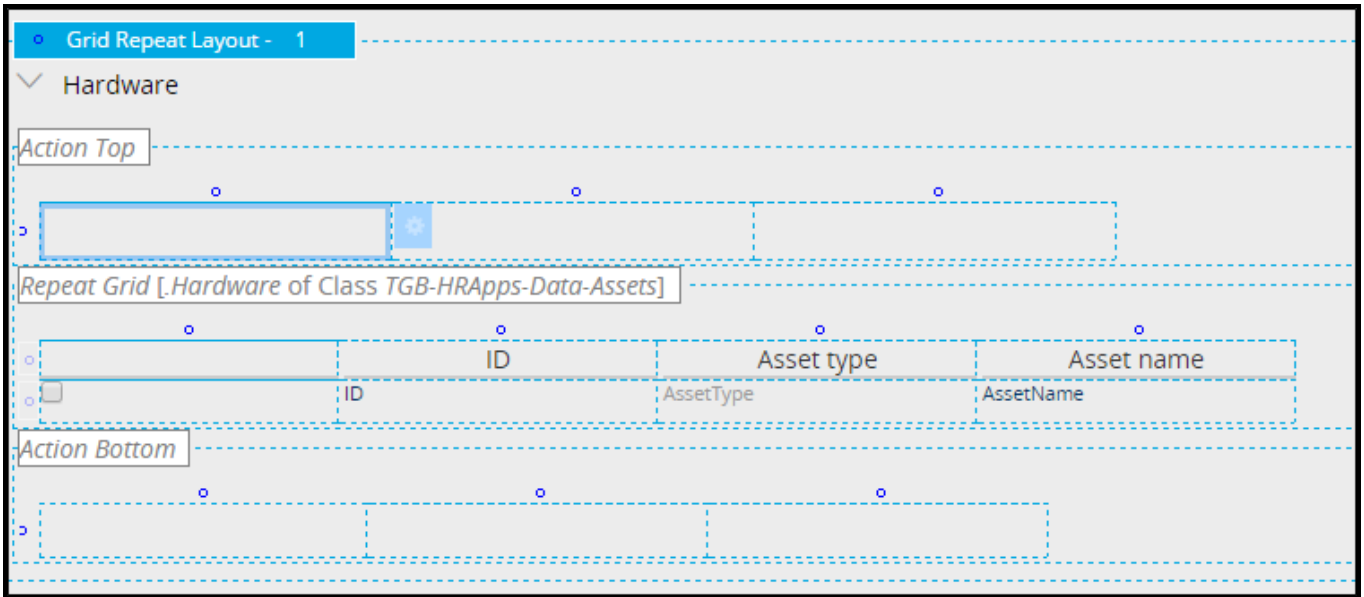
+ Add Item × Delete

Repeat Grid [.Hardware of Class TGB-HRApps-Data-Assets]

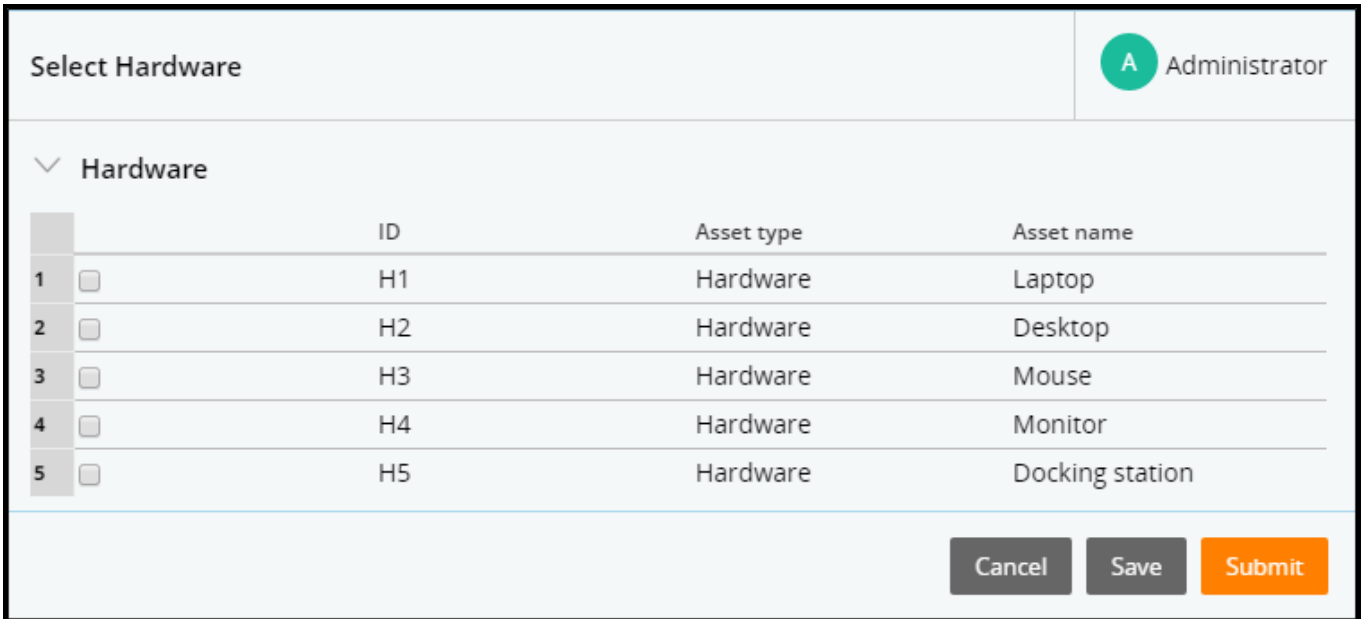
	ID	Asset type	Asset name
<input type="checkbox"/>	ID	AssetType	AssetName

Action Bottom

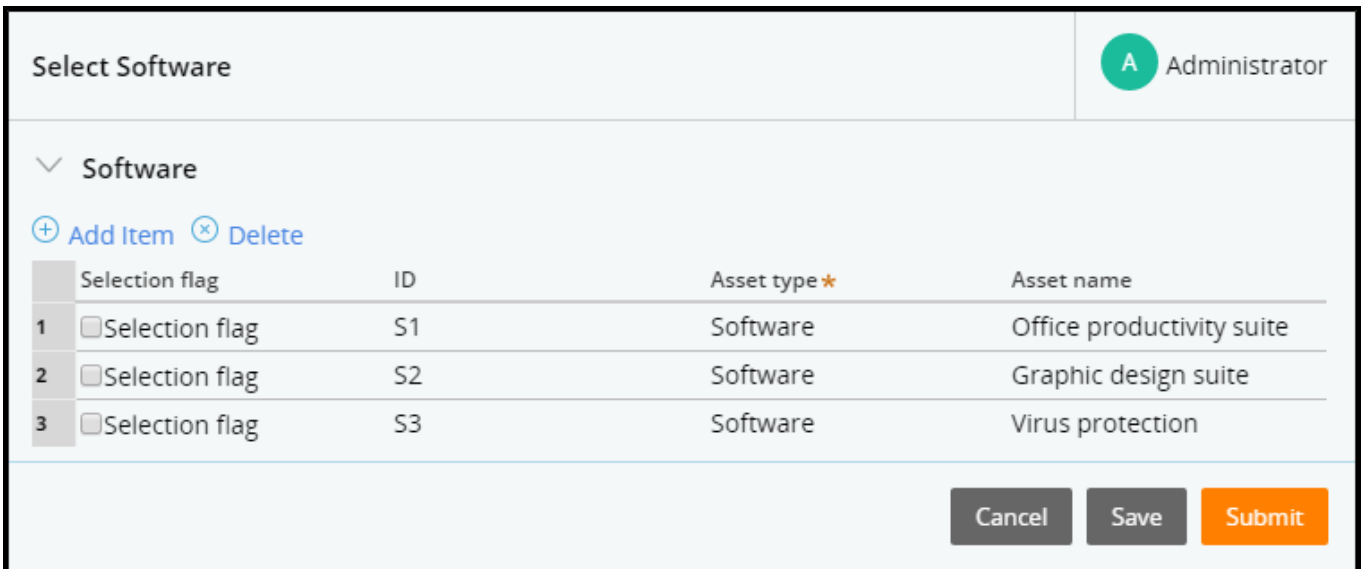
23. Right-click the cell and select **Cut**. The contents of the cell are removed from the form.



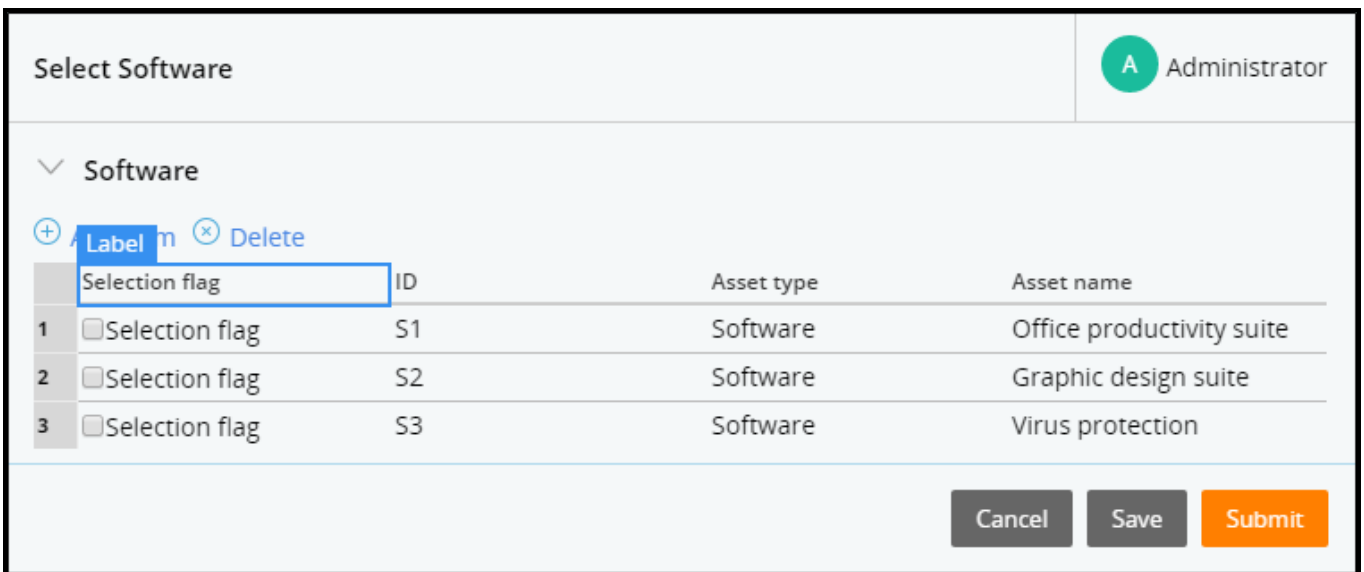
24. Click **Save** to commit your changes to the Select Hardware form.
25. In the Designer Studio, return to your open case.
26. On the case form, click **Action** and select **Refresh** to update the form with your changes.



27. Click **Submit** to advance to the Select Software form.
28. On the Select Software form, confirm that only assets of type Software are displayed in the list of assets.



29. On the Developer toolbar, click **Live UI**. The Live UI panel is displayed on the right side of the Designer Studio.
30. Position the Live UI selection rectangle over the **Selection flag** column label.



31. Click the mouse button to select the column label.

Select Software A Administrator

Software

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	S1	Software	Office productivity suite
2	<input type="checkbox"/> Selection flag	S2	Software	Graphic design suite
3	<input type="checkbox"/> Selection flag	S3	Software	Virus protection


32. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
33. In the Cell Properties panel, click in the **Value** field and delete the contents of the field.
34. Click **OK** to commit your change to the repeat grid layout.

Select Software A Administrator

Software

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	S1	Software	Office productivity suite
2	<input type="checkbox"/> Selection flag	S2	Software	Graphic design suite
3	<input type="checkbox"/> Selection flag	S3	Software	Virus protection

35. Position the Live UI selection rectangle over the **Selection flag** check box.
36. Click the mouse button to select the check box.
37. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
38. In the Cell Properties panel, click in the **Checkbox caption** field and delete the contents of the field.
39. Click **OK** to commit your change to the repeat grid layout.

Select Software
 Administrator


▼ Software

[+ Add Item](#) [✕ Delete](#)

	ID	Asset type	Asset name
1 <input type="checkbox"/>	S1	Software	Office productivity suite
2 <input type="checkbox"/>	S2	Software	Graphic design suite
3 <input type="checkbox"/>	S3	Software	Virus protection

Cancel Save Submit

40. Position the Live UI selection rectangle over the Repeat Grid Layout.

Select Software
 Administrator

Repeat Grid Layout

▼ Software

[+ Add Item](#) [✕ Delete](#)

	ID	Asset type	Asset name
1 <input type="checkbox"/>	S1	Software	Office productivity suite
2 <input type="checkbox"/>	S2	Software	Graphic design suite
3 <input type="checkbox"/>	S3	Software	Virus protection

Cancel Save Submit

41. Click the mouse button to select the Repeat Grid Layout.

Select Software Administrator

Repeat Grid Layout

Software

+ Add Item × Delete

	ID	Asset type	Asset name
1 <input type="checkbox"/>	S1	Software	Office productivity suite
2 <input type="checkbox"/>	S2	Software	Graphic design suite
3 <input type="checkbox"/>	S3	Software	Virus protection

Cancel Save Submit

42. In the selection identifier, click the **crosshair** icon to open the section that contains the repeating grid of hardware items.
43. On the section, in the Repeat Grid, select the left cell in the Action Top section.

Grid Repeat Layout - 1

Software

Action Top

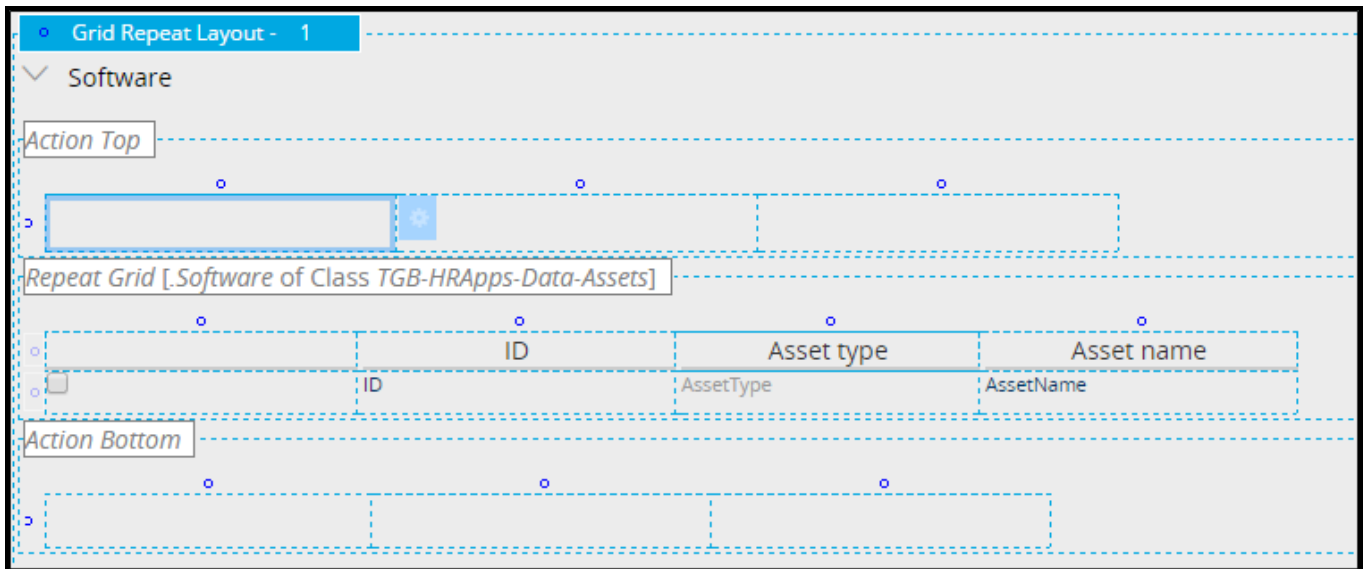
+ Add Item × Delete

Repeat Grid [Software of Class TGB-HRApps-Data-Assets]

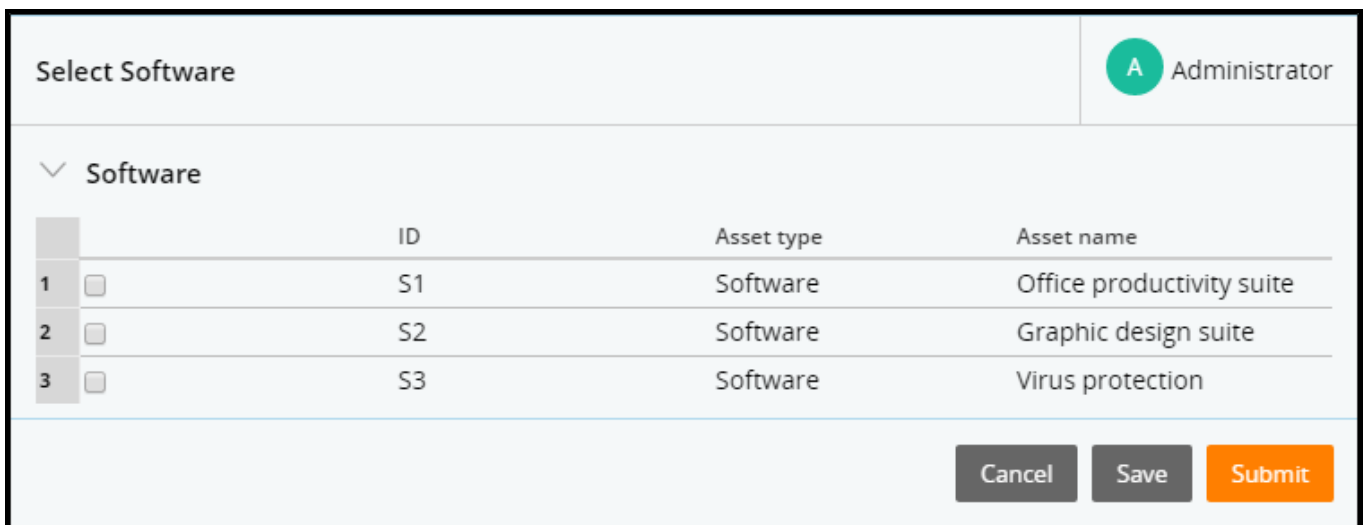
	ID	Asset type	Asset name
<input type="checkbox"/>	ID	AssetType	AssetName

Action Bottom

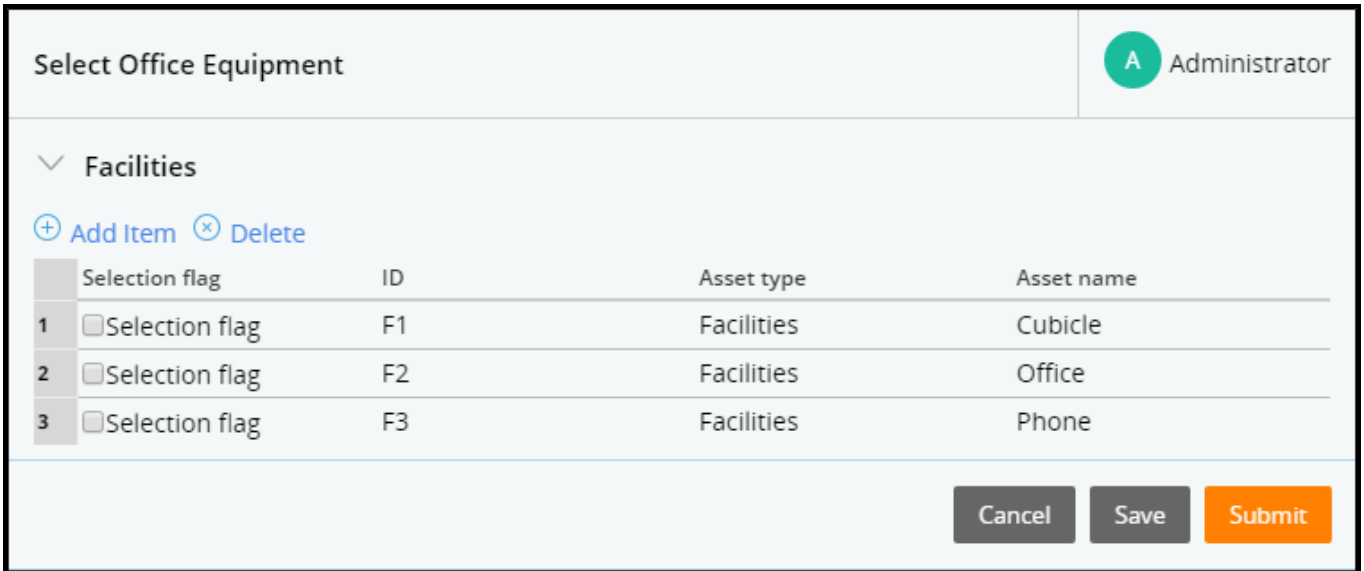
44. Right-click the cell and select **Cut**. The contents of the cell are removed from the form.



45. Click **Save** to commit your changes to the Select Hardware form.
46. In the Designer Studio, return to your open case.
47. On the case form, click **Action** and select **Refresh** to update the form with your changes.

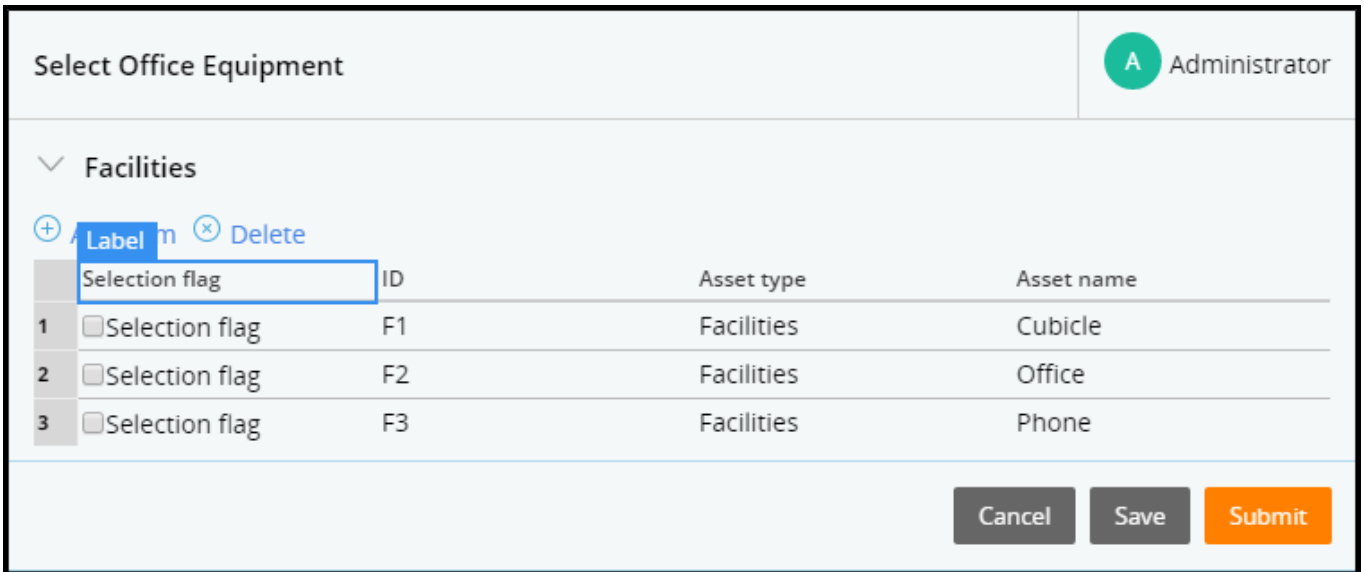


48. Click **Submit** to advance to the Approval form.
49. In the Open Assignments section, click **Facilities Setup (Equipment Selection)** to advance to the Select Seating Location step.
50. Click **Submit** to advance to the Select Office Equipment step.
51. On the Select Software form, confirm that only assets of type Facilities are displayed in the list of assets.



52. On the Developer toolbar, click **Live UI**. The Live UI panel is displayed on the right side of the Designer Studio.

53. Position the Live UI selection rectangle over the **Selection flag** column label.



54. Click the mouse button to select the column label.

Select Office Equipment A Administrator

Facilities

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	F1	Facilities	Cubicle
2	<input type="checkbox"/> Selection flag	F2	Facilities	Office
3	<input type="checkbox"/> Selection flag	F3	Facilities	Phone

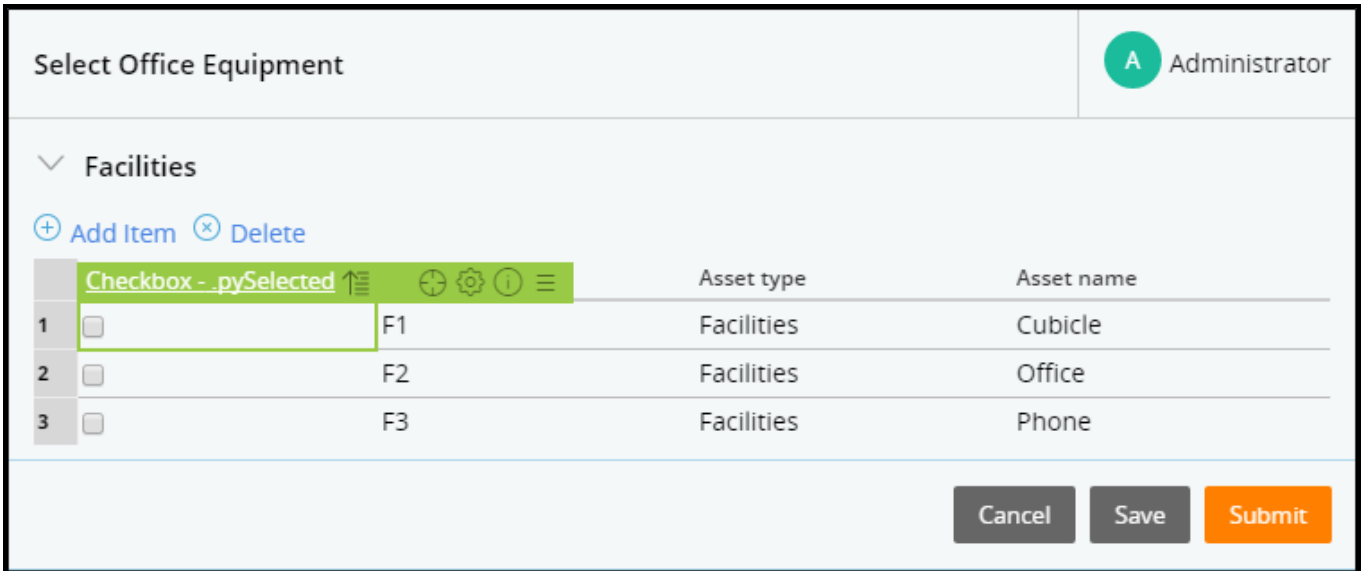
55. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
56. In the Cell Properties panel, click in the **Value** field and delete the contents of the field.
57. Click **OK** to commit your change to the repeat grid layout.

Select Office Equipment A Administrator

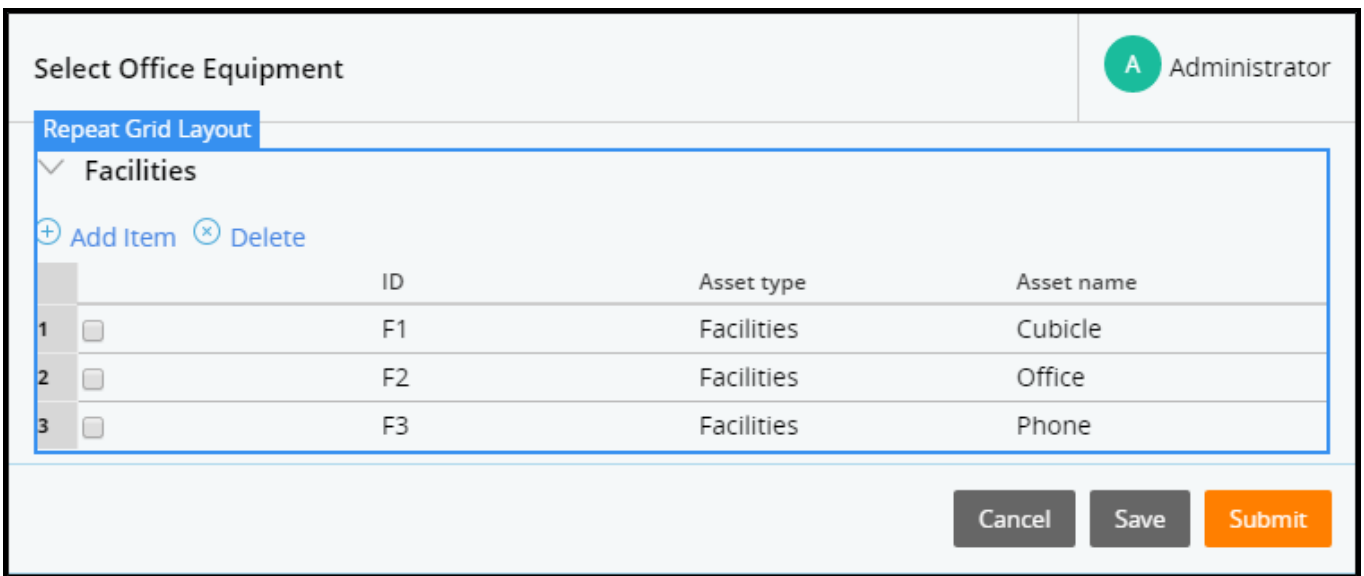
Facilities

	Label	ID	Asset type	Asset name
1	<input type="checkbox"/> Selection flag	F1	Facilities	Cubicle
2	<input type="checkbox"/> Selection flag	F2	Facilities	Office
3	<input type="checkbox"/> Selection flag	F3	Facilities	Phone

58. Position the Live UI selection rectangle over the **Selection flag** check box.
59. Click the mouse button to select the check box.
60. In the selection identifier, click the **Gear** icon to open the Cell Properties panel for the column label.
61. In the Cell Properties panel, click in the **Checkbox caption** field and delete the contents of the field.
62. Click **OK** to commit your change to the repeat grid layout.



63. Position the Live UI selection rectangle over the Repeat Grid Layout.



64. Click the mouse button to select the Repeat Grid Layout.

Select Office Equipment Administrator

Repeat Grid Layout

Facilities

+ Add Item × Delete

	ID	Asset type	Asset name
1 <input type="checkbox"/>	F1	Facilities	Cubicle
2 <input type="checkbox"/>	F2	Facilities	Office
3 <input type="checkbox"/>	F3	Facilities	Phone

Cancel Save Submit

65. In the selection identifier, click the **crosshair** icon to open the section that contains the repeating grid of hardware items.
66. On the section, in the Repeat Grid, select the left cell in the Action Top section.

Grid Repeat Layout - 1

Facilities

Action Top

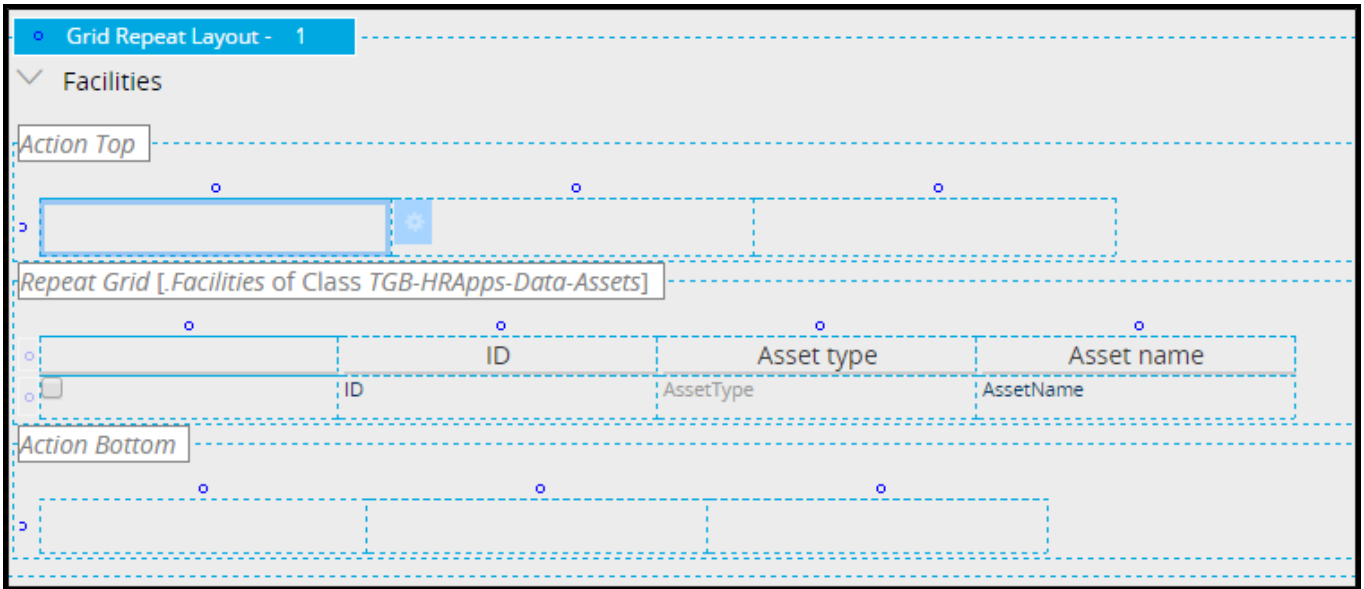
+ Add Item × Delete

Repeat Grid [Facilities of Class TGB-HRApps-Data-Assets]

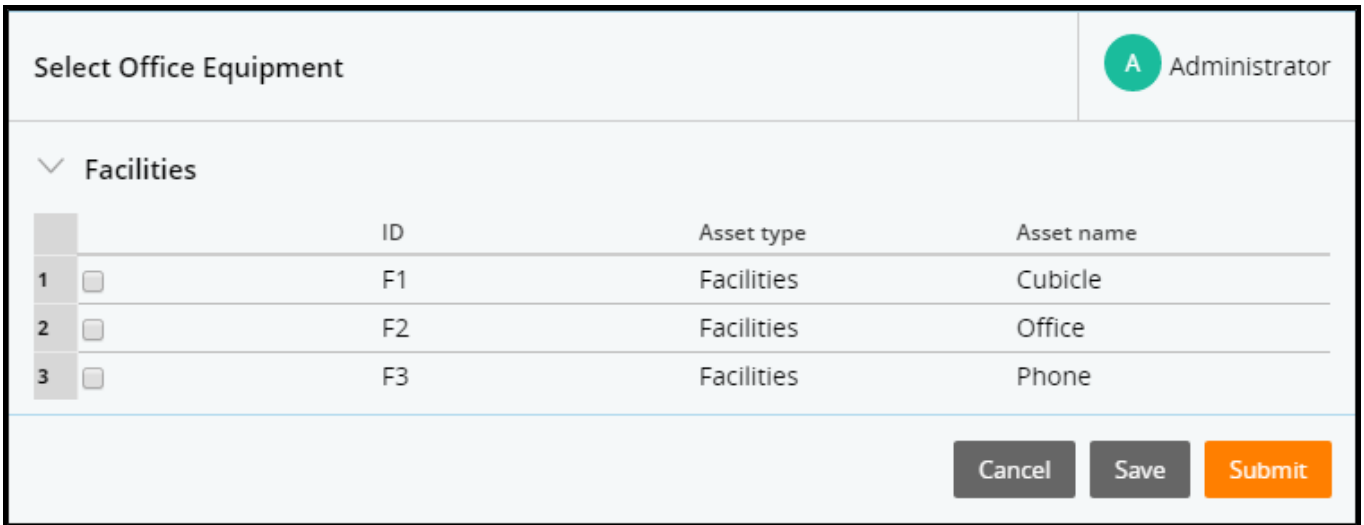
	ID	Asset type	Asset name
<input type="checkbox"/>	ID	AssetType	AssetName

Action Bottom

67. Right-click the cell and select **Cut**. The contents of the cell are removed from the form.



68. Click **Save** to commit your changes to the Select Hardware form.
69. In the Designer Studio, return to your open case.
70. On the case form, click **Action** and select **Refresh** to update the form with your changes.



APPLICATION DEBUGGING

Debugging applications with the Tracer

Ex: Debugging the Facilities Review routing

Scenario

During a playback of the Facilities Setup process, the process owner observes an error when the case reaches the Facilities Review assignment. Although a router is configured for the Facilities Review assignment, the application reports that no routing information has been provided. You have been asked to identify the source of the error and determine a course of action to resolve the issue, if necessary.

The table below provides the credentials you need to complete the exercise.

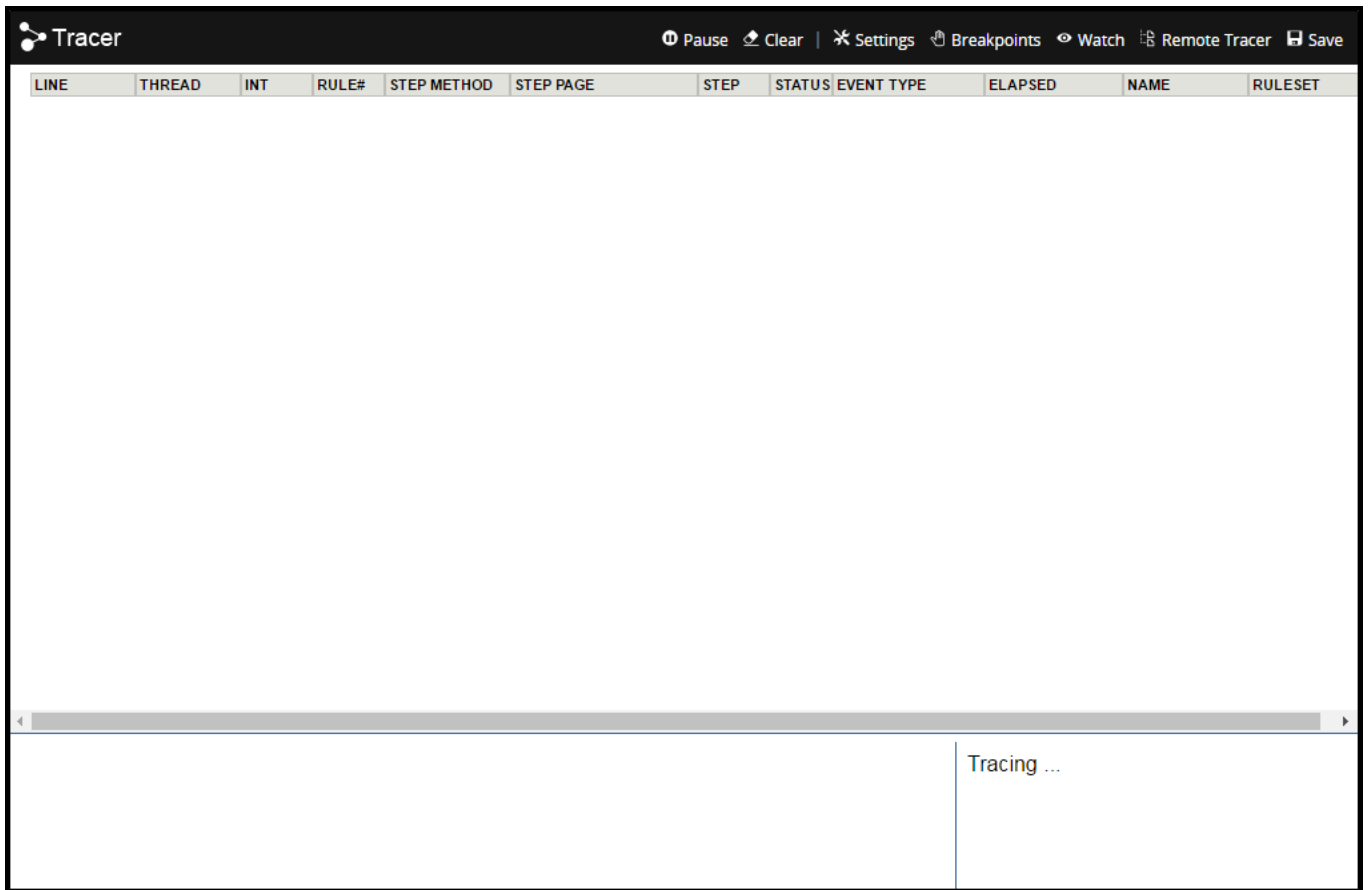
Role	Operator ID	Password
System Architect	SA@TGB	rules

Your assignment

Run the Facilities Setup process. When you reach the Select Office Equipment step, enable the Tracer. When the Tracer is monitoring case processing, advance to the Facilities Review step to observe the error. Review the Tracer output to determine the source of the error and identify if a fix is needed.

Detailed steps

1. In the Cases Explorer, select the **Onboarding** case type to open the Case Designer.
2. On the Life cycle tab on the Onboarding case type, select the **Facilities Setup** process. The Process Properties panel opens to the right of the case life cycle.
3. In the Process Properties panel, click **Open process** to open the Facilities Setup flow rule.
4. In the Facilities Setup flow, from the **Actions** menu select **Run**. The Select Seating Location form is displayed.
5. Click **Submit** to advance to the Select Office Equipment form.
6. On the Developer toolbar, click **Tracer** to launch the Tracer in a new window.



7. Return to the Designer Studio window.
8. On the Select Office Equipment form, click **Submit** to advance to the Facilities Review form.
9. Instead of the Facilities Review form, notice that the application returns an error stating that no routing information has been provided for the assignment.

No routing information was provided for this assignment.

Resume (fixed) problem flow
Click here to see problem description

Flow
FacilitiesSetup_0

Step
Select Office Equipment(Assignment2)

Error
No routing information was provided for this assignment.

Cancel Save Submit

10. Return to the Tracer window, which now contains an event log from the application.

Tracer Pause Clear Settings Breakpoints Watch Remote Tracer Save

LINE	THREAD	INT	RULE#	STEP METHOD	STEP PAGE	STEP	STATUS	EVENT TYPE	ELAPSED	NAME	RULESET
- Events for Requestor : H14FA4C80EFFDA384C5C06441775C2460											
4368	TABTHREAD2	67	75		pyWorkPage			Activity End	0.6830	@baseclass Relo...	Pega-UIEngir
4367	TABTHREAD2	67	75	Show-HTML	pyWorkPage	8	GOOD	Step End	0.4110	@baseclass Relo...	Pega-UIEngir
4366	TABTHREAD2	67	75	When Rule Evalu...	pxThread		True	When End	0.0010	Code-Pega-Threa...	Pega-WB 07-
4365	TABTHREAD2	67	75	When Rule Evalu...	pxThread			When Begin		Code-Pega-Threa...	Pega-WB 07-
4364	TABTHREAD2	67	75	When Rule Evalu...	pyWorkPage		True	When End	0.0060	Work- GadgetHa...	UI-Kit-7 06-0
4363	TABTHREAD2	67	75	When Rule Evalu...	pyWorkPage			When Begin		Work- GadgetHa...	UI-Kit-7 06-0
4362	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...		False	When End	0.0000	Assign- pzIsPastD...	Pega-EndUse
4361	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...			When Begin		Assign- pzIsPastD...	Pega-EndUse
4360	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...		False	When End	0.0000	Assign- pzIsPastD...	Pega-EndUse
4359	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...			When Begin		Assign- pzIsPastD...	Pega-EndUse
4358	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...		True	When End	0.0010	@baseclass pzEn...	Pega-UIDesig
4357	TABTHREAD2	67	75	When Rule Evalu...	CaseContentsKRPage.pxRe...			When Begin		@baseclass pzEn...	Pega-UIDesig
4356	TABTHREAD2	67	75	When Rule Evalu...	pyWorkPage		True	When End	0.0070	Work- GadgetHa...	UI-Kit-7 06-0
4355	TABTHREAD2	67	75	When Rule Evalu...	pyWorkPage			When Begin		Work- GadgetHa...	UI-Kit-7 06-0
4354	TABTHREAD2	67	76		pyWorkPage			Activity End	0.2720	@baseclass pzLo...	Pega-UIDesig
4353	TABTHREAD2	67	76	Page-Remove	pFlowAction	4	GOOD	Step End	0.0000	@baseclass pzLo...	Pega-UIDesig
4352	TABTHREAD2	67	76	Page-Remove	pFlowAction	4		Step Begin		@baseclass pzLo...	Pega-UIDesig
4351	TABTHREAD2	67	76	Java	pyWorkPage	3	GOOD	Step End	0.2380	@baseclass pzLo...	Pega-UIDesig
4350	TABTHREAD2	67	77		pyWorkPage			Activity End	0.2220	Work- pyPopulat...	Pega-EndUse
4349	TABTHREAD2	67	77	Page-Remove	CaseContentsTempPage	13	GOOD	Step End	0.0000	Work- pyPopulat...	Pega-EndUse
4348	TABTHREAD2	67	77	Page-Remove	CaseContentsTempPage	13		Step Begin		Work- pyPopulat...	Pega-EndUse
4347	TABTHREAD2	67	77	Page-Copy	pyWorkPage	12	GOOD	Step End	0.0060	Work- pyPopulat...	Pega-EndUse
4346	TABTHREAD2	67	77	Page-Copy	pyWorkPage	12		Step Begin		Work- pyPopulat...	Pega-EndUse
4345	TABTHREAD2	67	77	Java	pyWorkPage	11	GOOD	Step End	0.0190	Work- pyPopulat...	Pega-EndUse
4344	TABTHREAD2	67	77	Param.AlternateC...	pyWorkPage		False	When End	0.0070	Work- pyPopulat...	Pega-EndUse
4343	TABTHREAD2	67	77	Param.AlternateC...	pyWorkPage			When Begin		Work- pyPopulat...	Pega-EndUse
4342	TABTHREAD2	67	77	Java	pyWorkPage	11		Step Begin		Work- pyPopulat...	Pega-EndUse

Tracing ...

11. In the Tracer window, scroll to the bottom of the Tracer output then scroll upward until you locate a

line marked with the word FAIL on a red background.

324	TABTHREAD2	64	11		pyWorkPage			Activity End	0.0160	Work- ToDecision...	Pega-ProCon
323	TABTHREAD2	64	11	Property-Set	AssignDefaults	2	Skip St...	Step End	0.0010	Work- ToDecision...	Pega-ProCon
322	TABTHREAD2	64	11	Param.CheckAvai...	AssignDefaults		False	When End	0.0000	Work- ToDecision...	Pega-ProCon
321	TABTHREAD2	64	11	Param.CheckAvai...	AssignDefaults			When Begin		Work- ToDecision...	Pega-ProCon
320	TABTHREAD2	64	11	Property-Set	AssignDefaults	2		Step Begin		Work- ToDecision...	Pega-ProCon
319	TABTHREAD2	64	11	Property-Map-De...	pyWorkPage	1	FAIL	Step End	0.0060	Work- ToDecision...	Pega-ProCon
318	TABTHREAD2	64	11	Property-Map-De...	pyWorkPage	1		Step Begin		Work- ToDecision...	Pega-ProCon
317	TABTHREAD2	64	11		pyWorkPage			Activity Begin		Work- ToDecision...	Pega-ProCon
316	TABTHREAD2	64	7	Java	pyWorkPage	24		Step Begin		Assign- Complete...	Pega-Proces
315	TABTHREAD2	64	7	Page-Set-Messag...	pyWorkPage	23	Skip St...	Step End	0.0190	Assign- Complete...	Pega-Proces
314	TABTHREAD2	64	7	When Rule Evalu...	pyWorkPage		False	When End	0.0040	@baseclass Step...	Pega-RULES

12. In the Tracer window, click the word **Fail** to open the event properties in a new window.

Properties on Page TraceEvent [319]	
Header	
Sequence	318
Interaction	38
Timestamp	Jul 15, 116 - 12:16:14 16:21:01 (20160715T161614.976 GMT)
Elapsed Time	0.0380 (s)
Event Type	Step End
Event Name	Step End
Event Key	RULE-OBJ-ACTIVITY WORK- TODECISIONTABLE #20130919T002543.213 GMT
Thread Name	TABTHREAD2
Requestor ID	HCC63D99D9BABD73434696F37F40D7838
Correlation ID	HCC63D99D9BABD73434696F37F40D7838
Work Pool	TGB-HRApps-Work
Last Step	WORK- TODECISIONTABLE #20130919T002543.213 GMT Step: 1 Circum: 0
Input	Activity=FinishAssignment
Ruleset Name	Pega-ProCom
Ruleset Version	07-10-01
Standard	
Activity Name	TODECISIONTABLE
Activity Number	11
Parameter Page Name	=unnamed=
Primary Page Class	TGB-HRApps-Work-Onboarding
Primary Page Name	pyWorkPage
Step Method	Property-Map-DecisionTable
Step Number	1
Step Status	FAIL
Step Status Info	Goal seek requires missing input property pyWorkPage.Office on page pyWorkPage; details: (unknown)

13. Close the event properties window and the Tracer window.

The error reported by the application occurs because no value was set for the property *.Office*. The decision table used to route the Facilities Review assignment uses this property to determine the appropriate workbasket for the assignment. Since the property value was never set in the process, the router does not function correctly.

This error occurred because the value of *.Office* is set in a different flow. During normal case processing, a user selects a value for *.Office* from a drop-down list as part of the Identify Home Office assignment, during the Send Welcome Packet process. This list is marked required, so users cannot submit the form without specifying a value for *.Office*, so no fix is required.

COURSE SUMMARY

Next steps for system architects

System Architect Essentials 7.2 Summary

Now that you have completed this course, you should be able to:

- Apply Pega's principles of application design and development to deliver business applications that are Built for Change™.
- Use Pega Express to model the life cycle of a case that mirrors the way business people think about how work is completed.
- Directly capture business objectives to help ensure that business requirements are accurately captured, and that business and IT stakeholders share a common understanding.
- Use Designer Studio to refine and enhance the case life cycle design.
- Identify the tasks and responsibilities of the system architect on a Pega Implementation.
- Configure a case and case processing behavior.
- Create data classes and properties for use in a Pega application.
- Automate decision-making throughout an application to improve process efficiency.
- Design responsive user forms for use on any platform or browser.
- Design reports to deliver key insights to business users.
- Incorporate and manage reference data to allow applications to adapt to changing business conditions.
- Test your application design to analyze rule behavior and identify configuration errors.

Next Steps

Completion of Pega System Architect 7.2 helps prepare students for the Certified System Architect exam. To help you study for the exam, enroll in the CSA Practice Exam course in Pega Academy.

[Register for the exam.](#)