Course Guide

Build an IBM Case Manager Solution (V5.3.2)

Course code F2910G ERC 1.0

IBM Training

March 2018

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Course overview

Preface overview

In this course you will create basic case management solutions with IBM Case Manager Builder and Process Designer. Using an iterative solution development process, you will create, deploy, test, and revise your solutions, adding complexity and functionality to your solutions as you gain skills. You will create properties and document classes, configure roles and in-baskets, and define case stages. You will work with case types, tasks, and workflows. This course includes some guidelines on solution design principles. After completing this course, you can build on these skills by taking more advanced or specialized courses in security, user-interface customization, and solution deployment.

Intended audience

This course is intended for solution architects, developers, business analysts, system administrators, or anyone who works as a solution builder within their company.

Topics covered

Topics covered in this course include:

- Build and deploy a solution
- Create properties and document classes
- Create roles and in-baskets
- Create tasks
- Create a step map
- Use preconditions and sets
- Automate case packaging
- Add case stages
- Solution design principles
- Course prerequisites

Participants should have:

- Knowledge of Case Manager concepts, such as case management, case, solution, task.

- The ability to identify parts of a solution.

- or IBM Case Manager Essentials V5.3.2 (classroom)(F2900G)

- or IBM Case Manager Essentials V5.3.2 (self-paced) (F2909G)

Document conventions

Conventions used in this guide follow Microsoft Windows application standards, where applicable. As well, the following conventions are observed:

- **Bold**: Bold style is used in demonstration and exercise step-by-step solutions to indicate a user interface element that is actively selected.

- *Italic*: Used to reference book titles.

- CAPITALIZATION: All file names, table names, column names, and folder names appear in this guide exactly as they appear in the application.
  To keep capitalization consistent with this guide, type text exactly as shown.

- `Courier New font`: This font style is used in demonstrations and exercises to indicate that text must be typed by the participant.

Exercises

Exercise format

Exercises are designed to allow you to work according to your own pace. Content contained in an exercise is not fully scripted out to provide an additional challenge. Refer back to demonstrations if you need assistance with a particular task. The exercises are structured as follows:

The business question section

This section presents a business-type question followed by a series of tasks. These tasks provide additional information to help guide you through the exercise. Within each task, there may be numbered questions relating to the task. Complete the tasks by using the skills you learned in the unit. If you need more assistance, you can refer to the Task and Results section for more detailed instruction.

The task and results section

This section provides a task based set of instructions that presents the question as a series of numbered tasks to be accomplished. The information in the tasks expands on the business case, providing more details on how to accomplish a task. Screen captures are also provided at the end of some tasks and at the end of the exercise to show the expected results.

Additional training resources

Visit the IBM Skills Gateway (www.ibm.com/training/) for details on:

- Instructor-led training in a classroom or online

- Self-paced training that fits your needs and schedule

- Comprehensive curricula, learning journeys, and training paths that help you identify the courses that are right for you

- IBM Professional Certification Program (http://www-03.ibm.com/certify/)

- For other resources that will enhance your success, bookmark the IBM Cloud Skills Gateway https://www-03.ibm.com/services/learning/ites.wss/zz-en?pageType=page&c=O602980X82373O75

- Find IBM Case Manager videos and information in the Case Manager on Cloud Learning Center at http://ibmtvdemo.edgesuite.net/software/analytics/learning-centers/case-manager-cloud/index.html

IBM product help

Help type	When to use	Location
Task-oriented	You are working in the product and you need specific task-oriented help.	*http://www.ibm.com/support/knowledgecenter/SSCTJ4*
Books for Printing (.pdf)	You want to use search engines to find information. You can then print out selected pages, a section, or the whole book. Use Step-by-Step online books (.pdf) if you want to know how to complete a task but prefer to read about it in a book. The Step-by-Step online books contain the same information as the online help, but the method of presentation is different.	Start/Programs/*IBM Product*/Documentation
IBM on the Web	You want to access any of the following: • IBM Skills Gateway • Online support • IBM Web site	 • https://www-03.ibm.com/services/learning/ites.wss/zz-en?pageType=page&c=a0011023 • https://www.ibm.com/support/home/ • http://www.ibm.com

Unit 1   Build and deploy a solution

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Build and deploy a solution

IBM Case Manager V5.3.2

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Unit objectives

- Build a solution
- Deploy a solution
- Test a solution
- Manage roles
- Redeploy a solution

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Unit objectives

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Building your first solution

- Your first solution can be very simple. You can build more complexity into it later.
- With IBM Case Manager, you can build, deploy, and test prototype solutions quickly.
- You start in a development environment.
- You have access to the following tools:
  - IBM Case Manager Builder
  - IBM Case Manager Client
  - Process Designer

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Building your first solution

When you build solutions, you ideally begin with a design that has been carefully crafted to solve a business problem. The tasks, roles, and other artifacts have been carefully designed on paper, and all you need to do is start building.

However, in some cases, you might be the architect as well as the solution builder, in which case you might not have as much planning or direction, and your goal is to start rapidly developing prototypes.

The process of designing, building, deploying, and testing solutions is a common basis for all development work with IBM Case Manager.

A development environment provides a safe area for developing and testing solutions. Solutions in the development environment are not accessible to anyone outside the solution builder's group. In this environment, you are provided the tools that you need to create fully working solutions and test them before moving them to another environment for quality assurance or user acceptability testing, and then finally to production.

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Creating an IBM Case Manager solution

- Start the IBM Case Manager Builder.
  - http://*CaseManager-Server:port*/CaseBuilder
  - Where *CaseManager-Server* is your web application server that hosts IBM Case Manager and *port* is your port number.
- Create a solution.
- Edit the solution parameters:
  - Name
  - Solution prefix
  - Description (optional)
  - Solution icon (optional)

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Creating an IBM Case Manager solution

A solution is a system of case types, tasks, steps, and other components. Case workers use a solution to process cases.

Building a solution is an iterative process. You can create the solution, save it, deploy it, test it, and then go back to update it, save, redeploy, and retest.

To save the solution, you must provide these parameters:

- Name: Give your solution a meaningful name. Remember that the solution is not the same as a case type or a task. The solution must encompass the whole range of activities that are related to the business scenario.

- Solution prefix: 2 - 5 characters. The solution prefix identifies the solution to which all of our artifacts (metadata) belong. Make the prefix something that is easy to identify the solution by.

  You cannot change the name or solution prefix after you create the solution.

- Description: (optional) A brief description of the purpose solution is useful but not required.

- Solution icon: A solution icon is set by default. You can select a different icon if you want.

What are solution artifacts?

This diagram shows the main types of artifacts that you create in Case Manager Builder. It does not show all of the artifacts, but you must be familiar with these artifacts before you build a solution.

- Properties are attributes of objects. A property is a value that describes an object. For example, document files have properties such as the file name, creation date, and creator. In IBM Case Manager, you can create custom properties that describe cases. Examples of case properties include customer name and policy number. After you create a property, you can use this property in other artifacts, such as document classes and case types.

- A document class is a method for categorizing related documents. Each document class has a name, description, and a set of properties. The main difference between document classes is the set of properties defined for each. For example: If your solution includes both claim forms and email correspondence, you need to create these document classes and assign properties to them.

- A role is a collection of users or groups with a specific business function that can access a task or work item. You create roles in a solution to work on cases. For example, you create a Clerk role, an Approver role, and a Supervisor role. Then you associate roles with tasks. For example, you assign the document approval task to the Approver role. Later, you assign users and groups from the directory provider to those roles. For example, you might assign Jacob Smith to the Approver role. Only people who are assigned to a role are able to see work items that are designated for that role. Each role has an in-basket. The in-basket holds work items that are ready to be processed by anyone within that role.

- A case type is the definition of a case. Case types define the tasks, the necessary document classes to support the task, and the roles that must complete those tasks to solve a business problem. The case type also includes properties that are displayed to case workers in views. Related case types make up a solution. A solution can have multiple case types. For example, an auto insurance application might include a case type for thefts and a case type for collisions.

- A task defines the work that must be performed by the roles. A task can have one or more steps assigned to roles or workgroups. When a step is completed, the next step becomes available to be worked on by a role or workgroup. A step is also called a work item.

- The case type views determine how the case is displayed in Case Manager Client. For example, if you want the case number to display, you can add the case number property to the view.

- Case folders are folders that contain documents that are added to the case. Each time a new case is created, a folder hierarchy is created. You can use this folder hierarchy to organize the documents within the case. For example, you might have a folder for forms and another folder for evidence.
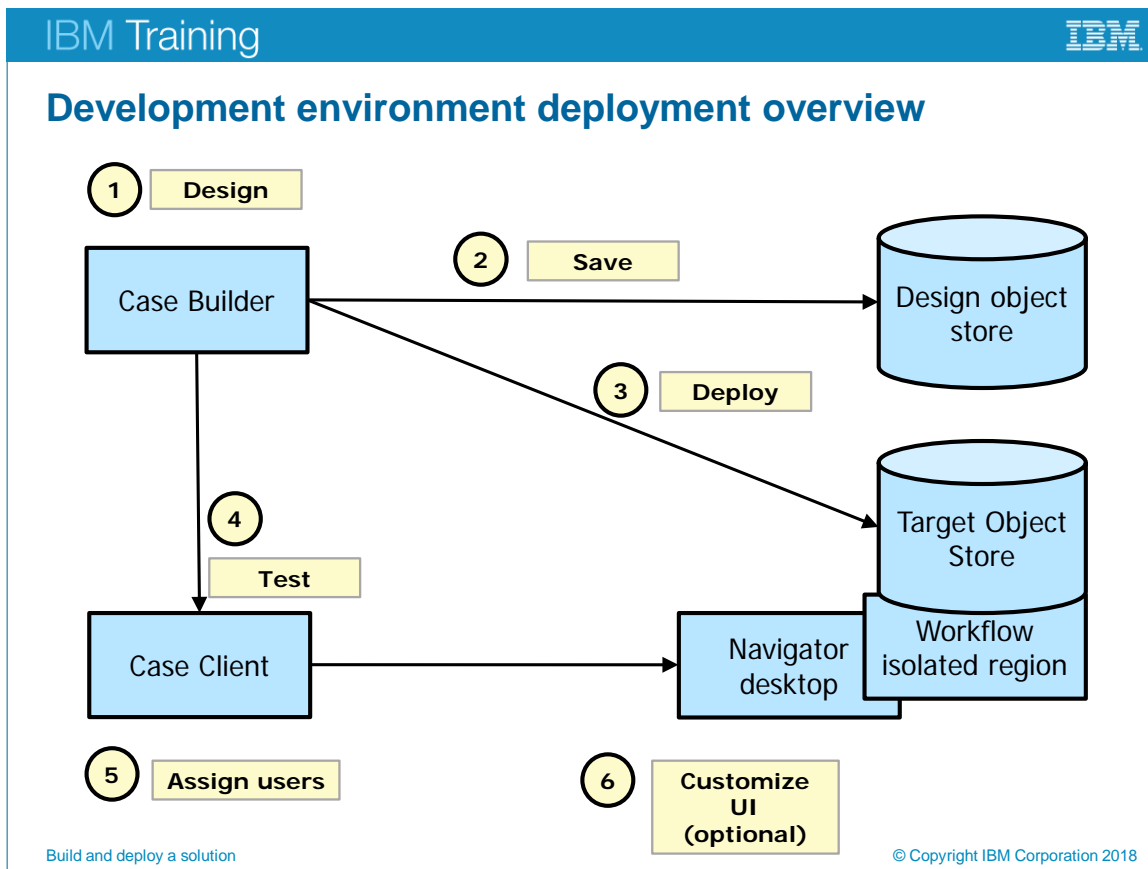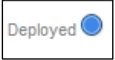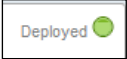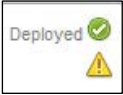
Development environment deployment overview

This diagram shows the process for designing and testing a solution.

1. Design and edit the solution.
2. Save the solution definition in the Design object store.
3. Deploy the solution and generate case worker user interfaces in the Target environment. The target environment includes the target object store, the IBM Content Navigator desktop, and the workflow isolated region.
4. Test the solution in Case Manager Client.
5. You assign users to roles and create cases to validate the solution.
6. Customize the solution user interface, if needed.

Each solution has a deployment indicator to show the current deployment status of the solution. The indicator is in the top right corner of the solution tile.

Deployed 🔵	A blue circle means the solution has not yet been deployed.
Deployed ✅	A white check mark means the solution has been deployed.
Deployed 🟢	A green circle means the solution is in the process of being deployed.
Deployed ✅ ⚠️	A yellow triangle below a white check mark means the solution has been deployed, but has since been modified.

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Testing in different environments

- Testing can have several phases before production.
  - Revisions are made in the Development environment.
  - The solution package is then moved to a new testing domain and redeployed.
  - After all testing is complete, the solution is moved and deployed to production.
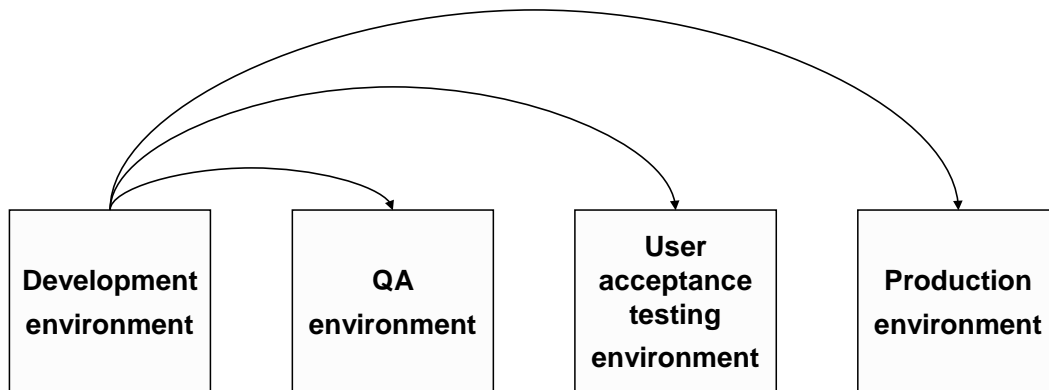
Development environment	QA environment	User acceptance testing environment	Production environment

Testing in different environments

This diagram shows how a solution is designed in a development environment, then moved to other environments.

The development environment is the place where you can make changes to the solution. You can iterate between building, testing, and revising.

After initial testing by the business analyst, an administrator can move the solution to a quality assurance system where testing can continue. During quality assurance testing, more changes might be required. These changes are made in the development environment and then the updated solution is moved again to the quality assurance environment for more testing. After quality assurance testing is complete, you might have an extra level of testing for user acceptance. Finally, after all testing and revisions are completed, the solution is moved and deployed to the production environment.

In each case, the solution is developed and updated in the Development environment before being moved to another environment for testing.

Each environment might have distinct directory servers. The first time the solution is deployed in an environment, the proper security needs to be applied. To assist with this task a security configuration manifest can be defined for each of the environments.

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Assigning users to roles

- Roles determine:
  - who can work on a case
  - what information is presented to that user
- When you first deploy a solution, no users are assigned to any roles.
- You must assign users to roles in order to open work items.
- For testing your own solutions, you can use the Manage Roles button in the Default Application space to assign users to roles.
- For testing in QA or UAT or for production, use the administration client to create a security configuration.

Build and deploy a solution

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Assigning users to roles

During development, you must assign users to roles after you deploy a solution. Until users are assigned to the roles, the solution is unavailable to any users.

For example, if you have a Customer Service Representative role, you assign a user, Cathy, to that role. When Cathy signs in to the Case Manager Client, she sees work items only for the Customer Service Representative role.

When you first deploy a solution, roles are unassigned. Until you add users to roles, no one can access a work item. To test your solution, you can add yourself to each role that you want to test so that you can open the work items.

For each role, you can select one or more users and groups. Users and groups must be selected from the company security provider directory server.

If you assign a group to a role, any person who belongs to that group can work on a step for that role.

You can assign several users and groups to a single role. For example, you might have a Legal Reviewers group that is assigned to a Legal Reviewers role. In addition, you have a Legal Reviewers Backup group. During peak workloads, you can add the Legal Reviewers Backup group to the Legal Reviewers role.

You can use the IBM Case Manager administration client to create a security manifest for a solution. You can also transfer that security configuration from a user-acceptance testing environment or a staging environment into a production environment. The administration client simplifies the process of setting up security for objects, users, groups, and roles. Creating and using security configuration manifests is beyond the scope of this course.

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Revising your solution

- After you deploy and test your solution, you might want to make changes.
- Use the IBM Case Manager Builder to make changes.
- These changes do not take effect until you redeploy your solution.
- Multiple users can update a solution.
- Each user's changes must be committed before deployment.

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Revising your solution

After deployment, you can always go back and update your solution, then redeploy and retest.

When you save changes to an asset, those changes are saved as drafts until you commit the changes. When lists of available items are displayed in Case Manager Builder, such as attachments and predefined workgroups, the lists include committed items only.

Multiple users can edit a single solution at the same time. However, multiple users cannot edit an asset at the same time. Editing locks the asset so that only one user can change it. Editing certain assets locks all associated assets.

If multiple users are working on a solution, each user must commit the changes before the solution can be redeployed with those changes.

If you are the only person who edits the solution, you can click the Deploy button and then confirm that you want the changes committed.

For more information, see the IBM Knowledge Center topic: https://www.ibm.com/support/knowledgecenter/SSCTJ4_5.3.2/com.ibm.casemgmt.help .doc/acmsdh54.htm.

Redeploying your solution

You can retest and redeploy within the testing environment as often as needed.

These issues can prevent successful redeployment:

- Changing the precondition for a task.

- Changing the symbolic name, ID, data type, or cardinality of a property template.

- Changing the symbolic name or ID of a document class or case type, or activity.

Before you redeploy your solution, check on IBM Knowledge Center topic: https://www.ibm.com/support/knowledgecenter/SSCTJ4_5.3.2/com.ibm.casemgmt.design.doc/acmdc024.htm.

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Consequences of resetting the test environment

- The Reset Test Environment action has the following effects:
  - The target environment is deleted and recreated.
  - All deployed solutions are deleted.
- Use project areas to limit the effects of resetting to protect other assets.

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Consequences of resetting the test environment

You can access the Reset Test Environment menu option from the solution page of Case Manager Builder. Reset Test Environment erases all of the deployed solution artifacts from the target environment.

- Do not click this option unless you are sure that everything in your target environment can be deleted.

- Resetting the test environment affects all solutions deployed in that target environment by deleting and recreating the target object store and initializing the workflow isolated region.

- If you use multiple project areas, the effects of the reset are limited to one project area.

- If you reuse metadata from another deployed solution, you must first redeploy the other solution.

Be cautious about using the Reset Test Environment command, because the effects can destroy many hours of development work.

Prepare your environment

Start IBM Case Manager components

The environment that is provided with this course requires that you start the IBM WebSphere Application servers that host the IBM Case Manager components. The WebSphere Admin folder, found on the desktop, includes the scripts that you run to start the components:

1. On the desktop, open the **WebSphere Admin** folder.
2. Right-click _**1 Start server1.bat**, and then select **Run as administrator**. Click **Yes**. Wait for the command window to close.
3. Right-click _**2 Start ICNserver.bat**, and then select **Run as administrator**. Click **Yes**. Wait for the command window to close.
4. Verify that IBM Case Manager is operational.

   - Open a Firefox browser window.

   - On the Course Portal Links page, under **System Health**, click **Case Manager Ping**.

   - Log in as `p8admin/FileNet1`

   - The **IBM Case Manager Context (Ping Page)** is displayed. You see a two-column table with information like: the Product name, Case Management Build version, and the Operating System.

   - Close the browser window.

Troubleshooting

If you do not see the IBM Case Manager Context (Ping Page), verify that the following two services are running:

- IBM WebSphere Application Server V9.0 - Dmgr

- IBM WebSphere Application Server V9.0 - Node01

  Stop and start the components

  In the WebSphere Admin folder, stop the two application servers and restart them. The list of steps are:

- Right-click _3 Stop ICNserver.bat and then select **Run as administrator**. Wait for the command window to close.

- Right -click _4 Stop server1.bat and then select **Run as administrator**. Wait for the command window to close.

- Right -click _1 Start server1.bat and then select **Run as administrator**. Wait for the command window to close.

- Right -click _2 Start ICNserver.bat and then select **Run as administrator**. Wait for the command window to close.

Do not start the next script until the command window closes for the previous script. Verify that IBM Case Manager is operational.

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Demonstration 1: Create and deploy a solution

- The solution includes:
  - one role
  - one case type
  - one property
- Deploy and test a solution.
- View the solution after deployment.
- Edit the solution.
- Redeploy the solution.

Demonstration 1: Create and deploy a solution

Demonstration 1: Create and deploy a solution

Purpose:

Developing a solution is an iterative process in which you might deploy and test a solution several times before the solution is ready for quality testing. In this demonstration, you create, deploy, and test a simple solution.

Create a minimal solution, deploy the solution, and then view the client user interface. The solution must include one of each of the following artifacts:

- **Property**
- **Role**
- **Case type**

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**

User/Password: **p8admin/FileNet1**

Solution: **Opening Solution**

Task 1. Log on to Case Manager Builder.

In this procedure, you log in to Case Manager Builder.

Make sure that the necessary components are started on your student system.

1. Start **Mozilla Firefox**.
2. Click the **Case Builder** bookmark.

   If you cannot find the bookmark, enter the IBM Case Builder URL: **http://vclassbase:9081/CaseBuilder**

3. Log in as:

   - User name: `p8admin`

   - Password: `FileNet1`

4. Click **Log In**.

Task 2. Create a solution.

Use Case Manager Builder to create a solution. You are on the Manage Solutions Page.

1. On the Solutions page click **Add Solution** ⊕ (button with a plus sign).
2. Type `Opening Solution` in the **Name** field.
3. Type `OPEN` for the **Solution prefix** field.

4. In the Description field, type*: `A solution for practice`.

5. Click **OK**.

   A solution window opens for the Solution. The default solution icon is a two-letter representation of your solution name - in this case, OS.

6. Optionally, click the icon menu drop down next to 'OS', to select a different solution icon.

Task 3. Add a Boolean Property.

1. On the **Properties** tab, click **Add Property**, and then click **New**.

2. In the **Name** field, type `Boolean Property`.

3. Select the **Boolean** property type from the **Type** menu.

4. Optionally, type the description: **This is a test property**.

5. Expand **Define Property Values** if it is not already expanded.

   Notice that the *A single value* option is selected by default. The Unique Identifier is also completed automatically, by concatenating the solution prefix and the property name.

6. Set the **Default value** to **true**.

7. Click **OK**.

Task 4. Add a role.

1. Click the **Roles** tab.

2. Click **Add Role**.

3. In the **Role** field, type `Tester`.

4. In the **Description** field, type `Solution tester`.

5. Click **OK**.

Task 5. Add a case type.

1. Click the **Case Types** tab.

2. Click **Add Case Type**.

3. Enter the **Case type name** as: `Case Type 1`.

4. Click **Save**.

Task 6. Validate the Opening Solution.

1. Click **Validate**.

   A message (near the bottom of the page) indicates that the solution as validated successfully. If the message indicates that an error exists, recheck the previous steps and validate again.

2. Click **Save and Close**.

Task 7. Deploy the solution.

1. Click **Deploy** ⟳ .

2. Wait until the indicator shows that the solution is deployed, before proceeding.

Task 8. Review the deployment logs.

1. Click **More Actions** ⋮ > **Deploy logs**.

    The More Actions button is three dots arranged in a column.
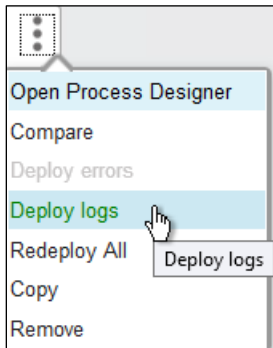
2. Read the deploy logs at the bottom of the window to confirm that no error messages are shown.

Task 9. Manage roles.

When you first open the solution in Case Manager Client, you must assign users to roles. You are viewing your solution in the solutions menu.

1. Click **Test** ▶ .

    Case Manager Client opens in a separate window. You are already logged in as p8admin.

2. Click **Opening Solution** from the top right corner of the window, to expand the view.

3. From the menu, select **Opening Solution** > **Manage Roles**.
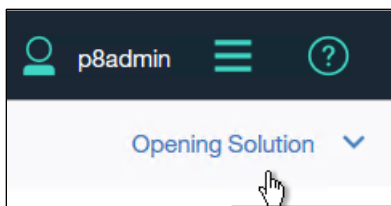
    This solution has one role with one in-basket.

4. Click **Add Users and Groups**.

5. Confirm that the search is for **Users** (not groups).

6. Type `p8admin` in the Users field, and then press **Enter**.

7. Click **Add** [→] to add the user to the role.

8. Click the **Add** button in the bottom-right corner.

9. Click **Save**.

Task 10.   Create a case.

In most solutions, you add property values when you add a case. For this demonstration, however, you add a case without property values to save time.

1. Click **Cases** to refresh the page.

2. Click **Add Case > Case Type 1**.

3. Click **Add**.

Task 11.   Open the case.

1. On the **Cases** page, click **Search**.

2. One case is returned.

    Notice the column headings: Title, Added On, Case State, Modified By, and Modified On. These columns provide a quick overview of the case information to help a case worker decide which case to open. When you edit the in-baskets, you can configure properties to be displayed as in-basket columns.

3. Click the case title to open the Case Details page.

    Observe the Case Details page. From here, a case worker can perform several case-related functions. On the Documents tab, you can add documents or folders.

4. Click the **Tasks** tab.
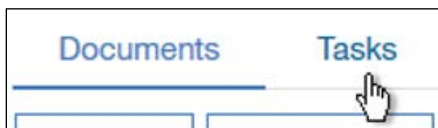
    No tasks are defined for this case type, so there is nothing to do here.

5. Click **History** to review what has happened with the case so far.

6. Click **Close**.

7. Log out of **Case Manager Client**.
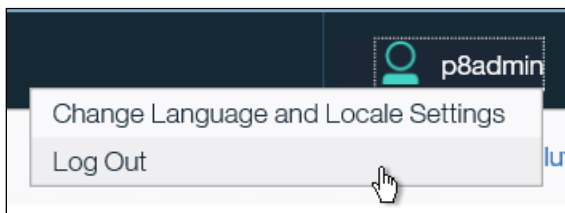
8. Close **Mozilla Firefox**.

    If you leave Mozilla Firefox open, cached pages and security data remain in the browser that can affect your outcomes.

Task 12.   Edit the solution.

You can edit a solution from Case Manager Builder by clicking the solution title.

1. In **Mozilla Firefox**, open **Case Builder**.
2. Log in to Case Manager Builder as **p8admin/FileNet1**.
3. Click the **Opening Solution** title to open the solution for editing.
4. Add a role: **Reviewer**.
5. Add a string property: **OpenString**.
6. Add a case type: **Case Type 2**.
7. Click **Save**.

Task 13.   Validate and redeploy the solution.

1. Click **Validate**.
2. Verify that validation was successful.
3. Click **Save and Close**.

    Notice that a yellow triangle now shows under the Deployed indicator. The icon indicates that the solution has been edited since it was last deployed.

4. Click **Commit** ⬇.
5. Click **Commit My Changes**.
6. Click **Deploy**.
7. Wait for the status message to indicate that the solution is deployed.

Task 14.   Re-test the solution.

Review the redeployed solution.

1. Click **Test**.
2. Click **Add Case > Case Type 2**.
3. Click **Add**.
4. Click **Search**.
5. Verify that the search returns your new case.

Task 15.   Manage roles.

After you deployed your solution, you added the Reviewer role. You need to assign a user to this role.

1.   Click the **Work** tab.
2.   Click **Manage Roles**.
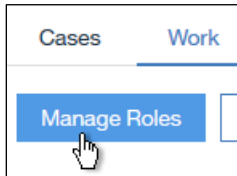
3.   Click the **Reviewer** role.
4.   Click **Add Users and Groups**.
5.   Search for `p8admin`.
6.   Add **p8admin** to the role.
7.   Click **Add**.
8.   Click **Save**.

Task 16.   Switch roles.

Occasionally, you must switch roles during testing. Sometimes, a user can have multiple roles. Each role has a separate in-basket, so work items might appear in one role in-basket but not in another.

1.   Click **Opening Solution | Tester** in the top right of the page.
2.   Select **Opening Solution > Reviewer**.
3.   Confirm that **Opening Solution | Reviewer** is displayed in the top right of the page.
4.   Log out of all applications and close all browsers.

Results:

In this demonstration, you created a solution, then deployed it. You managed roles for the solution and tested it by creating a case. You then updated the solution and redeployed it.

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Unit summary

- Build a solution
- Deploy a solution
- Test a solution
- Manage roles
- Redeploy a solution

Build and deploy a solution

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Unit summary

Exercise 1: Deploy and test a solution

Exercise 1:
Deploy and test a solution

As part of the iterative design and testing process, you must deploy and test the solution in the development environment.

Use the Case Manager Builder application on your student system to complete this exercise. To complete the exercise, you must complete the following activities:

- Create a solution

- Deploy your solution

- Read the deployment logs

- Test your solution

- Create a case

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **My Solution <initials>**

Task 1. Create a solution.

- Log in to Case Manager Builder as **p8admin/FileNet1**.

- Use Case Manager Builder to create a solution.

- Name the solution: **My Solution <xxx>**, where <xxx> are your initials.

- Add at least one property to the solution.

- Add at least one role to the solution.

- Add at least one case type to the solution.

Task 2. Deploy the solution

- **Validate** the solution.

- **Deploy** the solution.

- Check the solution deployment logs.

Task 3. Test the solution.

- Open **Case Manager Client**.

- **Manage Roles** in order to open the solution. Add **p8admin** to the roles.

- **Open** the solution.

- Create a case.

- Open the **Case Details** page.

- Log out of all applications and close all browsers.

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Create properties and document classes

IBM Case Manager V5.3.2

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Unit objectives

- Create case properties
- Create task properties
- Create business objects
- Create document classes

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Unit objectives

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Why create properties and document classes?

- Properties hold case data that caseworkers use for completing tasks.
  - Properties are like data fields that apply to a case or a document. For example:
    - Product number
    - Customer name
    - Phone number
- Document classes are types of documents that are used for processing cases.
  - Document classes are classes of documents that are used in a case. For example:
    - Customer complaint
    - Loan application
    - Expense report

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Why create properties and document classes?

Although it might be possible to create a solution that does not include properties or document classes, such a solution would not likely have any practical applications.

Properties are fields that can hold data, and which are associated with cases, tasks, or documents. For example, a mortgage case type might have the following properties: customer_name, customer_address, bank_account_number. Workers can use these properties to search for cases or their associated documents.

Document classes are types of documents that are used for case work. A document class is like a template for all documents of that class. All documents of the same class have the same properties. For example, a customer complaint document class might include properties such as customer_name and product_number.

You can use the same properties for case types and document classes.

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When to create new or reuse existing properties

- You can create a new property or use existing properties from a deployed solution.

- In most instances, you create new properties as you create your solution.

- You might reuse existing properties in these situations:
  - An existing solution has the properties that you need.
  - Properties are used by other applications.

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When to create new or reuse existing properties

New properties that are created in an IBM Case Manager solution are included in other Case Manager entities like In-baskets, Document classes, or Case types.

When properties are created with the New option, the Case Manager Builder has complete control over setting all the property attributes.

When the solution is deployed, the new properties that are created for the solution become property templates in a target object store.

You can reuse properties when there is a good reason. For example, if you have a loan solution and a customer service solution, you might use the same customer_account property in both solutions. When you reuse a property, you reference a template that is already defined in the target object store. Property attributes cannot be changed.

The New option in the Add Property list causes the solution prefix to be concatenated with the property name to form a unique identifier for the property template, for example, sol2_propertyname.

The Reuse Property requires you to identify the property template that you want to reuse from a deployed solution, for example: sol1_propertyname.

The Reuse Property list option can also reference Property templates that already exist on the object store. These properties have no solution prefix.

The property unique identifier is also known as the property symbolic name.

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When to use case properties and task properties

- Case properties are used for case searches and case information.
  - Defined as content data
  - Maintained on the case folder object
  - Used for general case processing
- Task properties are used for task processing.
  - Defined as workflow data
  - Maintained on the task object
  - Used whenever task-specific information provided during the workflow steps needs to be available after the workflow is completed.
- You can add either type of property to an in-basket.
- Users can distinguish between these two properties by their object type.

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When to use case properties and task properties

Case properties are properties of the case folder object. Case properties can be viewed and edited (if the user is authorized) in Case Manager Client from the Properties Widget. Case properties retain their values through the lifecycle of the case object.

Customer_Name and Complaint_Description, are good candidates for case properties.

Task properties retain workflow parameter information and make it available after the workflow is completed. Workflow parameters are otherwise lost when the workflow terminates.

Task properties persist on the task object in Content Platform Engine. The advantages for using task properties are that they improve solution development and avoid using case properties as a work-around where properties are only needed on the task object. Task properties were added in ICM Case Manager v5.2.1. Prior to this version, solution builders had to map workflow parameters to case properties in order to persist workflow parameters information.

Dedicated task properties do not clutter a case instance with properties that are not relevant to the case.

Task property values are kept in sync between workflow, work queues and task object.

A brokerage might perform a suitability review task whenever appropriate conditions are met. The results of the suitability review must be available after the task completes. Task properties, such as Approver and Review Result might be used in this scenario.

Task properties are not supported for the following objects:

- Task preconditions
- Rule definitions
- Custom tasks
- Container tasks
- Forms

Also, there is no enhancement in Case Analyzer regarding task property modification related events and statistics.

Using property options

- When you create properties, you can set the property options.
- Name
- Description
- Type
- Unique Identifier
- Value options:
  - single value or multiple values
  - maximum length (String type)
  - maximum and minimum values (Float and Integer types)
  - choice list (Integer and String types)
  - default value (All property types)

Using property options

The Name is used to identify the property. A property has a display name and a symbolic name. The display name is the name as it appears in the user interface.

The symbolic name is also called the unique identifier. The solution prefix is merged with the property name to create a property name that is unique on the object store. For example, if a customer_name property exists on the object store, and the solution prefix is SOL, the new property will have the unique identifier SOL_customer_name.

Each object and property on the object store must have a unique identifier. You cannot create a symbolic property name if that property name already exists. The solution prefix helps to ensure that you can create a property with any name because its symbolic name is unique. If an object with the same unique identifier already exists in the target object store, then the solution cannot be deployed.

Description is the description of the purpose of the property.

Several property types exist:

- Boolean - Has a binary value that is either true or false.

- DateTime - Has a value based on the date and time that can be used for recording times and for calculations. Value options: Default value: example: 12/20/2010 00:00.00

- Float - Has a float data type that is typically used for fractional calculations. Value options: Maximum value, Minimum value, Default value sample: 123456.4321

- Integer - Has an integer data type that is used for whole-number calculations. Value options: Maximum value, Minimum value, Choice list, Default value sample: 123456

- String - Has an alphanumeric string data type that can be used for names or other non-calculated values. Value options: Maximum length, Choice list, Default value sample: Country

- Business Object – This property is a multi-valued property that takes on the value of a business object. Business objects are a used to organize objects with multiple properties into a table. After you create a business object, you create a business object-valued property in order to use it.

You specify the following value options:

- Single value or Multiple values. If a property must have only one value, such as a customer name, then select Single Value. If the property can have multiple values, such as a phone number, select Multiple Values.

- Maximum length (String type). You can determine the maximum allowable string length.

- Maximum and Minimum values (Float and Integer types). You can determine the maximum and minimum values for a Float or Integer.

- Choice list (Integer and String types). You can create choice lists to allow property value selection instead of typing. At runtime, the user selects from among a menu of provided options. For example, a product model might be chosen from a choice list of available product offerings.

- Default value (All property types). You can add a default value that users can overwrite with their own data or leave as is.

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Creating properties

- You can create property templates in several places.
- Properties are always added to the solution context.
- Complete property configuration is possible only at the solution level.

Creating properties

In Case Manager Builder, you can create properties directly on the solution, on document classes, or on case types.

Wherever you create properties, they are added to the solution, so you can later access them from the solution Properties tab.

If you define properties when you create document classes or case types, you must return to the solution Properties tab to set the following options:

- Cardinality (single or multiple element)

- Limits (Maximum or minimum value for integer and float or length for string)

- Choice list definition (integer or string types)

Demonstration 1: Add properties to a solution

IBM Training

Customer Service Solution
A customer service solution.
Solution prefix: CS
Created by p8admin
Created on February 6, 2018

CS

| Properties | Roles | In-baskets | Documents | Business Objects | Pages | Case Types |

Add Property   OK All

Name ^	Type	Attributes	Description
Customer Since	DateTime		
Given Name	String		
Good Customer	Boolean		
Happiness Rating	Integer		How happy is the customer with our service?
Keywords	String		Enter keywords for the type of issue.
Priority	Integer		
Product ID	String		
Product Name	String		
Products Ordered	Business Object		
Quantity	Integer		
Rate	Float		
Service Level	String		Level of service for the customer

Create properties and document classes   © Copyright IBM Corporation 2018

Demonstration 1: Add properties to a solution

Demonstration 1:
Add properties to a solution

Purpose:

As part of the preparation for creating a case management solution you must add properties to a solution. These properties can later be used in cases, document classes, tasks, and steps.

In this scenario, you create a simple customer service solution that you can later build upon.

In this procedure, you log in to Case Manager Builder and create a Customer Service Solution. You add properties, business objects, and document classes to this solution.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Log on to Case Manager Builder.

1. Start **Firefox**.

2. Log on to **Case Manager Builder** with the following credentials:

   - User name: `p8admin`

   - Password: `FileNet1`

Task 2. Create a Customer Service Solution.

1. On the Solutions page, click **Add Solution** (button with a plus sign).

2. Type `Customer Service Solution` in the **Name** field.

3. Type `CS` for the **Solution prefix** field.

4. Type a description: `A customer service solution`.

5. Click **OK**.

   A solution window opens for the Solution. The default solution icon is a two-letter representation of your solution name.

6. Optionally, click the icon menu to select a different solution icon.

Task 3. Create a string property.

Use string properties for alphanumeric data, such as names and identification numbers.

1. On the **Properties** tab, click **Add Property > New**.
2. In the **Property Name** field, type: `Ticket Number`.
3. Change the **Maximum Length** field to 10.
4. Click **OK**.
5. Create the following string properties with default property settings:

   - `Surname`

   - `Given Name`

Task 4. Create a choice list.

Use choice lists to constrain property values to valid entries, to save time for users, and to prevent data entry errors. You must create the choice list first, then add it to the property. The display name and the value do not need to match.

1. On the **Properties** page, click **Manage Choice Lists**.
2. On the **Manage Choice Lists** page, click **Add Choice List**.
3. In the **Name** field, type `Service Level`.
4. Click **Add Choice Item**, and then enter the following data:

   - **Display Name**: `Platinum`.

   - **Value** : `1`.

5. Click **Add Choice Item** again, and then enter the following data:

   - **Display Name**: `Gold`.

   - **Value** : `2`.

6. Continue to add the following additional service levels to the choice list:

   - `Silver: 3`

   - `Bronze: 4`

   - `Copper: 5`

   - `Lead: 6`

7. Once all service levels are created, click **OK**.
8. Click **Close**.

Task 5. Create a string property with a choice list.

You created a choice list that you can now add to a property.

1.   On the **Properties** tab, click **Add Property > New**.
2.   In the **Property Name** field, type `Service Level`.
3.   In the **Description** field, type `Level of service for this customer`.
4.   From the **Choice List** menu, select **Service Level**.
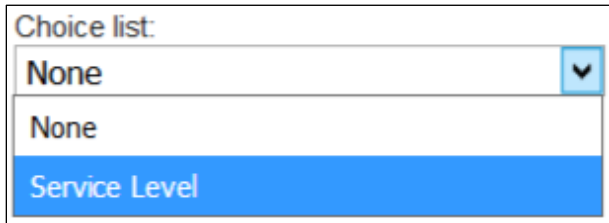
5.   Click **OK**.

Task 6. Create a datetime property.

Use DateTime property to record dates and time-of-day.

1.   On the **Properties** tab, click **Add Property > New**.
2.   In the **Property Name** field, type: `Customer since`.
3.   Select the **DateTime** property type from the **Type** list.
4.   Click **OK**.

Task 7. Create a Boolean property.

Boolean properties hold a true or false value.

1.   On the **Properties** tab, click **Add Property > New**.
2.   In the **Property Name** field, type: `Good customer`.
3.   Select the **Boolean** property type from the **Type** list.
4.   Under **Define Property Values**, set **Default value** to **True**.
5.   Click **OK**.

Task 8. Create an integer property.

Use integer properties to hold whole number values that might be used for calculations.

1. On the **Properties** tab, click **Add Property > New**.
2. In the **Property Name** field, type: `Happiness Rating`.
3. In the **Description** field, type: `How happy is the customer with our service?`
4. Select the **Integer** property type from the **Type** list.
5. Set **Minimum value** to `1`.
6. Set **Maximum value** to `5`.
7. Set the **Default value** to `5`.
8. Click **OK**.

Task 9. Create a float property.

Use float properties for number values that require precision that might be used for calculations.

1. On the **Properties** tab, click **Add Property > New**.
2. In the **Property Name** field, type: `Rate`.
3. Select the **Float** property type from the **Type** list.
4. Click **OK**.

Task 10.   Create a multi-valued property.

A property can have multiple values. For example, a customer might have multiple phone numbers.

1. On the **Properties** tab, click **Add Property > New**.
2. In the **Property Name** field, type: `Keywords`.
3. In the **Description** field, type: `Enter keywords for the type of issue`.
4. Select the **String** property type from the **Type** list.
5. Select the **Multiple values** option.
6. Click **OK**.
7. Click **Save and Close**.
8. Log out of **Case Manager Builder**.
9. Close your **Firefox** browser.

> **Results:**
> **You created a Customer Service Solution. You added properties of different data types to this solution.**

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What are business objects?

- A business object is a structured data type that represents a case entity as a collection of properties.
- Business problem:
  - Your solution requires a way to display a list of items in a case, with each item having separate properties.
  - Example: A list of people covered by an insurance policy, along with their contact information.
  - Example: A list of medications and dosages used by a patient.
- Solution: Use a business object to represent these items.
- You must also create a case property to reference the business object.
  - You can view this property in the Properties widget on the Case Details page.

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What are business objects?

You can use business objects instead of multi-valued properties as places to store related data. For example, you might define a business object named dependents to represent persons who are covered by an insurance policy. You then assign the object properties that apply to any person who is insured, such as surname, given name, and contact information. A case worker who has access to the case can see at a glance all of the insured people who are covered by the policy.

Business objects are supported only in Content Platform Engine repositories, V5.5.0 or later.

Displaying business objects

- In the Case Details page, business objects are displayed as tables.
- For example, an insurance policy might list several dependents.

Name	Relationship	Contact phone
Joe Blank	Son	555 555 3322
Susan Rasa	Daughter	555 555 1483
Jude Blanca	Daughter	555 555 3923

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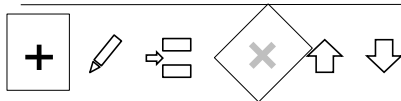
Displaying business objects

Case Manager Client displays business objects as a table in the Case Details page.

- Only five properties are displayed in the table. By default, these are the first five properties that are defined. However, you can customize the properties that are displayed.

- If you click a business object, all of the properties are displayed.

When you create a multi-valued property with the Business Object type, you specify a single Business Object property to be the title property. This title property is what Case Manager Client displays on pages that do not have sufficient room to display the table.

Business objects cannot be used in in the following situations:

- In an expression for the *A property condition is met* option in a task precondition

- In an in-basket

- In Step Designer as a property for a step in a task workflow

- In a business rule

- As a document property

When you create an in-basket or document class, you can see a check box that you can use to display properties from business objects. However, if you add business object properties to in-baskets or document properties, the values of these properties are always blank. The property selection interface is reused in several different areas of Case Manager Builder, and so this checkbox is always visible, even when it is not applicable in all cases. Therefore, when selecting properties for in-baskets and document classes, always leave this check box unchecked.

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Creating business objects

- You create business objects on the Business Objects tab of Case Manager Builder.
- To use a business object:
  - Create a property on the Properties tab.
  - Assign the property the data type of Business Object.
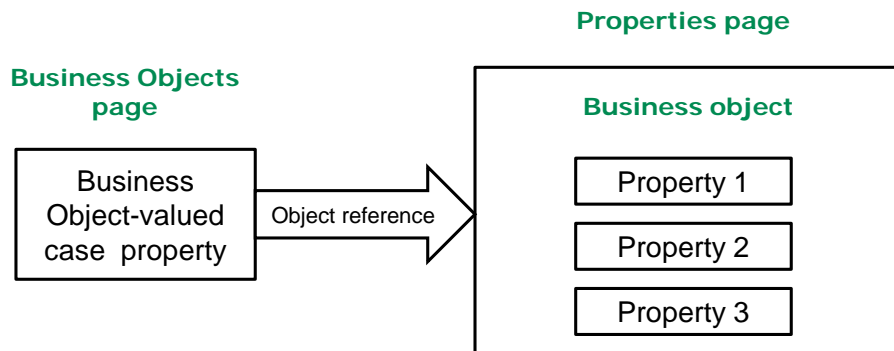
Creating business objects

You create business objects on the Business Objects tab of Case Manager Builder. The business object represents a business entity, such as a person or product that has multiple properties to describe it. You then create a multi-valued case property that references the business object. That case property represents the relationship of the business object to the case, such as Insured Persons, or Owned Products. The case property must have the data type of Business Object. After you select this property type, you must specify a business object that is defined for the solution.

Business objects do not have a unique identifier. Select a property with a unique value to be the Title of the business object.

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Reusing and subclassing business objects

- You can use the same business object for multiple case properties.

```
┌──────────────────────┐
│ Available medications │────────┐
└──────────────────────┘        │      ┌──────────────────┐
                                 ├─────▶│   Medications    │
┌──────────────────────┐        │      └──────────────────┘
│ Prescribed medications│────────┘
└──────────────────────┘
```
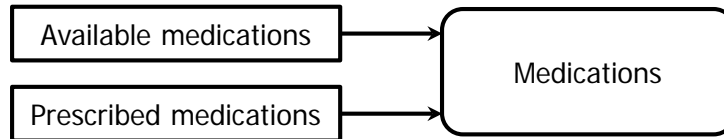
- You can create subclasses of a business object.
  - Children of the business object inherit the properties of the parent object.

```
┌──────────────────┐
│ Insurance Policy │
└──────────────────┘
         │         ┌──────────────────┐
         ├────────▶│  Home Insurance  │
         │         └──────────────────┘
         │         ┌──────────────────┐
         └────────▶│ Health Insurance │
                   └──────────────────┘
```
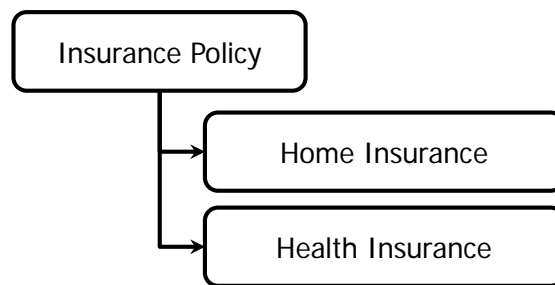
Create properties and document classes   © Copyright IBM Corporation 2018

Reusing and subclassing business objects

The same business object can be used for multiple properties. For example, you can create a single business object, Medications, and then use the object to show lists of available medications and prescribed medications.

Business objects can also have subclasses. Child business objects inherit properties from the parent class. For example, you might have an *insurance policy* business object that has generic properties for any kind of policy. You can then create child objects: home insurance, car insurance, health insurance. The child objects inherit the properties from the parent, but then can have more properties that the parent does not have. For example, after creating a car insurance object, you can add the vehicle identification number as a property.

When you create a business object, you have the option not to use the business object as a property type. You can use this setting if you want users only to use the child business objects for creating properties. In the insurance policy example, it would prevent users from creating a generic insurance policy.

Demonstration 2: Add a business object to a solution

Demonstration 2:
Add a business object to a solution

Purpose:
You need to create a business object to show multiple entries for product information as a table.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Log on to Case Manager Builder.

In this procedure, you log in to Case Manager Builder and create a business object for the Customer Service solution to hold customer contact information. You then add a property to the solution that takes the business object as a value.

1. Start **Firefox**.
2. Log on to **Case Manager Builder** with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

Task 2. Create a business object.

Create a business object to represent products that has product name, product ID, and quantity properties.

1. Click the **Customer Service** solution.
2. On the **Business Objects** tab, click **Add Business Object** > **New**.
3. In the **Name** field, type **Product**.
4. In the **Description** field, type **Product information**, and then click **OK**.
5. Click the **Properties** tab for the business object.
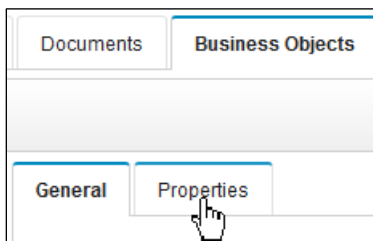
6. Click **Add Property** > **New**.
7. In the **Name** field, type **Product Name**, then click **OK**.
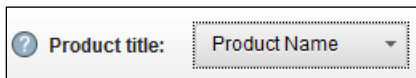
8. Add the following new properties to the **Product** business object:

   - Name: `Product ID`, Type: **String**

   - Name: `Quantity`, Type: **Integer**

Name	Type	Attributes	Description
Product Name	String	▭	
Product ID	String	▭	
Quantity	Integer	▭	

9. Click **OK All**.

10. On the right side, for **Product title**, select **Existing** > **Product Name**.

⊘ Product title: Product Name   ▾

The Product Name title property is the property that is displayed where the whole business object table cannot be rendered.

11. Click **Save**.

Task 3. Create a business object property.

1. Click the **Properties** tab for the solution.

CS ▾

Properties | Roles
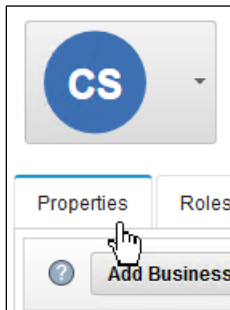
⊘ Add Business

2. Click **Add Property > New**.

3. In the Name field, type `Products Ordered`.

4. From the **Type** field, select the **Business Object** type.

5. Confirm that **Product** is shown in the **Business Object** field.

6. Click **OK**.

Task 4. Close the activity.

1. Click **Save and Close**.

2. Log out of **Case Manager**.

3. Close **Mozilla Firefox**.

Results:
You created a business object to show multiple entries for product information as a table.

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Creating document classes

- Create a new document class.
  - Name it and add properties that are required for the new document class.
- Reuse an existing document class.
  - Specify the unique identifier of the document class.

Creating document classes

How is a document class used?

- When a new document class is defined in the Case Manager Builder, a new class of document is defined in the target object store when the solution is deployed.

- During run time, document classes are used when you add documents to the case document folders.

If you reuse a document class, you cannot add or remove any properties from it. You are limited to the original Document Class class definition.

To reuse a document class, you must know its unique identifier. If the document class was originally created in another IBM Case Manager solution, the unique identifier is a concatenation of the solution prefix and the document class name, for example soln_doctypename.

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2-24

What are document subclasses?

- A document subclass is a "child" of a document class that inherits its properties.
  - A child document class inherits properties from the parent.
  - You can add extra properties to the children.
- Use document inheritance to save design time.

Form

Customer_name
Customer_ID

Loan_form

Acct_form
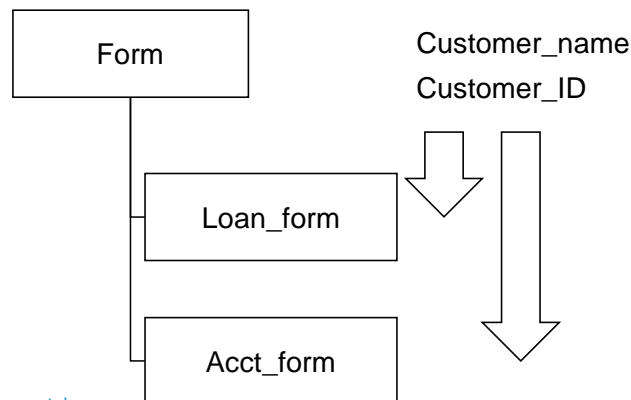
Create properties and document classes   © Copyright IBM Corporation 2018

What are document subclasses?

Creating documents in this hierarchical way can save much time if your document classes share most of the same property templates.

For example, a Form (parent) includes these properties:

- Customer_name
- Customer_ID

Two children are created:

- Loan Application Form
- New Account Form

The children automatically inherit the same properties.

When you create document classes, be sure not to have another document class selected when you click the button, otherwise, your new class will automatically be added as a subclass.

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Demonstration 3: Add document classes to the solution

- Add a document class to a solution.
- Add a document subclass to a solution.

Demonstration 3: Add document classes to the solution

Demonstration 3:
Add document classes to the solution

Purpose:
Documents provide content that is used to support cases. To add documents to a case, you must use document classes. If the documents must contain case-specific metadata, then you create the document class to meet these requirements. In this demonstration, you add a document class to a solution. After you add the document class, add a test case type and then deploy the solution to view how your artifacts look in Case Manager Client.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Edit Customer Service Solution.

In this procedure, you log in to Case Manager Builder and open Customer Service Solution for editing. You add new document classes to the solution.

1. Start **Firefox**.

2. Log on to **Case Manager Builder** with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

3. Click **Customer Service Solution** to open it for editing.

Task 2. Add a document class.

1. Click the **Documents** tab.

2. Click **Add Document Class > New**.

3. Type **ComplaintDoc** for the Name.
    Notice that the unique identifier is automatically completed.

4. Click **OK**.

Task 3. Add properties to the document class.

These properties provide document metadata.

1. Open the **Properties** tab for the **ComplaintDoc** document class.
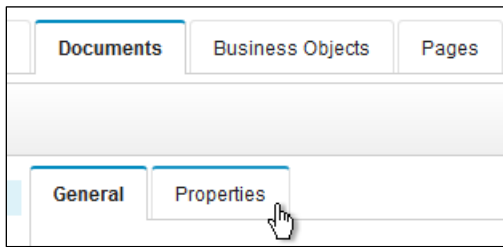
2. Click **Add Property > Existing**.
3. Select **Business object properties** to show business object properties.
4. Select the following properties:

    - **Given Name**

    - **Surname**

    - **Ticket Number**

    You can hold the CTRL key to select multiple properties.
5. Click **OK**.
6. Click **OK All**.

Task 4. Create a document subclass.

You can create a document subclass by creating a document class when another document class is selected.

1. With **ComplaintDoc** selected, click **Add Document Class > New Subclass**.
2. Type `ServiceComplaint` in the **Name** field.
3. Click **OK**.

    You can verify that the new class has inherited the properties by clicking the Properties tab and then selecting the Show Inherited Properties option.

Task 5. Create another document class.

Make sure that you can create a document class that is not a subclass of another document class.

1. Click **Add Document Class > New**.
2. Type `Support` for the Name.
3. Click **OK**.

    You can verify that the new document class has no properties by opening the properties tab.

Task 6. Create a role and a case type.

To view the new artifacts in the Case Manager Client, you must create at least one role and one case type.

1. Click the **Roles** tab.
2. Click **Add Role**.
3. In the **Role** field, type: **CSS_Tier1**.
4. Click **OK**.
5. Click the **Case Types** tab.
6. Click **Add Case Type**.
7. In the **Case type name** field, type `Product Complaint`.
8. Click **Save**.

Task 7. Add properties to the case type.

To see the properties on a case, you must add the properties to the case type. You are on the Case Type Attributes page.

1. Click **Properties**.
2. Click **Add Property > Existing**.
3. Click **Select All**.
4. Click **OK**.
5. Click **OK All**.
6. Click **Save**.

Task 8. Validate and deploy your solution.

1. Click **Validate**.
2. Click **Save and Close**.
3. Click **Deploy** to deploy the **Customer Service Solution** and wait for the deployment indicator to complete the deployment and show a checkmark.
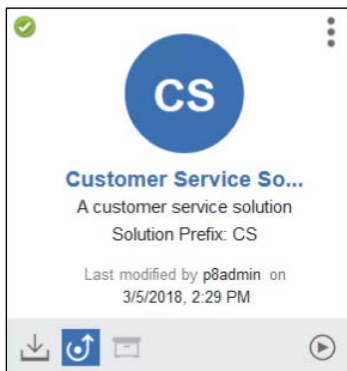
Task 9. Test your solution.

1. Click **Test**.
2. Click **Customer Service Solution > Manage Roles**.
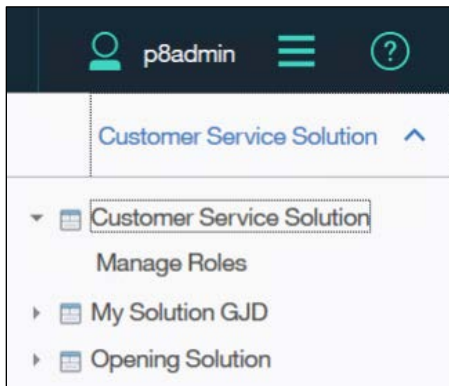
3. Assign **p8admin** to the **CSS_Tier1** role.
4. **Save** the role assignment.
5. Open the **Cases** page.
6. Click **Add Case > Product Complaint**.

    The new case opens, with several properties without values. You can add values to test.
7. Enter the following values:

    - **Customer Since:**   *today's date*

    - **Given Name:**   `Rod`

    - **Happiness rating:**   `5`

    - **Rate:**   `4`

    - **Service Level:**   **Copper**

    - **Surname:**   `Reely`

8. Add at least two values for the multi-valued property, Keywords, by clicking **No items to display**, and then clicking the **Add** (plus sign) button to add items. Use any values that you want.
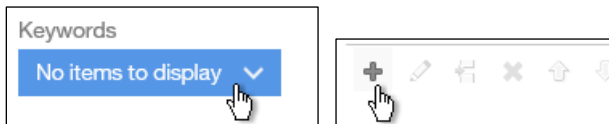
9. Click **OK** when you are finished adding values to Keywords.

Task 10.   Enter business object property values.

The Products Ordered business object is shown as a table. To add values to the business object, you must add a business object instance.

1. Under the **Products Ordered** table, click **Add**.

2. On the **Products Ordered** page, enter values for the following properties:

    - **Product Name**: `Heavy Head`

    - **Product ID**:   `339993`

    - **Quantity**:   `1`

3. Click **OK**.

    These are suggested values: you can add other values if you want.

4. Add at least two more products, for a total of three. Use any values that you want.

5. Verify that you can see values for the **Customer Contact** business object.

6. Click **Add** in the top right corner of the page.

7. On the **Cases** page, click **Search** to search for the case.

    Only one case is returned.

8. Click the case title to open the case in the Case Details page, and then review the various properties.

Task 11.   Add a document to the case.

1. On the Case Details page, click the **Documents** tab if it is not already selected.

2. On the **Document** tab, click **Add > Add Document from Local System**.

    Note: if you do not see the option, you may need to resize the pane to be able to see the Add button.
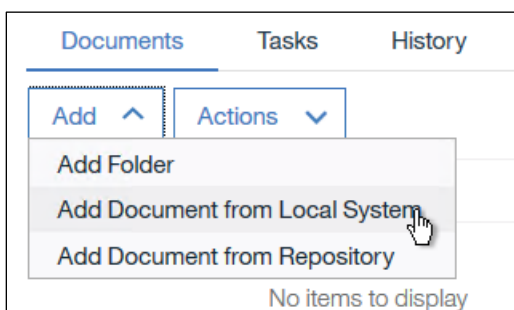
3. Select the **ComplaintDoc** class.
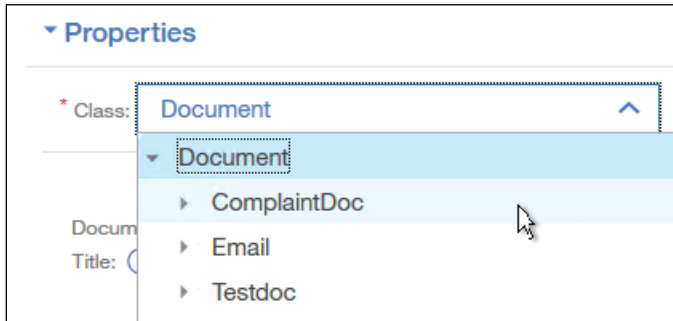
4. Click **OK**.

5. Click **Browse**.

6. Browse to **C:\Training\F2910**.

7. Select any file from this folder. The document title is automatically added. You can change the title if you want.

8. Enter values for the following properties:

- **Ticket Number**: `1`

- **Surname**: `Reely`

- **Given Name**: `Rod`

9. Click **Add**.

10. Confirm that the document is now displayed in the **Documents** tab.
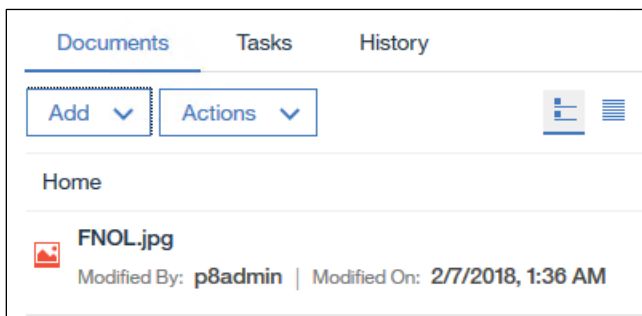
11. Log out of all applications and close all browsers.

> **Results:**
> **In this demonstration, you added the document class, added a test case type, and then deployed the solution to test it. You created a case, and then added a document to the case.**

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Unit summary

- Create case properties
- Create task properties
- Create business objects
- Create document classes

Create properties and document classes   © Copyright IBM Corporation 2018

Unit summary

Exercise 1: Create properties and document classes

- Create a Simple Claims solution.
- Create properties.
- Create a choice list.
- Create a business object.
- Create document classes.

Create properties and document classes

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Exercise 1: Create properties and document classes

Exercise 1:
Create properties and document classes

You are a Solution Builder who is responsible for building a case management business solution to handle auto insurance claims with IBM Case Manager. As part of the preparation for creating a case management solution you must create properties and define a document class.

You will continue to build this solution throughout the course, so make sure that you have properly completed each exercise before going on to the next.

To complete this exercise, you must complete the following activities:

- Create a Simple Claims solution.

- Add properties to the solution.

Property name	Type	Single/Multi	Default value
Due Date	DateTime	A single value	<none>
Date Of Loss	DateTime	A single value	<none>
Estimate	Float	A single value	<none>
Policy Current	Boolean	A single value	True
Surname	String	A single value	Name
Given Name	String	A Single value	Name
Policy Number	String	A single value	9999

- Create a business object with a choice list to hold mobile, work, and home phone numbers.

- Create a business object (to represent vehicles) that includes the following properties: make, model, year, and VIN.

- Create document classes with the following properties:

Document class	Description	Properties	Options
FNOL	First Notice of Loss	Date of loss	
		Policy Current	
		Policy Number	Required
Supporting Document	Any documents that support a claim.		

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Simple Claims Solution**

Task 1. Create a solution.

Use the Case Manager Builder application on your student system and the information in the following data tables to complete this exercise.

- Start the Case Manager Builder application from a Firefox browser window and log in with the following credentials.

    - User name: **p8admin**

    - Password: **FileNet1**

- Create a solution by using the following data:

    - Case Manager Builder application: http://vclassbase:9081/CaseBuilder

    - Solution Name: **Simple Claims Solution**

    - Solution Prefix: **SCS**

    - Description: **Auto Insurance Simple Claims Solution**

    - Select the icon that resembles an automobile.

Task 2. Create properties.

- Add properties to your Simple Auto Claims solution by using the following table.

Property name	Type	Single/Multi	Default value
Due Date	DateTime	A single value	<none>
Date Of Loss	DateTime	A single value	<none>
Estimate	Float	A single value	<none>
Policy Current	Boolean	A single value	True
Surname	String	A single value	Name
Given Name	String	A single value	Name
Policy Number	String	A single value	9999

Task 3. Create a choice list for phone number types.

- Create a choice list for phone number types named **Phone**. Include the following choice items:

  - **Mobile**

  - **Home**

  - **Work**

  - **Other**

Task 4. Create a Phone Number business object.

- Create a business object named **Phone Number** that has the following single-value string properties:

  - **Type** (For the **Type** property, specify the **Phone** choice list)

  - **Number**

Task 5. Create a Vehicle business object.

- Create a business object named **Vehicle** that has the following single-value properties:

    - **Make**:   **String** type

    - **Model**:   **String** type

    - **Year**:   **Integer** type

    - **VIN**:   **String** type

- Specify **VIN** (vehicle identification number) as the **Vehicle title** property.

Task 6. Create case properties for business objects.

- Create a property that takes the Business Object type that references the **Phone Number** business object. Name the property **Phone Numbers**.

- Create a property that takes the Business Object type that references the **Vehicle** business object. Name the property **Insured Vehicles**.

Task 7. Create document classes.
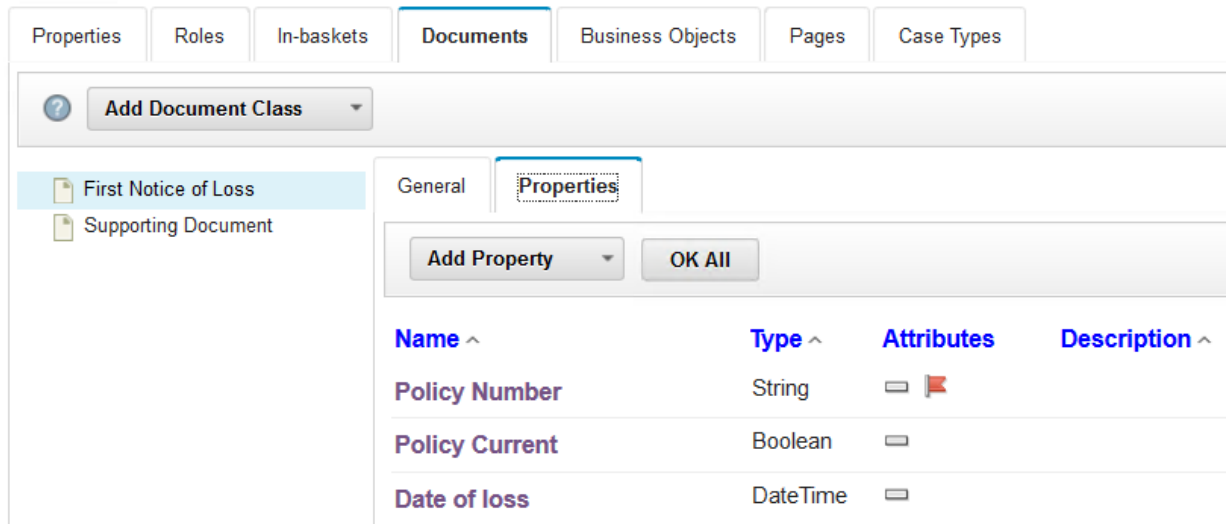
- Add two document classes to your solution by using the following data table.

    Use the existing case properties for the FNOL document class.

Document class	Description	Properties	Options
First Notice of Loss	First Notice of Loss	Date of Loss	
		Policy Current	
		Policy Number	Required
Supporting Document	Any documents that support a claim.		

Task 8.   Verify and save your solution.

You are going to use this solution for future exercises, so make sure that you have completed this exercise correctly.

- On the **Properties** tab, verify that you see all of the properties that you created.

- Confirm that **Phone Numbers** and **Insured Vehicles** properties belong to the **Business Object** property type.

- On the **Documents** tab, verify that you see document classes:
First Notice of Loss and **Supporting Document**.

- On the **Properties** tab of the **First Notice of Loss**, ensure that the document class has the following properties:
Policy Number, **Policy Current**, and **Date of Loss**.

- Note these observations:

  - The two document classes are at the same level in the hierarchy.

  - The **Policy Number** property has a red flag in the **Attributes** column to indicate that it is a required property.

- Save and close your solution.

- Log out of **Case Manager Builder**.

- Close **Firefox**.

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Create roles and in-baskets

IBM Case Manager v5.3.2

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Unit objectives

- Create roles
- Create in-baskets

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Unit objectives

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Why create roles and in-baskets?

- A solution includes roles and in-baskets.
- Roles define who completes tasks.
- Role members access work from their in-baskets.

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Why create roles and in-baskets?

You use roles to assign work to people. When a user logs on to Case Manager Client, they must belong to a role in order to access the cases. Tasks that are assigned to roles must be completed by a member of that role. A user can belong to multiple roles. To view different role in-baskets, the user must switch between roles.

When users open the Work page of Case Manager Client, they see their in-basket. The in-basket is role-specific. The in-basket shows work that is assigned to that role. Users who belong to that role can open work from their in-basket to complete.

When you define a role, an in-basket is automatically created for that role with default settings. After you create the role, you can configure the in-basket to customize what the role-members see and how they receive work.

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What is a role?

- A role defines and groups people by the type of work they do.
- Examples:
  - customer service representative
  - loan officer
- Why define roles?
  - Roles enable work to be routed to a particular group of users who need to perform a step in a task.
- Use Add Role on the Roles page to define a role.

Create roles and in-baskets

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What is a role?

After you define roles, you assign users to those roles.

For example, you can assign Carol, Jack, and Connor to the customer service representative role. When a work item is assigned to customer service representative, all three users see the item in their role in-basket. The first one who opens that work item can then complete it.

When you create a role definition, you configure the following options:

- Role name, Description
- Role settings, including in-basket display options, work assignment options.

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What is an in-basket?

- An in-basket is where case workers go to find their work.
- From the in-basket, they can do the following activities:
  - Open work items
  - Sort work items
  - Optionally reassign work items or move them between in-basket types.
- Types of in-basket:
  - Role In-basket
  - Personal(Common) In-basket
  - Personal(Role) In-basket
  - Assignment In-basket

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What is an in-basket?

Each role is assigned an in-basket. Role members use the in-basket to view, open, and modify work. The Role in-basket is a work queue where cases are routed.

Role members can see the work items that are assigned to that role and can access task steps that are assigned to that role. Only a member of a role has access to the work.

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Types of personal in-baskets

	Personal (common)	Personal (role)	Assignment
Description	In-basket shared by many roles.	In-basket tied to a role. Display depends on role.	Shows all assigned work in a solution.
Target User	Individual users	Individual users	Managers, supervisors
Default name	My Work	My Work	All Assigned Work
Created	When a solution is created	When selected	When a solution is created
Displays	All of the user's assigned work for a solution	All of the user's assigned work for a solution.	All assigned work for the solution

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Types of personal in-baskets

The personal in-basket displays the work items that are assigned directly to you. You can select any work item in your in-basket, open it to complete the item, reassign it to someone else, or view its attachments or data fields. The solution builder can prevent users from reassigning work items.

A role in-basket provides access to work items that are assigned to a group of people who share the same role. The in-basket can be configured to display a list of work items from which anyone in that role can select the next item to work on. Alternatively, the in-basket can be configured to display only a button that you click to open the next item to work on.

The user can perform these operations from the in-basket:

- Select work from a personal in-basket and open it.

- Complete the work.

- Reassign the work to someone else.

- View attachments or data fields.

You can move a work item from the role in-basket to your own in-basket for processing. You can also process the work item from the role in-basket. Because access to a role in-basket is determined by the person who designed the application that you are using, you might not be able to see a specific role in-basket. Additionally, you might not be able to reassign work items or move work items to your personal in-basket if these actions are not authorized by the solution builder.

The assignment (all assigned work) in-basket displays a list of all the open work items that are assigned to users. Work items that are assigned to roles are not listed. You can filter the list to display only the work that is assigned to a specific user. Only users in specific roles, such as managers, can access this in-basket.

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Creating a role in-basket

- Use IBM Case Manager Builder Roles tab to create roles.
- Use the In-Baskets tab to configure in-basket properties.
- Specify General tab parameters:
- Specify In-basket Filter tab parameters:

Creating a role in-basket

The General tab includes the following properties:

- Name
- Description

Only properties that are already defined as solution properties can be added to the in-basket.

Select the property for sortability and select the sort order.

The In-basket Filter tab includes the following properties:

- Filter operators
- Text to display

You configure filters to restrict the items that are displayed in the in-basket to reduce in-basket clutter and to minimize the time spent locating items. For example, you might have a filter that shows only items that apply only to a specific product line. The solution builder specifies the property to be used as a filter. The case worker can specify the values for that property to be filtered on.

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What are the in-basket properties?

- Sortable - allow users to sort by this property?
- Sort default - which property is the default for sorting?
- Sort order - ascending or descending?
- Object type - case property or task property?

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What are the in-basket properties?

Properties that you add to an in-basket appear as columns in the end-user experience. When you add properties to an in-basket, you configure several options for how to organize and display those properties.

- **Sortable** - Use the Sortable check boxes to select the properties that you want users to be able to sort by. When a user clicks a column header, the column sorts the items according to the contents of that column. You can make several properties sortable, so that the user can choose which property to use for sorting the items.
- **Sort default** - Use the Sort Default setting to determine which property is the default for sorting. When the user opens the in-basket, the items are already sorted by these values.
- **Sort order** - Use Sort Order to determine whether the work items are sorted in ascending or descending order.
- **Object Type** - Use the Object Type field to differentiate case and task properties in an in-basket. A property that is added to an in-basket column might exist on the case object or on the task object that is the parent of the work item. A case property can be added to a task to persist its value when the task is created. However, a task property might be persisted only as long as the task is running. If you configure the in-basket to display a property of the wrong object type, it displays an empty column.

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Demonstration 1: Create a role in-basket

📁 Cases ∨				Customer Service Solution | CSS_Tier2 ∨

Work   Cases

[Manage Roles]   [Add Case ∨]

CSS_Tier2 (0)   My Work (0)

Filter: No filters applied   Reset

Step Name	Time Created ⌄	Subject	Ticket Number	Surname	Given Name

The in-basket is empty

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Demonstration 1: Create a role in-basket

Demonstration 1:
Create a role in-basket

Purpose:
You create roles in order to allow users to work on cases. Their in-baskets provide information that they use to open work items. Control how users interact with cases by creating roles and in-baskets. In this demonstration, you update the Customer Service Solution that you created in a prior exercise.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Open the Customer Service Solution.

1. Start **Firefox**.

2. Log on to Case Manager Builder with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

3. Click the **Customer Service Solution** case to edit it.

Task 2. Add a role.

1. Click the **Roles** tab.

2. Click **Add Role**.

3. Type **CSS_Tier2** for the **Role**.

4. Click **OK**.

Task 3. Configure the in-basket properties.

1. Click the **In-baskets** tab.
2. Click **CSS_Tier2**.
3. Click **Select Property**, and then select the following properties:

   - **Given Name**

   - **Surname**

   - **Ticket Number**

   Hold the **CTRL** key to select multiple properties.

4. Click **OK**.
5. For the **Time Created** property, select the **Sortable** option, and then ensure that **Ascending** is selected from the **Sort Order** list.

   Time Created is a system property. Although you did not add this property to the solution, this system property is available to use.

6. Using the up-arrow and down-arrow controls at the right edge of the rows (you need to mouse over, to see them), reorder the properties as follows:

   - **Step Name**

   - **Time Created**

   - **Subject**

   - **Ticket Number**

   - **Surname**

   - **Given Name**

Name	Sortable	Sort Default	Sort Order	Object Type
Step Name	☐			
Time Created	☑	◉	Ascending ⌄	
Subject	☐			
Ticket Number	☐			Case ⌄ ⇧ ⇩ 🗑
Surname	☐			Case ⌄
Given Name	☐			Case ⌄

Also, you can click and drag properties up or down in this list.

Task 4. Configure the in-basket filters.

In-basket filters can be used to limit the work that is displayed in an in-basket.

1. Click the **In-basket Filters** tab.
2. Click **Add Filter**.
3. Click **Select Property**, and then select **Good customer**.
4. Select **is equal** for the **Operator**.

    Case workers can work only on cases for good customers.
5. Click **OK** to finalize the In-basket Filters definition.
6. Click the **In-basket General** tab.
7. Click **OK All** to finalize the role definition.
8. Click **Save**.

Task 5. Deploy the solution.

1. Click **Validate** to validate the solution.
2. Click **Save and Close**.
3. Click **Commit** to commit your changes.
4. Click **Commit My Changes**.
5. Click **Deploy**.
6. Once you have a checkmark appear, click **Test**.

Task 6. Manage roles.

1. On the **Work** page, click **Manage Roles**.
2. Assign **p8admin** to the **CSS_Tier2** role.
3. **Save** the role assignment.

Task 7. View in-baskets

1. Open the **Work** page, if it is not already open.
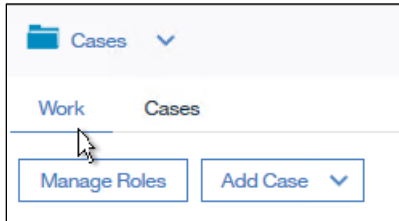
2. Verify that for CSS_Tier1, the in-basket has the following columns:

    *   **Step Name**

    *   **Time Created**

    *   **Subject**

3. At the top of the page, click **Customer Service Solution CSS_Tier1** to open the roles menu.

4. Select the **Customer Service Solution > CSS_Tier2** role.
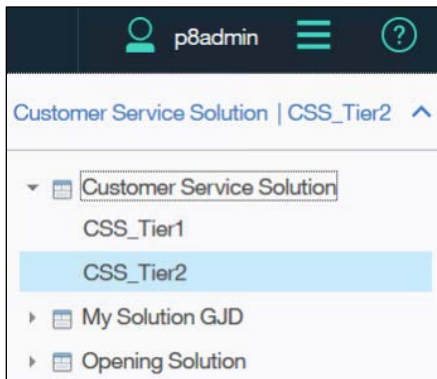
5. Verify that the in-basket for the CSS_Tier2 role has the following columns:

    *   **Step Name**

    *   **Time Created**

    *   **Subject**

    *   **Ticket Number**

    *   **Surname**

    *   **Given Name**

6. Log out of all applications and close all browsers.

Results:
In this demonstration, you added roles to a solution and configured their in-basket properties.

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Unit summary

- Create roles.
- Create in-baskets

Create roles and in-baskets   © Copyright IBM Corporation 2018

Unit summary

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Exercise 1: Create roles and in-baskets with filters

- Create roles and in-baskets with filters.

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Exercise 1: Create roles and in-baskets with filters

Exercise 1:
Create roles and in-baskets with filters

In this exercise you build upon the Simple Claims Solution that you created in a prior exercise. You are going to add roles and in-baskets to the solution.

The Simple Claims Solution requires two roles:

- Customer Service Representative
- Customer Service Representative properties include, in this order:
  - Step Name
  - Date of Loss
  - Due Date
  - Surname
  - Subject
  - Policy Number
- Claim Adjuster
- Claim Adjuster properties include, in this order:
  - Step Name
  - Date Of Loss
  - Due Date
  - Surname
  - Given Name
  - Policy Number

Both roles must have role-based in-baskets that include the properties that they can use to decide whether to open the work item.

Configure the personal inbasket with the following settings:

- In-basket name: My Work.
- Properties include, in this order:
  - Step Name
  - Subject
  - Due Date
  - Policy Number

Make Due Date Sortable, with descending sort order.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

The Simple Claims Solution requires two roles: a customer service representative and a claims adjuster. The customer service representative handles the calls from customers and deals directly with them. The claims adjuster makes decisions regarding insurance claims.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Simple Claims Solution**

Task 1. Create roles.

Use the Case Manager Builder application and the information in the following data tables to complete this exercise.

- Start the Case Manager Builder application from a Firefox browser window.

- Log in as: **p8admin/FileNet1**.

- Edit the **Simple Claims Solution** that you created earlier.

- Add the following roles to the solution:

  - **Customer Service Rep**

  - **Claims Adjuster**

Task 2. Configure the Customer Service Rep in-basket.

Configure the Customer Service Rep in-basket according to the following criteria:

- Include properties, in this order; delete any remaining properties that are not on the list:

  - **Step Name**

  - **Date of Loss**

  - **Due Date**

  - **Surname**

  - **Subject**

  - **Policy Number**

- Make **Date of Loss** sortable, with **Descending** sort order.

Task 3. Configure the Claims Adjuster in-basket.

- Configure the Claims Adjuster in-basket according to the following criteria. Remove properties not in the list, and include properties, in this order:

    - **Step Name**

    - **Date Of Loss**

    - **Due Date**

    - **Surname**

    - **Given Name**

    - **Policy Number**

Task 4. Configure the personal in-basket.

- Configure the personal (**My Work**) in-basket according to the following criteria, and remove any not on the list:

    Include properties, in this order:

    - **Step Name**

    - **Subject**

    - **Due Date**

    - **Policy Number**

- Make **Due Date** sortable, with **Descending** sort order.

- **Save and Close**.

- Log out of all applications and close all browsers.

Unit 4   Create tasks

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Create tasks

IBM Case Manager V5.3.2

IBM Training

Unit objectives

- Create a to-do task
- Create a container task
- Add the to-do list widget to the Case Details page

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Unit objectives

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Why build case types and tasks?

- A complete IBM Case Manager solution must include at least one case type and a task.

- Without tasks, there is no case management.

- Tasks are part of case types.

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Why build case types and tasks?

A Case Manager solution must include a case type and a task. Without a task, nothing happens: there is nothing to launch and nothing for anyone to do. A task can be created only within the context of a case type.
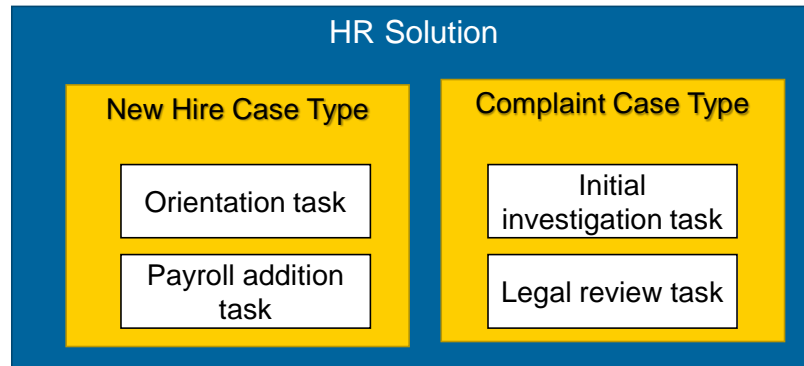
Case types are used for processing types of use-cases. A solution can have many different case types, and each case type can have many tasks.

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What is a case type?

- A case type defines properties, views, case folders, rules, and tasks that are required for processing cases.
- A solution can have multiple case types.
- Each case type can have multiple tasks.

HR Solution

New Hire Case Type

Orientation task

Payroll addition task

Complaint Case Type

Initial investigation task

Legal review task

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What is a case type?

The diagram shows the organization of a human resources solution into case types and tasks. A typical solution has more case types, and each case type would have many more tasks.

A solution consists of one or more related case types.

Case types define the tasks, the necessary documents types to support the tasks, the task steps, and the roles that must complete those steps to solve a business problem. The case type includes properties that are displayed to case workers in views. Related case types make up a solution. The case types provide infrastructure for storing case-specific documents, data help in case properties, business processing, and routing to direct work items to knowledge workers.

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Creating a case type

- Case types are created on the Case Types tab of Case Manager Builder.
- Case type settings:
  - Properties
  - Views
  - Case Folders
  - Rules
  - Tasks
- For each case type, you define its attributes.

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Creating a case type

When you define a case type, you only need to specify the name of the case type. All other options are either set by default or are optional. You can edit the case type attributes later if needed.

- Properties determine which properties are available in the case type.

- Views determines what the case worker sees on the Case Summary, Properties, and Case Search views. For each view, you determine which properties are shown. On the Properties Layout tab, you configure how the properties are displayed in the Properties widget. On the Case Search tab, you configure how the Case Search widget displays, including which properties are searchable by default.

- Case Folders is where you set up subfolders that are used in that case type for documents that are added to the case. For example, a legal case might have an evidence folder.

- Rules are business rules that you create by using the integrated rule builder. Business rules can greatly enhance a solution by automating decisions.

When you create a case type, you configure the following case type attributes:

- Case Type Name is a required attribute. You define the case type name and the description for each case type. The system assigns a unique identifier for the case type that is based on the case type name and the solution prefix.

- Description is an optional field where you can describe the purpose of the case type.

- Starting Document Class is an optional setting where you specify a Document Class to automatically open a case each time a document of this type is added to the system. For example, when a new claim form document is added to the system, a new case starts to process the claim.

- External Repository includes two settings for allowing documents and attachments from repositories other than the Case Manager target object store.

- *Case workers can use Box to collaborate with external users* is an option that you must select if you want to use IBM Case Manager Box integration. You can configure a Box integration to allow external users, such as clients, to add documents to the case without allowing them access to Case Manager Client.

- *Enable case workers to create quick tasks* specifies whether you allow case workers to create quick tasks. A *quick task* represents a one-time activity that is related to a case but not associated with a workflow.

- *Enable case workers to create custom tasks* specifies whether you allow case workers to create custom tasks. A *custom task* is a task that is created in Case Manager Client and is not one of the discretionary tasks that are defined for a case type.

- Default Layout for Add Case Page selects the Case Manager Client page to be displayed when a user adds a case. There are 2 default Add Case pages, *Add Case* and *Add Case Form,* and more can be added.

- Default Layout for Split Case Page selects the Case Manager Client page to be displayed when a user splits a case. The default Split Case page is Split Case. More can be added.

- Default Layout for Case Details Page selects the Case Manager Client page to be displayed when a user views a case. There are 2 default Case Details pages, *Case Details* and *Case Details Form,* and more can be added.

- *Override default case details page for* specifies for which roles you want to override the default case details page.

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Adding properties to the case type

- Why add properties to a case type?
  - Workers use properties for finding, reviewing, and updating cases.
  - Cases can have only the properties that you defined for the case type.
- Assign properties to the case type.
  - Select existing properties that were defined for the solution.
  - Add new properties.
  - Reuse properties from other solutions.

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Adding properties to the case type

Properties hold the metadata for a case. Case workers use properties for finding cases, reviewing cases, and updating case information. Properties that you add to a case type can be used in the tasks of that case type.

You can add new properties or reuse existing property templates from the target object store. Existing properties can come from previously deployed solutions or from other P8 Platform applications. In most cases, you create new properties for your solution. You can reuse an existing property if an existing property template already meets your requirements. Reusing existing properties reduces the database size. If you decide to reuse existing properties, you cannot modify the property attributes.

After selecting existing solution properties or defining new properties, three more attributes can be set.

- Default value

- Required property

- Hidden

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Designing case views

- When you create a case type, you define the Case Views.
  - Case Summary view
  - Properties Layout view
  - Case Search view

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Designing case views

The case views define the properties and their display order in the Case Manager Client. A single property can be used in one or more of the case views.

Use the Case Summary view to define the properties that are displayed in the Summary tab of the Case Information widget and in the Case List widget.

The case list display is used to display search results.

Use the Properties Layout view to define different layouts for properties widgets. There are a number of property containers for designing varied layout views. The default data case view for the Properties widget is the IBM Case Manager system-generated view. Alternatively, you can specify a custom view as the default for the case type. The default view is used unless you configure the Properties widget on a page to use a specific view.

For the Properties Layout view configuration, you format the view with several property containers.

Use the Case Search view to define the properties that are available in the search widget and their display order for building a search in the Search display.
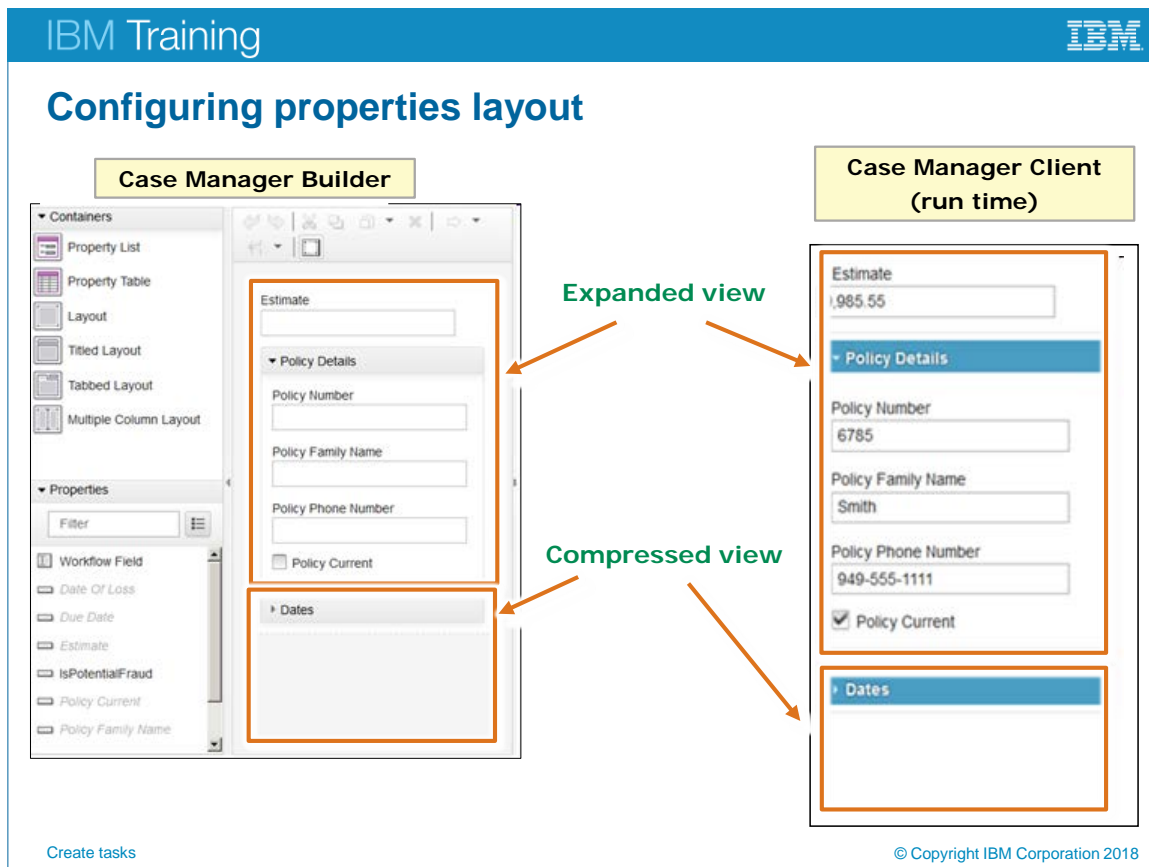
Configuring properties layout

This screen capture shows the interfaces for grouping properties in Case Manager Builder, and the resulting display of property groups in Case Manager Client.

Use the Properties Layout view to define a Properties view. This layout uses a Titled Layout Container to create property groups and the order for the properties in the group. The Properties Layout views are used with any widget.

You can learn more about defining a Properties view in F2940G: Customize the Case Manager Client User Interface (V5.3.2)

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Rules for case folder creation

- Folders provide logical groupings for case-related documents.
- You can create more than one top-level folder.
- You can create subfolders for any folder.
- Folder names can contain 255 characters.
- The folder name cannot contain the following characters:

\ * / < > : | ? "

Rules for case folder creation

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Identify types of tasks

- A task represents a specific activity that is performed as part of a case.
- Types of tasks:
  - Workflow task
  - Custom workflow task (created at runtime)
  - To-do task
  - Quick task (created at runtime)
  - Container task
- For workflow tasks and to-do tasks:
  - You configure the task start methods
  - You configure the task execution options
- For To-Do tasks and Quick tasks:
  - You must include the To-Do list widget in order to see the tasks.

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Identify types of tasks

Tasks are where you define what needs to be done for a case to be processed and completed. Task can be a series of steps connected by routes, a simple instruction for someone to do something. It can be as simple or as complex s the case type requires. Most solution builders create short modular tasks that represent independent work processes. Tasks can also be imported from Case Foundation solutions and reused in IBM Case Manager solutions.

Task types include:

- Workflow tasks. A workflow task represents an activity that is performed regularly for a case. As part of the case type, you define the workflow for the task. This workflow defines the sequence of steps or work items that must be completed for the task along with the role or user that must complete each step.

- Custom workflow tasks. You can enable case workers to create custom tasks for a case type. Case workers can create custom workflow tasks to address unexpected or one-time activities that are related to a case, but which are not formally defined as part of the solution. For example, a case worker determines that a document needs to be reviewed by a person who is not typically part of the review team for a case.

- To-do tasks. A to-do task represents a simple activity that does not have workflow steps. To-do tasks provide a checklist of activities that must be done or information that must be collected for a case type. For example, if the solution that you are designing is for automobile claims and one of the case types is for automobile accidents, you can create a to-do task to enter the completion of making contact by telephone with a claimant.

- Quick tasks. A quick task represents a one-time activity that is related to a case but not associated with a workflow. You can enable case workers to create quick tasks for a case type to help them organize their work or address unexpected or one-time activities. For example, a case worker determines that a follow-up call to a customer is required and adds a quick task to track this requirement. The case worker can assign the quick tasks to another case worker and set a due date.

- Container tasks. A container task is a type of task that serves as a container for other tasks. Container tasks help to manage solution complexity by organizing multiple subtasks into a few larger tasks. Container tasks also prevent automatic tasks from automatically starting at runtime, which makes case creation more efficient. Subtasks can also be container tasks. After you create a container task, you can move tasks into the container.

If users consistently add certain custom workflow tasks, you might consider adding those tasks to the case type.

Task start methods include:

- Automatically means that the task becomes active as soon as the case is created.

- Manually means that a user must manually activate the task.

- Discretionally means that the task is available, but not started in the workflow as soon as a case is created.

Task execution options determine whether a task is required or not for the case to complete.

- If a task is Required, the task must be completed before the case can be flagged as complete.

- If a task is not Required, the task is optional and does not necessarily have to be performed. However, after a task is started, it must be completed or disabled before the case can be complete.

The **To-do list widget** shows to-do tasks and quick tasks. If you add these types of tasks to your solution, you must add the to-do list widget to the Case Details page in order to view the tasks.

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When to use task properties

- Use task properties to retain task data that is not needed on the case.
- Task properties:
  - are properties that are associated with tasks.
  - are not associated with the case folder object.
  - are updated during the task.
  - retain their values after the task is complete.
 - are viewable from Case Manager Client.

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When to use task properties

Case properties are associated with the case folder. Task properties are associated with the task object. Task properties are not necessarily needed for the case, but might be specific to a task. For example, you might need a reviewer's approval score during a specific task, but this score does not need to be part of the case folder.

In prior versions of IBM Case Manager, solution builders would use Process Designer to create an Assign step in order to update case properties with the value of a task property. Now task properties retain their values after the task is complete, this workaround is no longer necessary.
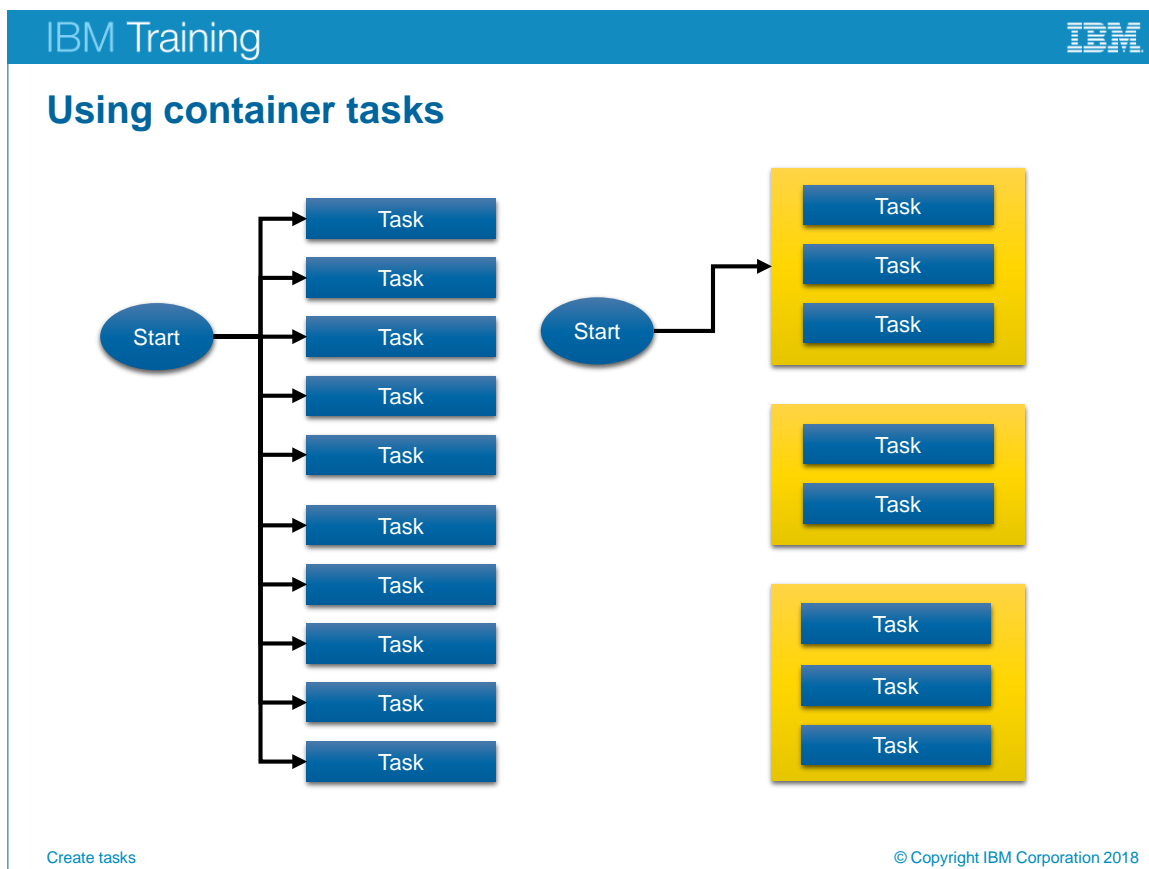
Using container tasks

Container tasks are a useful way to organize tasks in solutions that have many tasks. If your solution has many tasks that start automatically and without preconditions, then all of these tasks start when the case starts. The case starts slowly because all of these tasks are launching at the same time. Furthermore, the case worker user interface is cluttered with too many tasks.

If you organize your tasks into container tasks, then you can use different start methods for the containers. The subtasks do not start until the container task starts. Container tasks provide a handy method for launching groups of related tasks at the appropriate point in the case lifecycle.

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Demonstration 1: Create a case type and a task

- Create a case type
- Create a task

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Demonstration 1: Create a case type and a task

Demonstration 1:
Create a case type and a task

Purpose:
An IBM Case Manager solution must include a case type and a task. A task can be created only within the context of a case type, so you must create both in order to have something to test. In this demonstration you create a case type to handle customer service requests.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

## Task 1. Open the Customer Service Solution.

1. Start **Firefox**.

2. Log on to **Case Manager Builder** with the following credentials:

    - User name: `p8admin`

    - Password: `FileNet1`

3. Edit the **Customer Service Solution** that you created earlier.

Task 2. Create a case type.

1. Click the **Case Types** tab.

2. Click **Add Case Type**.

3. Enter the case type name: `Service Request`.

4. Click **Save**.

Task 3. Configure case type properties.

1. Click **Properties**.
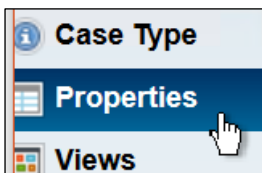
2. Click **Add Property** > **Existing**.

3.   Select the following properties:

- **Given Name**

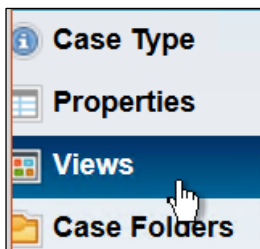- **Service Level**

- **Surname**

- **Ticket Number**

Hold the **CTRL** key to select multiple properties.

4.   Click **OK** to confirm your selection.

5.   Click **OK All** to accept the property settings for this case type.

Task 4.   Configure Case Views.

1.   Click **Views**.

The Views page is organized into three tabs: Case Summary, Properties Layout, and Case Search.

2.   On the **Case Summary** tab, hover over the **Added On** property.

When you hover over a property in this menu, it is highlighted, and a right-facing arrow is displayed.

3.   Click the arrow that appears, to move the property into Case Summary view.

4. Add the following properties to **Case Summary view**:

    - **Case State**

    - **Surname**

    - **Given Name**

    - **Service Level**

    - **Ticket Number**

5. Click the **Case Search** tab.

6. Add the following properties to **Case Search view**:

    - **Added On**

    - **Surname**

    - **Given Name**

    - **Ticket Number**

7. Click **Save**.

Task 5. Configure case folders.

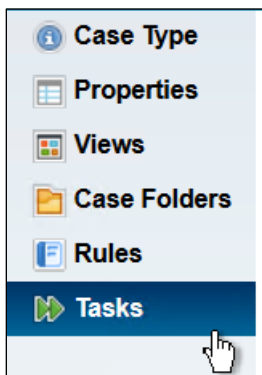Case folders store documents that are added to a case.

1. Click **Case Folders**.

2. Click **Add Folder**.
3. Enter the name for the folder: `Document Destination`.
4. Click **OK**.
5. Click **Save**.

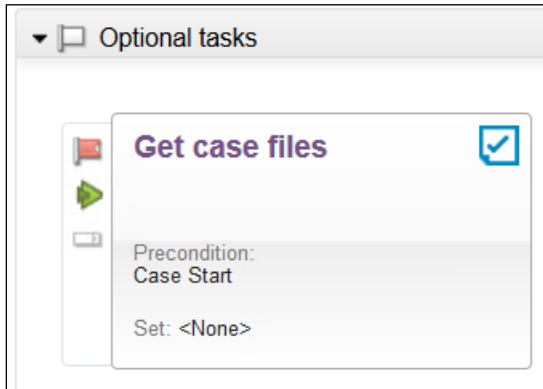# Task 6. Create a task.

1. Click **Tasks**.

2. Click **Add Task > To-do task**.
3. In the **Name** field, type: `Get case files`.
4. Click the **Design Comment** tab.
5. Enter a comment: `This is a short, single-step task`.
6. Click **OK**.

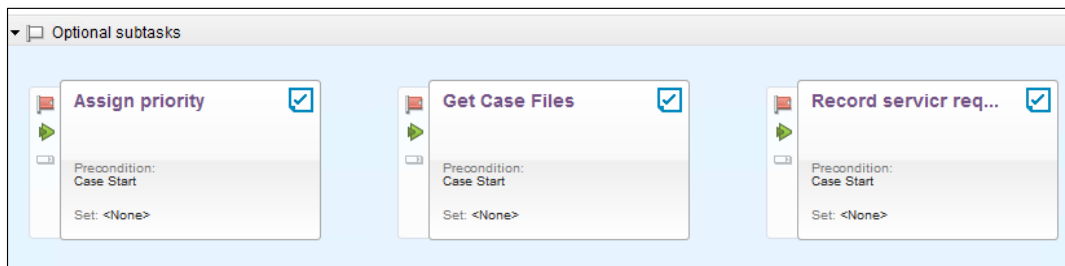7. After you create your task, verify that you see it in the Tasks list page.

8. Click **Save**.
9. Leave Case Manager Builder open for the next demonstration.

Results:
In this demonstration you created a case type to handle customer service requests, and a task.

Demonstration 2: Create a container task with subtasks

Demonstration 2:
Create a container task with subtasks

Purpose:
Use container tasks to organize automatic tasks to improve case start efficiency and to avoid task crowding in the case worker user interface.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Create a container task.

You are in Case Manager Builder. The Customer Service Solution is open. You are viewing the Case Type > Service Request > Tasks page.

1. Click **Add Task > Container task**.
2. Name the container task: `Open service request.`
3. Select the option to start the task **Manually**.
4. Click **OK**.

A container task starts either manually or with a precondition.

Task 2. Add two subtasks to a container task.

1. Hover over the container task until the task menus display.
2. Click **Go to subtasks** .
3. Click **Add Subtask > To-do task**.
4. In the **Name** field, type: `Record service request.`
5. Click **OK**.
6. Click **Add Subtask > To-do task**.
7. In the **Name** field, type: `Assign priority.`
8. Click **OK**.
9. Click **Save**.

Task 3. Move a task into a container task.

You can move tasks into container tasks.

1. Click **Tasks** to return to the top level of the **Tasks** page.
2. Hover your cursor over the **Get case files** task until you see the task menus.
3. Click **Move task** .
4. Select **Open service request**.

5. Click **OK**.

6. Click **OK** again, to acknowledge that the task was moved successfully.

7. Verify that you see one task: **Open service request**.

8. **Go to subtasks** for **Open service request**.

9. Verify that all of the to-do tasks appear in **Open service request**.

Task 4. Create a task property.

You need to create a priority property that retains its value after the task is completed.

1. On the **Assign priority** task, click **Edit task**.
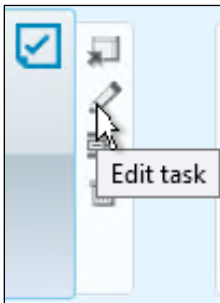
2. Click the **Task Properties** tab.

3. Click **Add Property > New**.

4. Configure the property:

   - **Name**: **Priority**

   - **Type**: **Integer**

   - **Minimum Value**: 1.

   - **Maximum Value**: 4.

5. Click **OK All.**

6. Click **OK.**

7. Click **Save**.

8. Click **Back**.

9. Leave Case Manager Builder open for the next demonstration.

Results:
In this demonstration you created a container task and added some tasks to it. You also created a task property.
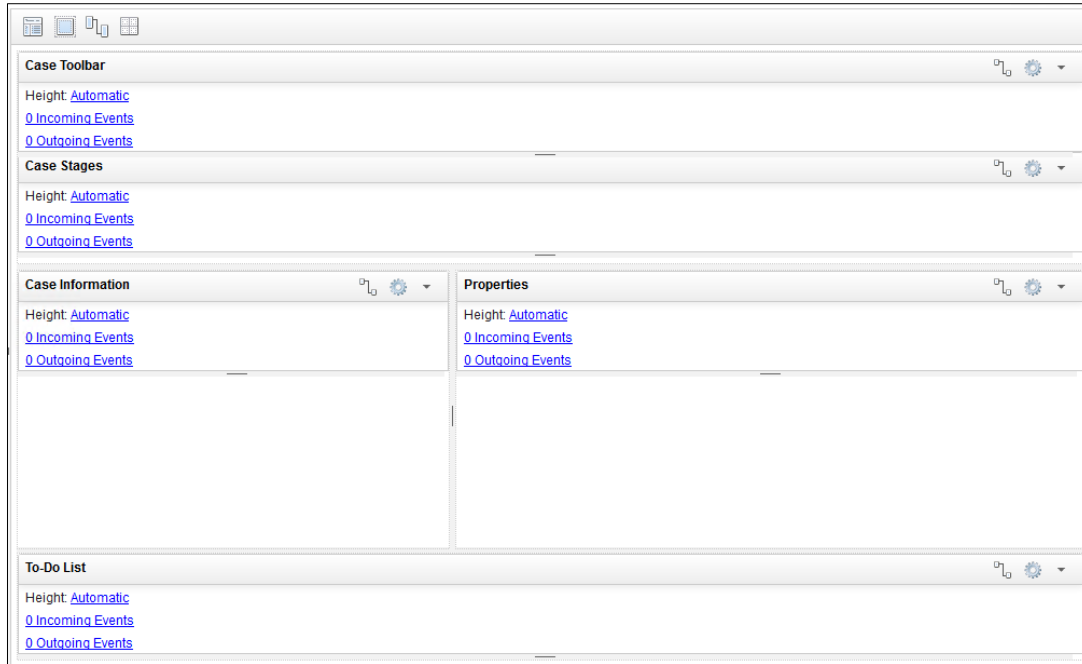
Demonstration 3: Add the to-do list widget to the Case Details page

Demonstration 3:
Add the to-do list widget to the Case Details page

Purpose:
If your solution has to-do tasks, or allows caseworkers to create quick tasks, you must add the to-do list widget to the Case Details page. Without this widget, the caseworkers are unable to see these tasks.

If you have just completed the previous demonstration, you are currently logged in to Case Manager Builder. If you need to log on again, use this information to log on.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Copy the Case Details page.

1.   Click the **Pages** tab.

2.   Expand **Case Details Pages**.

3.   Hover over **Case Details** page, then click **Copy** .

4.   Rename the copy of the Case Details page:
     `Case Details with To Do List.`

5.   Click **OK**.

     When working on a page layout, always make a copy of the default page. Do not change the default pages.

Page Name ^	Description ^
Case Details with To Do List	View and update the properties for a case, add documents, ...
Case Details Form	View and update the properties for a case by using the Form wid...
Case Details	View and update the properties for a case, add documents, ...

▼ Case Details Pages

Task 2. Edit the Case Details with To Do List page.

The Case Details page does not have enough room for the To-Do List widget. The Timeline visualizer widget is at the bottom of the layout. To fit the new widget, you must delete this widget and then add the To-Do List widget in its place.

1. Click the title of the **Case Details with To Do List** page to edit the page layout.

2. From the **Timeline Visualizer** widget, click the menu button, and then click **Delete Widget**.
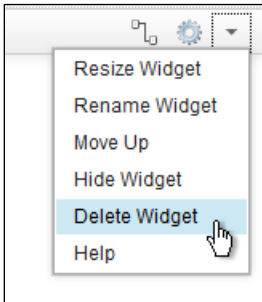
3. Scroll down the Case Widgets list in the left pane until you see the **To-Do List** widget.

4. Drag the **To-Do List** widget onto the bottom of the page, where the Timeline Visualizer widget was previously.
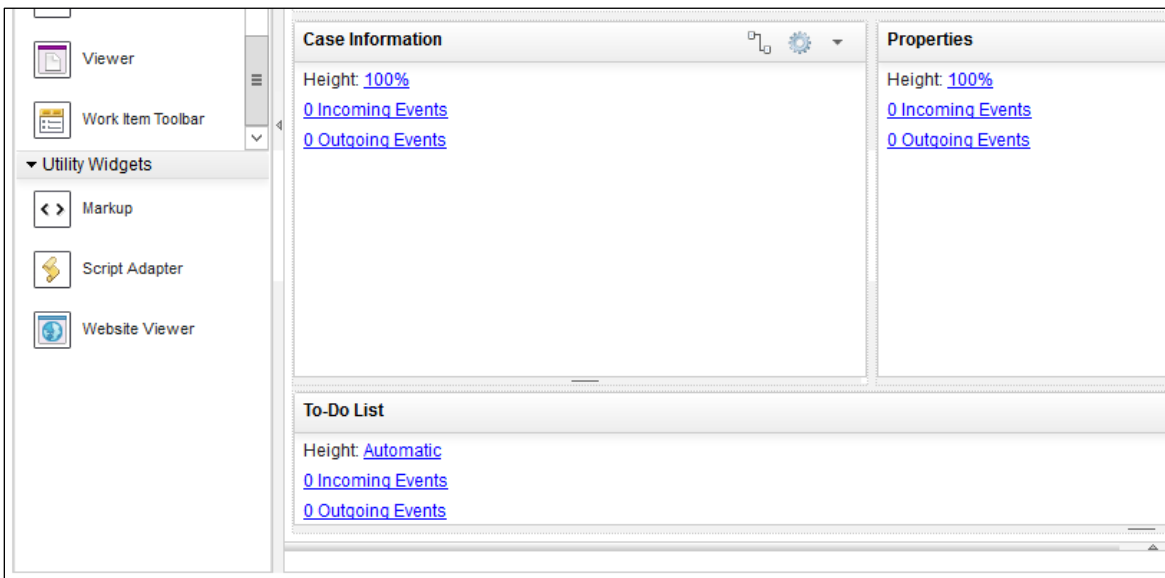
You must adjust the heights of the Case Information and Properties widgets in order for the To-Do List widget to fit on the page.

5. Inside the **Case Information** widget, click the link for: Height: **100%.**
6. From the Resize Widget Height window, click **Automatic**, then click **OK**.
7. Inside the **Properties** widget, click the link for: Height: **100%.**
8. From the Resize Widget Height window, click **Automatic**, then click **OK**.
9. Confirm that the height of each widget on the page is set to **Automatic**.
10. Click **Save**.
11. Click **Close**.

Task 3. Set the default case details page.

Currently, the default Case Details page is set on the case type. You must set the default to the Case Details with To Do List page if you want caseworkers to see your new page.

1. Click the **Case Types** tab.
2. Click the **Service Request** case type, to edit the case type configuration.
3. For the **Default layout for Case Details page**, select:
Case Details with To Do List.

Default layout for Case Details page:
```
Case Details                          v
Case Details
Case Details Form
Case Details with To Do List
```
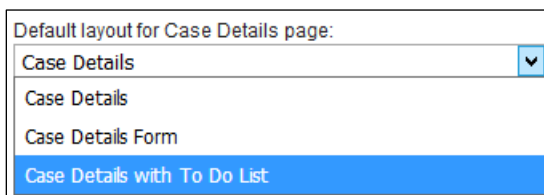
4. Click **Save**.
5. Click **Validate**.

If the validation is unsuccessful, carefully review your work.

6. Click **Save and Close**.

Task 4. Deploy your solution.

1. For **Customer Service Solution**, click **Commit**.
2. Click **Commit My Changes**.
3. Click **Deploy**.
4. Once you see a checkmark, click **Test**.

Task 5. Add a case.

The Service Request case type has the to-do tasks, so that is what you are going to test. If you have tested this solution before, you have previously managed the roles. You can therefore start creating cases without having to assign users to roles.

1. Click **Add Case** > **Service Request**.
2. Enter values for the following properties:

   - **Given Name**

   - **Service Level**

   - **Surname**

   - **Ticket Number**

3. Click **Add**.

Task 6. Process the case.

1. Click the **Cases** tab.
2. Click **Search**.

   Cases for the current date are shown by default.

3. Click the **Service Request** case that you just created to open the Case Details page.
4. Click the **Tasks** tab.

   Tip: If you do not see the Tasks tab, change the magnification of the web page by pressing **CTRL + -**.

5. Click **Start** to start the tasks that are in the Open service request container task.
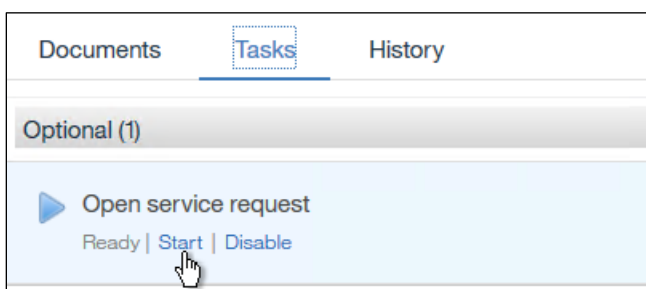
6. Click **Yes** to start the task.
7. Wait a few seconds, and then click **Refresh**.
8. Confirm that the to-do tasks are shown in the To-Do List widget at the bottom.

Task 7. Complete the tasks.

1. Expand the **Assign priority** task.

2. Type 1 in the Priority field, then click **Complete**.

3. Expand **Get case files**, then click **Complete**.

4. Expand **Record service request**, then click **Complete**.

5. Click **Close**.

6. Click **Search**.

7. Confirm that the **Case State** for the service request is showing **Complete**.

Title	Added On	Case Type	Case State	Modified By
CS_ServiceRequest_000000100001	1/11/2018, 1:04 AM	Service Request	Complete	p8admin

8. Log out of all applications and close all browsers.

Results:
You copied the Case Details page and added the To-Do List widget to this page in order to see To-Do tasks. You deployed and tested the solution.

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Unit summary

- Create a To-Do task
- Create a container task
- Add the To-Do list widget to the Case Details page

Unit summary

Exercise 1: Create a case type and a task

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Add Subtask ▾   **Manage Sets**   All tasks \ Open Membership Account

View by: Priority | Set | Name

▾ ☐ Optional subtasks

Process Application ☑
Precondition:
Case Start
Set: <None>

Send Welcome Letter ☑
Precondition:
Case Start
Set: <None>

Verify Payment ☑
Precondition:
Case Start
Set: <None>

Create tasks   © Copyright IBM Corporation 2018

Exercise 1: Create a case type and a task

Exercise 1:
Create a case type and a task

You are building a solution to handle auto insurance claims. You are going to create a new case type for new memberships with the following properties:

- Surname
- Given Name
- Phone Numbers

For the New Membership case type, you are going to create the following tasks:

- Container task: Open Membership Account
  - To-do subtask: Process Application
  - To-do subtask: Verify Payment
  - To-do subtask: Send Welcome Letter

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Simple Claim Solution**

In this exercise, you create two case types and some tasks. Save your solution after you complete each task.

Task 1. Create the New Membership case type.

In the Simple Claims Solution, create a case type that meets the following requirements:

- Case type name: **New Membership**.
- Properties:
    - **Surname**
    - **Given Name**
    - **Phone Numbers**
- Properties for **Case Summary view**:
    - **Surname**
    - **Given Name**
    - **Phone Numbers**
- Properties for **Case Search view**:
    - **Surname**
    - **Added On**
    - **Phone Numbers**

Task 2.   Create tasks for New Membership case type.

Create tasks for the **New Membership** case type that meet the following requirements:

- **Task type: Container task**
- **Name: Open Membership Account**
- **Start type: Manually**.
- To-do task subtask:
  - **Process Application**
  - **Verify Payment**
  - **Send Welcome Letter**

Task 3.   Add the To-Do list widget to the Case Details page.

- Make a copy of the default **Case Details** page. Name the page:
  `To Do Case Details`.
- Delete the Case **Timeline Visualizer** widget to make room.
- Add the **To-Do List** widget to the To Do Case Details page.
- Configure **To Do Case Details** as the default case details page for the New Membership case type.
- Save your solution.

Task 4.   Validate, deploy, and test your solution.

- Validate **Simple Claims Solution**.
- Deploy **Simple Claims Solution**.
- Test **Simple Claims Solution**.
- Manage roles for **Simple Claims Solution** by adding **p8admin** to both roles.
- Add a **New Membership** case.
  Use any property values that you want to test with.
- Process the **New Membership** case by completing all of the tasks as a **Customer Service Rep**.
- Verify that the state of the case is reflected as **Complete**.
- Log out of all applications and close all browsers.

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Create a step map

IBM Case Manager V5.3.2

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Unit objectives

- Open a task in Step Designer
- Create a step map
- Add a workgroup to a step map
- Add an attachment to a step map

Create a step map

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Unit objectives

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Why build step maps?

- Simple to-do tasks do not require step maps.
  - A to-do task is a single check box task.
- Workflow tasks are used for tasks that require more than one step.
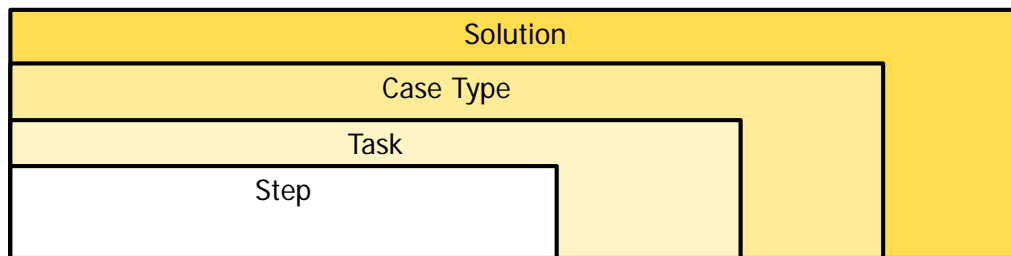- You build workflow tasks by creating step maps in Step Designer, or in Process Designer.

Create a step map

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Why build step maps?

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What is a Step?

- A step is an action that must be completed for a task.
- Assigned to a role or a workgroup or an automated process
- Smallest unit of work in a solution.

| Solution |
| Case Type |
| Task |
| Step |

Create a step map   © Copyright IBM Corporation 2018

What is a Step?

When a step is assigned to a role, any member who is a member of a role can get access to the work item.

Workgroup users are assigned at runtime by a case worker. When a step is assigned to a workgroup, the following conditions apply:

- All the users that are assigned to the workgroup must complete the step.
- The work is displayed in the personal in-basket of each worker.

Steps are connected to other steps in a step map. Steps include various conditions or restrictions. A step can include an event with a condition, a deadline, or an action that a specific role must complete. Steps can be assigned to be completed by a role or workgroup. Steps can depend on completion of prior or concurrent steps. A step can be required.

The action that results from a step can be a process, a notification, or other actions. An action can have a deadline with different results if the deadline is met or not met.

Case workers see steps as work items in Case Manager Client.

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What is a step map?

Route

Swimlane

Step

Create a step map

© Copyright IBM Corporation 2018
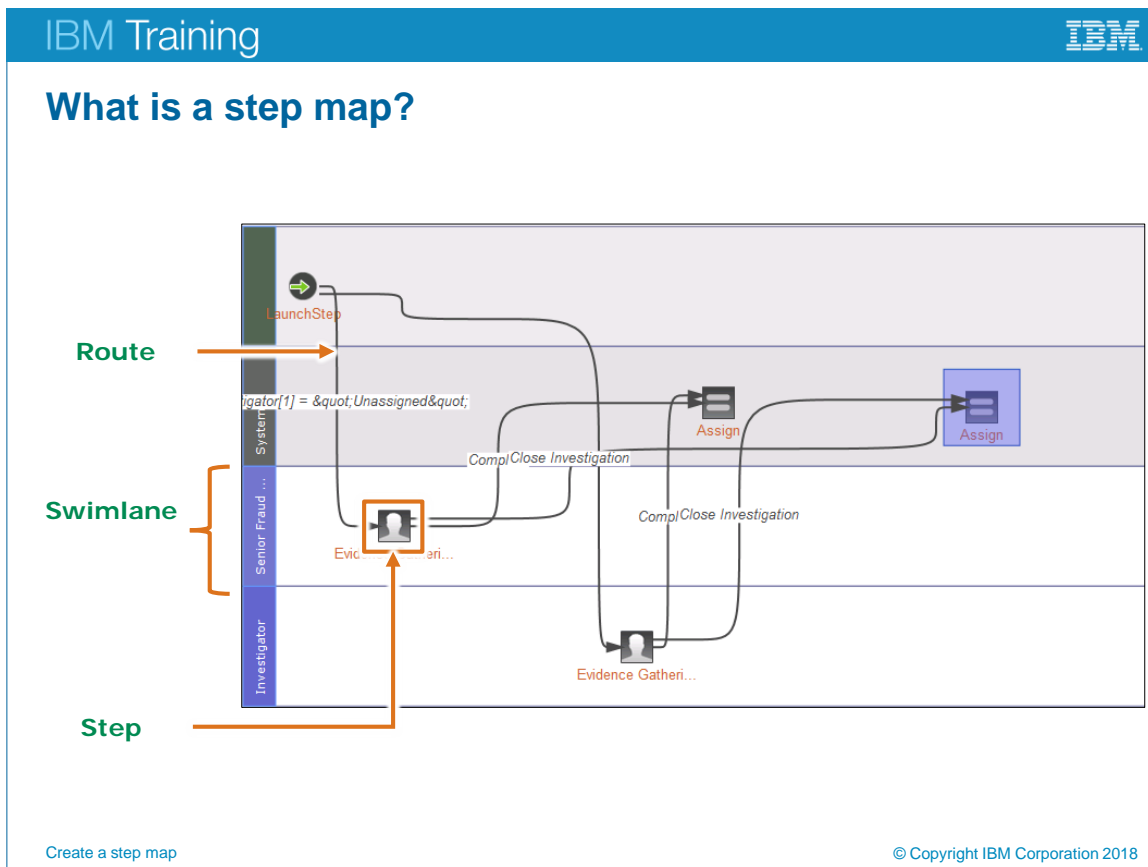
What is a step map?

The graphic shows a step map with parts labeled.

A step map is a process in a case type that consists of steps and routes between them.

Steps are assigned to swimlanes. Each swimlane belongs to a role or a workgroup. You assign a step to a role or workgroup by dragging that step into the swimlane.

Step maps are created in Step Designer. Because step maps use Process Services, you can also use Process Designer to create step maps (also called workflow definitions). You can either import processes or you can create the process in Step Designer, then open them in Process Designer to add details.

To get started, you add swimlanes to your step map. You can define workgroups directly in Step Designer, as well as attachments. You must have swimlanes before you can assign steps.

After you add the steps to the swimlanes, you configure the step properties. Step properties are where you provide information to the workers who work on the steps.

You connect the steps with routes. Routes can be conditional or unconditional. Each step can have responses. Often, the route is chosen based on user responses. For example, a user who is reviewing a document can choose to approve the document to send it to publishing, or reject the document, sending it back to the author for updating.

Using swimlanes

- Use the System lane to hold automated steps.
- Use the LaunchStep swimlane to hold LaunchStep.
- Use role lanes to hold steps that are assigned to a Role.
- Use Workgroup lanes to hold steps that are assigned to a workgroup.

Create a step map   © Copyright IBM Corporation 2018

Using swimlanes

The System swimlane contains system steps that are assigned to IBM FileNet P8 system processes, such as: component steps and submap steps that are created with Process Designer and rule steps that are created with the Rule Designer.

Each task includes a System swimlane. You cannot delete the System swimlane. The System swimlane includes automated steps. For example, component steps that you add with Process Designer are shown in the System swimlane.

The Launch swimlane contains the launch step. For tasks that start automatically or manually, you cannot edit the Launch steps in the LaunchStep swimlane. For tasks that the user creates, you can edit the steps in the Undefined Participants lane. For example, you can assign a workgroup to the Launch step so that a case worker can assign the workgroup members.

Each workflow contains a Launch step in the Launchstep swimlane.

You cannot add steps to the LaunchStep swimlane.

You cannot delete the LaunchStep swimlane.

Role swimlanes designate tasks to be performed by roles. Roles provide a way to assign work to users who are members of a particular role designation.

Any member of a role can perform the work at any task step that is assigned to the role.

Workgroup swimlanes designate tasks to be performed by workgroups. Workgroups provide a way to assign work to particular users.

The users or groups in the workgroup are defined at run time in the Case Manager Client.

Users or groups must be assigned to the workgroup at a step before the Workgroup step is reached in the Step map.

If more than one user is assigned to a workgroup, then each assigned workgroup member must complete the step before it can be advanced to the next step.

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Differences between Roles and Workgroups

Question	Roles	Workgroups
Where is it created?	Solution	Task
Shared among tasks?	Yes	No
Who completes a task?	Any one role member	All workgroup members
Does it have an In-basket?	Yes	No

Create a step map

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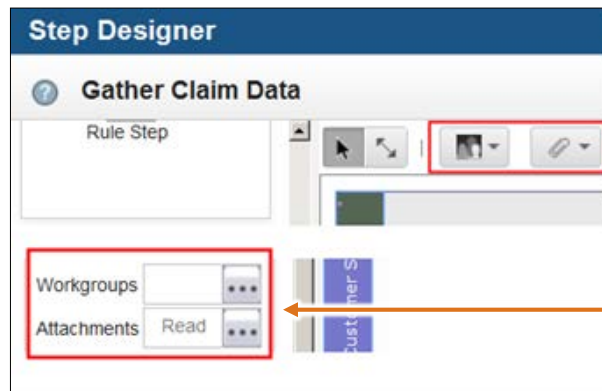*Differences between roles and workgroups*

Before you assign steps, you must know the difference between Roles and Workgroups.

Each role is assigned an in-basket at the solution level. Each role in the solution has a work queue. Only one of the users that is assigned to the role performs the Steps in a Role lane.

All users that are assigned to a workgroup must perform the workgroup steps. To reuse a workgroup name, you must create the workgroup manually in each task. Workgroups do not have in-baskets. Work assigned to workgroup members is in the personal in-basket for the member. Workgroups are not assigned to a queue. Each member of the workgroup receives the work item. For example, a request for repair estimates is a good use for a workgroup. The workgroup forces multiple users to perform the same step. It might be the policy of an auto insurance company to require three repair estimates from different repair shops before awarding the job.

Manage Workgroups and Attachments

The Manage Workgroup action defines workgroup names that can be used to define workgroup lanes.

The Workgroups field in Step Properties creates a field for case workers to select a workgroup before a workgroup step is reached.

If users are not assigned to the workgroup before the workgroup step is reached, then the step causes a malfunction.

The Manage Attachment action defines attachments to be used in a task. Attachment definitions at a process step enable case workers to attach documents or view attached documents at that step.

When you manage attachments, you define only the name of an attachment.

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Setting step properties

- You configure step properties in the properties panel.
- Commonly used step properties:
  - Name and Description
  - Instruction
  - Responses
  - Properties
  - Workgroups

Create a step map

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Setting step properties

When you select a property in Step Designer, the Properties panel opens. Use this panel to configure the properties for the step. The step properties include:

- Name: name of the step.

- Description: optional verbose description of the Step action.

- Instruction: a textual instruction to the case worker that states what must be done to complete the step.

- Responses: specifies the responses that users can select to complete the step. You can create conditional routes that are followed if a user selects a particular response.

- Reassign: true or false, whether or not the step can be reassigned to a different user.

- Deadline: defines a deadline by which the step must be completed.

- Properties: Select Properties that are visible at the step and assign read-only or read-write access.

- Workgroups: Provides a way for caseworkers to select workgroup members.

- Attachments: Select Attachment names at a task step so that the runtime interface displays the Attachment widget, which is used to attach files at this step. Attachments and documents that are filed in case folders are unrelated. Documents that are filed in case folders cannot be accessed as attachments.

- Data fields: Data fields contain data that is persisted within the case but is not retained when the case is closed. Task properties can now be used instead. Task properties retain their values after the task ends.

- Page Layout: Select the default page layout for the step. Initially, default pages are assigned. After the solution is deployed, custom pages can be built. Then, you must return to the step and select the new page layout.

- Swimlane: Define which role or workgroup processes this step. This option is automatically selected based on the lane where the step is placed. This selection can override the initial setting.

- Split and Join characteristics: Defines whether a node is a split or a join node for parallel paths. If you have multiple paths coming out of a step, those paths can either be both be followed, or only one path is followed. If only one path is followed, you must specify the conditions that select which path is followed. If both paths are followed, you must join the paths later. A split step occurs at the beginning of a set parallel paths point of a step map. The join step occurs at the end of set of parallel paths.

The options for split and join steps are AND, OR, and AUTO.

AND means that all paths between the AND-Split step and the AND-Join step must be completed.

OR means that only one of the paths between the OR-Split and OR-Join step needs to be completed.

Auto means default to a NONE-split. When you validate the workflow, the system determines the appropriate split type for the AUTO-split that is based on the steps in the route. That is, the system determines whether an AND-split, an OR-split, or a NONE-split is appropriate based on the entire workflow.

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Demonstration 1: Create a step map

- Open Step Designer for the Case Type.
- Configure the Manage Workgroups and Manage Attachments options.
- Create Role Lanes.
- Create Task Map Steps.
- Create Routes between Steps.
- Validate and Save the Solution.

Create a step map

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Demonstration 1: Create a step map

Demonstration 1: Create a step map

Purpose:

Step maps are tasks that you create using Step Designer. More complex than to-do tasks, workflow tasks can include multiple steps with multiple roles and workgroups to accomplish a business goal.

Create a workflow step to handle product complaints in the Customer Service Solution. Customer complaints are handled initially by tier 1, then if they cannot be resolved, they are passed on to tier 2. If tier 2 cannot handle the issue, a specialist is required. The tier 2 customer service representative must identify an expert and select a user to assign to the Specialist workgroup to handle specific issues.

In this demonstration, you create a simple workflow for the Product Complaint case type.

- Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
- User/Password: **p8admin/FileNet1**
- Solution: **Customer Service Solution**

Task 1. Open the Customer Service Solution.

1. Start **Firefox**.
2. Log on to **Case Manager Builder** with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

3. Edit **Customer Service Solution** that you created earlier.

Task 2. Create the Product Complaint task.

You created the Product Complaint case type in a prior demonstration for solution testing.

1. Navigate to **Case Types** > **Product Complaint** > **Tasks**.
2. Click **Add Task** > **Task**.
3. Name the task: **Handle Complaint**.
4. Click the **Task Properties** tab.
5. Click **Add Property** > **Existing** > **Priority**.

6. Click **OK**.

7. Click **OK ALL**.

8. Click **OK**.

> By default, the task starts automatically. Without preconditions, the task launches when the case is created.

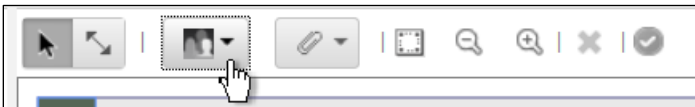## Task 3. Open Step Designer.

1. Hover your mouse cursor over the new task to display menus.

2. Click **Edit steps**.
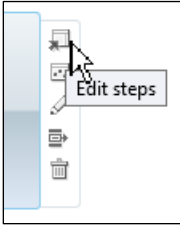
Task 4. Configure a workgroup.

> Not every task needs a workgroup. If you do need to add workgroup, you can create one with the Manage Workgroups button.

1. Click **Manage Workgroups** on the toolbar.

2. Click **Add Workgroup**, and then type the Workgroup Name: `Specialist`.

3. Click **OK**.

4. Click **Close**.

Task 5. Configure an attachment.

1. Click **Manage Attachments** on the toolbar.
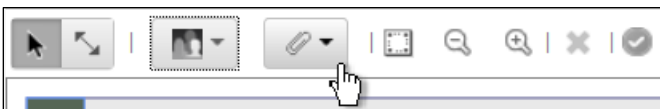
2. Click **Add Attachment**.

3. Type the **Attachment Name**: `Support_doc`.

4. In the **Prompt** field, type: `Attach any supporting documentation`.

5. Click **OK**.

6. Click **Close**.

Task 6. Create role lanes.

You created the CSS_Tier1 and CSS_Tier2 roles in previous demonstrations.

1. Drag and then drop the **Role Lane** icon in the Palette on the left, to below the **System** lane.

2. Confirm that the role lane name is **CSS_Tier1**.

3. Create a second role lane for **CSS_Tier2**, below **CSS_Tier1**.

4. Drag and then drop the **Workgroup Lane** icon in the Palette, to below the **CSS_Tier2** lane.

5. The workgroup name, **Specialist**, is automatically applied to the lane because it is the only workgroup that is defined for the task.

6. Click **Save**.

Task 7. Create steps.

These steps represent a simple escalation from Tier 1 to Tier 2, and finally to a Specialist.

1. Drag the **Step** icon from the Palette onto the **CSS_Tier1** lane.

    The step is automatically named Step1.

2. Drag another step onto the **CSS_Tier2** lane.

3. Drag a step to the **Specialist** lane.

    Results appear similar to the following:
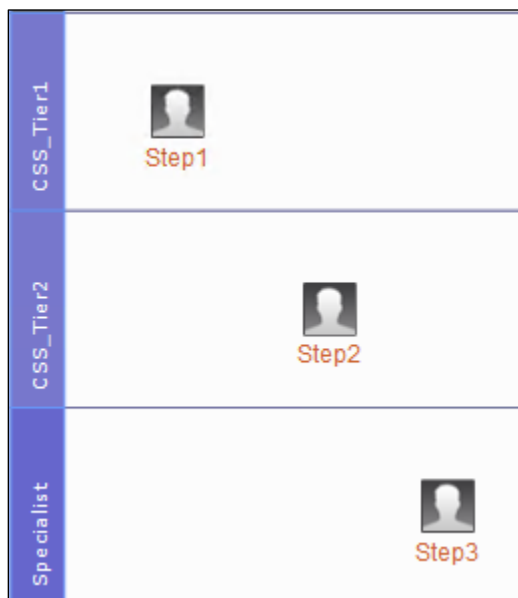
Task 8.   Configure properties for Step1.

Most of the properties that you add to this step are case properties. However, there is one task property. You added the Priority task property to the case type previously. The task property is useful during the course of the workflow, but is not needed as part of the case file.

1. Click **Step1**.

2. In the **Name** field of the Step Properties pane (bottom left, under the Palette – you may need to scroll), update it to: `Initial support`.

3. Click **Edit** [...] to the right of the **Instruction** field.

4. In the **Instruction** field, type:
   `Gather data and then choose a response`.

5. Click **OK**.

6. Click **Edit** for the **Properties** field.

7. On the **Case Properties** tab, click **Select Property** > **Select All**, and then click **OK**.

   Notice that all properties have Read and write permission.

8. Click the **Task Properties** tab.

9. On the **Task Properties** tab, click **Select Property** > **Priority**, and then click **OK**.

10. Click **OK** to close the **Properties** window.

Task 9.   Configure responses for Step1.

1. Click **Edit** for **Responses** field.

2. Click **Add Response**.

3. In the **Response name** field, type: `Escalate`.

4. Click **OK and Add**.

5. In the **Response name** field, type: `Provided Help`.

6. Click **OK** to confirm these responses.

7. Click **OK** to close the **Responses** window.

Task 10.   Configure attachments for Step1.

In this task, you configure attachments. Attachments are added to a work item instead of a case. You are editing the Initial support step.

1. With the **Initial support** step item selected, under **Step Properties**, click the **Edit** button to the right of the **Attachments** field.

2. Click **Select Attachment > Support_doc**.

3. Confirm that the **Read and write** permission is selected, and then click **OK**.

Task 11.   Configure properties for Step2.

The second step is for the CSS_Tier2 level case worker. This role is more qualified to handle complex questions than the tier 1 operator, and also knows how to direct complex issues to specialists.

1. Click **Step2**.
2. Under **Step Properties**, in the **Name** field, type: `Level 2 Support`.
3. For the **Instructions** field, type: `Review the information, provide support, or choose a specialist`, and then click **OK**.
4. Edit the **Properties** field for the step.
5. On the **Case Properties** tab, click **Select Property > Select All**.
6. Click **OK**.
7. Click the **Task Properties** tab.
8. On the **Task Properties** tab, click **Select Property > Priority**.
9. Click **OK**.
10. Click **OK** to close the **Properties** window.

Task 12.   Configure responses for Step2.

1. Edit the **Responses** field.
2. Click **Add Response**.
3. In the **Response name** field, type: `Send to specialist`.
4. Click **OK and Add**.
5. In the **Response name** field, type: `Provided help`.
6. Click **OK**.
7. Click **OK** to close the Responses window.
8. Click **Save.**

Task 13.   Configure a Workgroup on Step2.

The members of a workgroup are undefined. Case workers must assign workgroup members before the first workgroup step. The case worker who completes the Level 2 Support step chooses the specialist. In this task, you add a workgroup field to the Level 2 Support step to provide case workers with the opportunity to make their workgroup member selection.

1. With the Level 2 Support step still selected, edit the **Workgroups** field.
2. Select **Specialist**, and then click **OK**.
3. Confirm that the **Read and write** permission is selected.
4. Click **OK** to close the Workgroups window.

Task 14.   Configure attachments for Step2.

You want level 2 support to have access to the attachments. These documents are used to complete a specific task.

1. With the Level 2 Support step selected, edit the **Attachments** field.
2. Click **Select Attachment > Support_doc**, and then click **OK**.
3. Confirm that the **Read and write** permission is selected.
4. Click **OK** to close the Attachments window.

Task 15.   Configure properties for Step3.

1. Click **Step3**.
2. Rename the step: `Specialist support.`
3. Enter the following **Instruction** info: `Handle the complaint.`
4. Click **OK**.
5. Edit the **Properties** field.
6. For **Case Properties**, select all properties, then click **OK**.
7. Click the **Task Properties** tab.
8. Click **Select Property** > **Priority**, and then click **OK**.
9. Click **OK** to close the **Properties** window.

## Task 16.   Configure attachments for Step3.

1. Edit the **Attachments** field.
2. Click **Select Attachment** > **Support_doc**, and then click **OK**.
3. Click **Save**.

Task 17.   Create connections between steps.

A connection, or route, leads from one step to the next step. When the first step completes, the next step starts.

1.   From the toolbar, click **Add connectors between steps** ⬈.

As you move the mouse over the page, the cursor changes to a cross to indicate that you are in Add Connections mode.

2.   Click **LaunchStep**, and then left-click-drag a route to the **Initial support** step, before releasing the button.

Confirm that a route exists from **LaunchStep** to **Initial support**. If there is no route, try step 2 again.
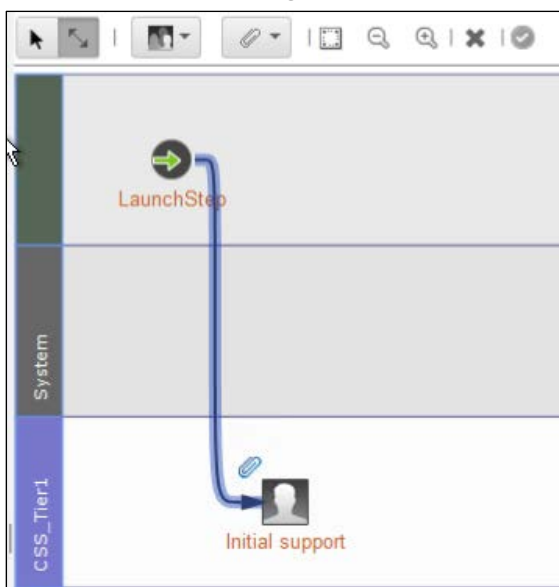
3.   Create a route from **Initial support** to **Level 2 Support**.

4.   In the bottom-left frame, under **Connector Properties**, select **Escalate** against the **Responses** field.

This route is taken only if the case worker chooses the Escalate response.

5.   Create a route from **Level 2 support** to **Specialist support**.

6. Select **Send to specialist**, for the **Responses** field.

This route is taken only if the case worker chooses the Send to specialist response.
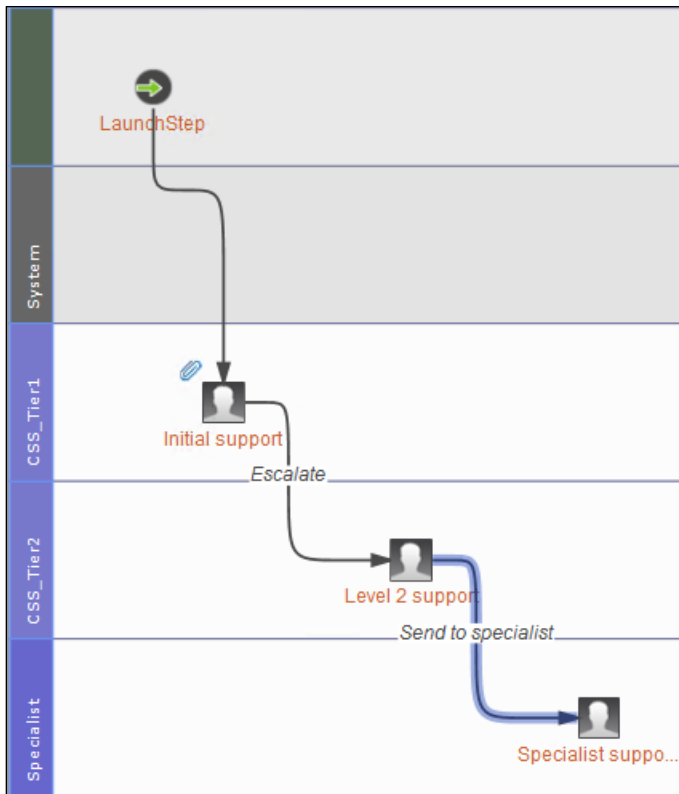
Check your work against the following description.

Your task shows these steps:

- LaunchStep
- Initial support
- Level 2 Support
- Specialist support

These routes connect the steps:

- Launch step – Initial support
- Initial support – Level 2 Support
- Level 2 Support – Specialist support

Task 18. Validate and save your solution.

1. Click **Save**, and then click **Close**.

2. Click **Validate** .

3. Confirm that the status message near the lower left corner of the page indicates that the Validation was successful.
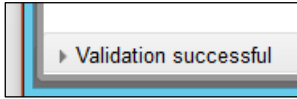
4. Click **Close** to return to the Tasks page.

Task 19. Deploy and test the Customer Service Solution.

1. **Validate** the solution.
2. Click **Save and Close**.
3. **Deploy** the solution.
4. Click **Test**.

Task 20. Create a Product Complaint task.

p8admin is a member of both CSS_Tier1 and CSS_Tier2 roles. If this is not the case, manage roles for this solution.

1. Verify that you are signed into the Case Manager Client as p8admin and that you are currently in the CSS_Tier1 role.
2. Click **Add Case > Product Complaint**.
3. Enter the following property values:

    - **Customer Since**: **1/10/2018**.

    - **Given name**: Bob

    - **Service Level**: **Copper**

    - **Surname**: Sled
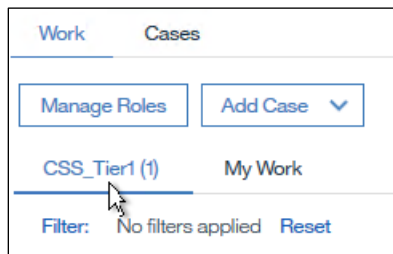
    - **Ticket Number**: 1

4. Enter the following data for the business objects. For each row, click **Add** to add a product, enter the data, then click **OK**:

Product Name	Product ID	Quantity
Rubber Duckies	2233	100
Nose Plugs	3399	500
Strawberry Snorkel	3883	250

5. Click **Add**.

Task 21. Process a Product Complaint task.

1. On the **Work** page, click the **CSS_Tier1** tab to refresh the in-basket.

2. Confirm that you can see a work item in the in-basket.

3. Click **Initial support** to open the work item.

   The work item opens in the Work Details page. On this page, you have Instructions, responses, properties, and case information. You can add attachments, change property values, and add comments to the case.

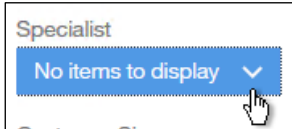4. In the **Priority** field, type **3**.

5. Click **Escalate**.

   The work item moves to the Level 2 support step.

6. Select the **CSS_Tier2** role from the roles menu in the top right.

7. Click the **Level 2 Support** item in the in-basket.

8.   Click **No Items to Display** under Specialist.

The user must specify a member for a workgroup.

9.   Search for **p8admin**, then **Add** the user, and then click **OK**.

10. Confirm that the Specialist is **p8admin**.
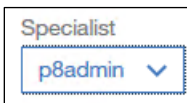
If you select the Send to Specialist response without first selecting a Specialist, the workflow enters an error state.

11. Click **Send to specialist**.

12. Click the **My Work** tab.
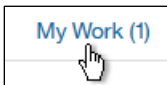
13. Click the **Specialist support** work item.

14. Review the details, and then click **Complete**.

15. Log out of all applications and close all browsers.

> **Results:**
> **You created a step map with Step Designer. You deployed and tested the solution.**

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Unit summary

- Open a task in Step Designer
- Create a step map
- Add a workgroup to a step map
- Add an attachment to a step map

Create a step map   © Copyright IBM Corporation 2018

Unit summary

Exercise 1: Create a step map for a task

The graphic shows the process flow for the task that you create in this exercise.

Exercise 1:
Create a step map for a task

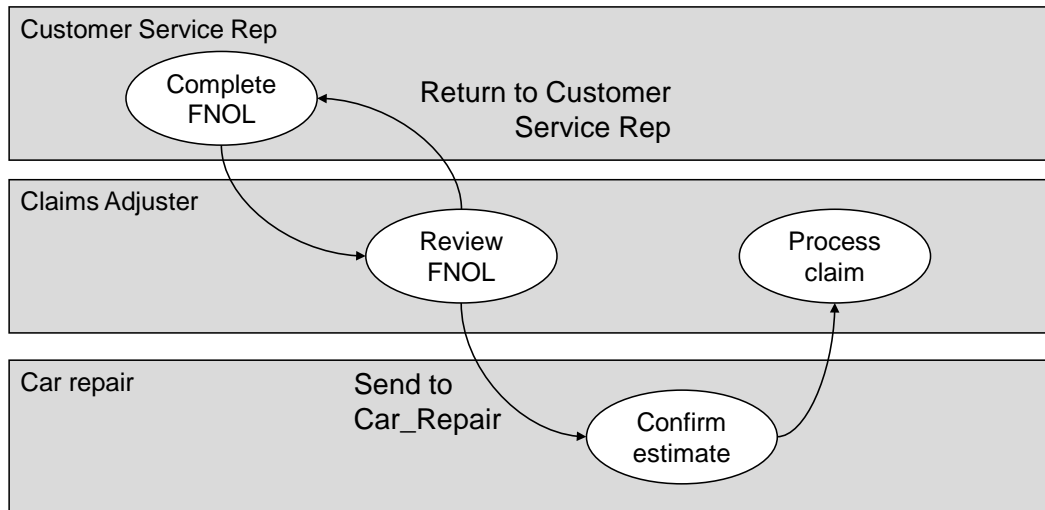Build a step map for the Auto Claims General case type that you created in a previous exercise. To complete this exercise, you must have completed the previous exercises because you are building on the same solution.

What needs to happen in this task?

In the first step, the Customer Service Representative enters data into the First Notice of Loss form, based on customer-provided information.

In the next step, the Claims Adjuster checks whether the data is complete. The Claims Adjuster has two responses that determine the course of the work.

- If the information is complete, a work item is sent to the car repair office to verify the estimate.

- If the information is incomplete, the work is sent back to the customer service representative.

The car repair office updates the estimate (the estimate field must be read/write) and sends the work back to the Claims adjuster.

Finally, the Claims Adjuster processes the claim.

The car repair service provider is not known until the task starts, so configure the car repair office as a workgroup.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL: **http://ecmedu01:9080/CaseBuilder**

Username/password: **p8admin/FileNet1**

Solution Name: **Simple Claims Solution**

Task 1. Create the General Auto Claim case type.

Edit the Simple Claims Solution.

- Create a case type that meets the following requirements:

    - Case type name: **Auto Claim General**

    - Properties: Add **all** existing properties to the case type.

- Configure the following properties for Case Summary view:

    - Policy Number

    - Due Date

    - Estimate

    - Policy Current

- Configure the following properties for Case Search view:

    - Policy Number

    - Surname

    - Due Date

- Configure the following Case Folders:

    - Correspondence and Forms

    - Internal Documents

    Save your solution at convenient intervals.

Task 2.   Create a task.

Create a task with the following settings:

- Task name: `Gather Claim Data`

- This task is: **Required**.

Task 3.   Configure the step map settings.

- Open **Gather Claim Data** in Step Designer.
- Configure step map settings:

Item	Value
Workgroup	**Car_repair**
Attachments	**Attached _Document**

Task 4.   Add swimlanes.

- Add role swimlanes and the workgroup swimlane:

Item	Value
Role lanes	**Customer Service Rep**
	Claim Adjuster
Workgroup lane	**Car_repair**

Task 5.   Add steps.

Add steps to the swimlanes.

Step	Swimlane	Step Name
1	Customer Service Rep	Complete FNOL
2	Claims Adjuster	Review FNOL
3	Car_repair	Confirm Estimate
4	Claims Adjuster	Process Claim

Task 6. Configure the steps.

Configure the steps with the following settings:

Step	Attribute	Settings
Complete FNOL	Instruction	Gather information from the client and fill out the First Notice of Loss form.
Complete FNOL	Properties	Estimate: Read and write Policy Number: Read and write Date Of Loss: Read and write Due Date: Read and write Surname: Read and write Given Name: Read and write Policy Current: Read and write
Complete FNOL	Workgroups	Car_repair: Read and write
Complete FNOL	Attachments	Attached_Documents: Read and write
Review FNOL	Instruction	Review the information. If the information is complete, send to Car_repair. Otherwise, Return to Customer Service Rep.
Review FNOL	Responses	Send to Car_repair Return to Customer Service Rep.
Review FNOL	Properties	Estimate: Read only Policy Number: Read only Date Of Loss: Read only Due Date: Read only Surname: Read only Given name: Read only Policy Current: Read only
Review FNOL	Workgroups	Car_repair: Read only
Confirm Estimate	Instruction	Confirm or update the estimated cost of repair.

Step	Attribute	Settings
Confirm Estimate	Properties	Estimate: Read and write Date Of Loss: Read only Surname: Read only Given Name: Read only
Confirm Estimate	Attachments	Attached_Documents: Read and write
Process Claim	Instruction	Process the claim.
Process Claim	Properties	Select all properties: Read only

Task 7. Create routes.

- Create the following routes:

  - Launch step > Complete FNOL

  - Complete FNOL > Review FNOL

  - Review FNOL > Confirm Estimate - Response: Send to Car_repair

  - Review FNOL > Complete FNOL - Response: Return to Customer Service Rep.

  - Confirm Estimate > Process Claim
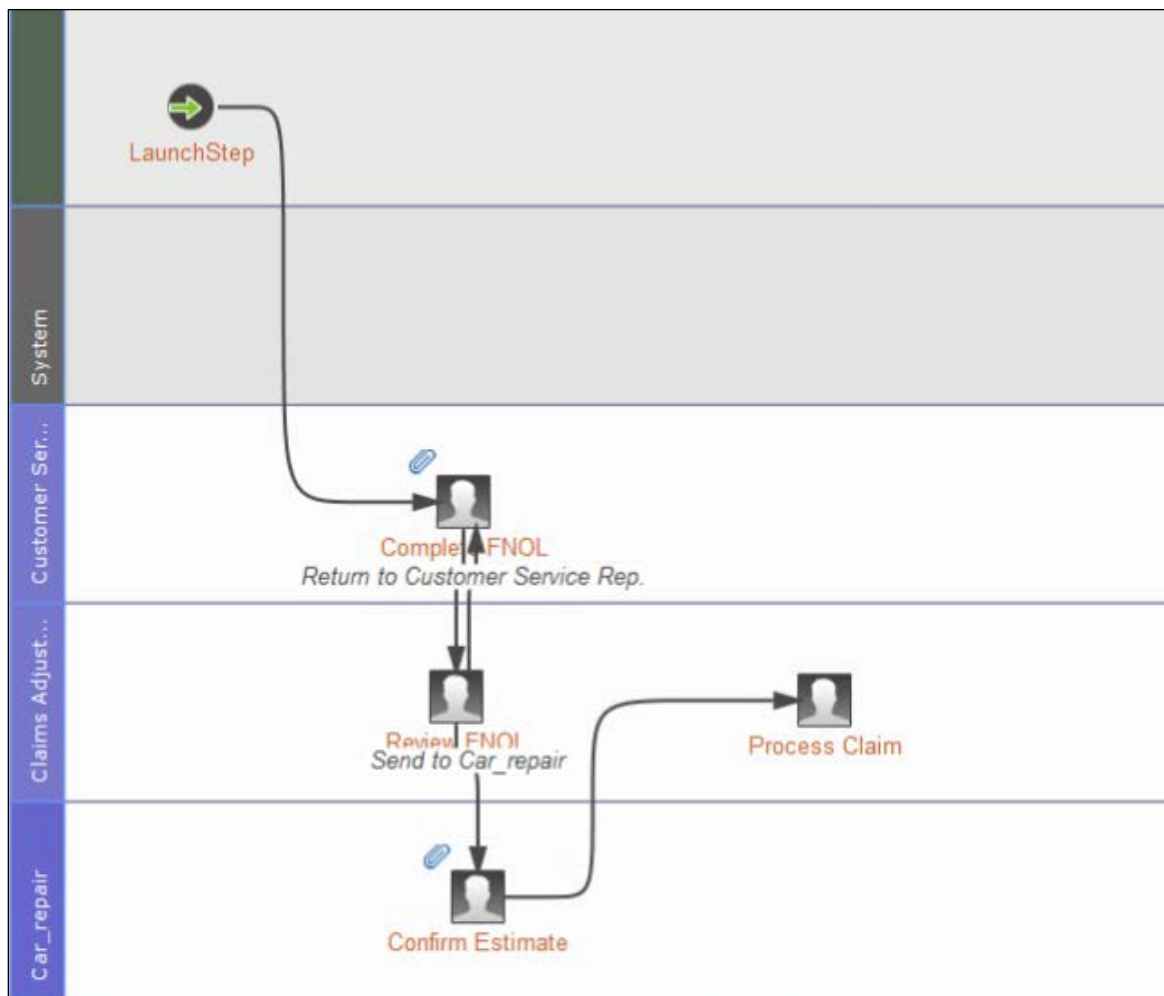
Task 8. Validate and save your solution

- Save your step map.

- Validate your step map.

- Save and close your solution.

- Log out of all applications and close all browsers.

Exercise 2: Test your workflow task

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Exercise 2: Test your workflow task

Simple Claims Solution
Auto insurance simple ...
Solution Prefix: SCS

Last modified by **p8admin** on
2/13/2018, 1:20 AM
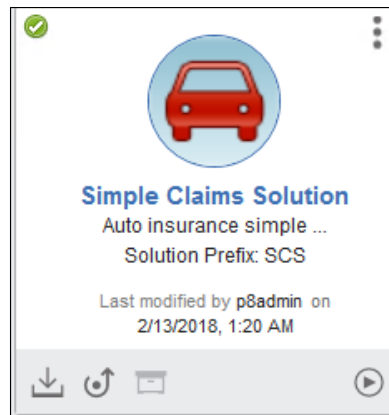
Create a step map   © Copyright IBM Corporation 2018

Exercise 2: Test your workflow task

Exercise 2: Test your workflow task

You created a workflow task for your Simple Claims Solution, in Exercise 1.

In this exercise, you deploy and test your workflow.

- Deploy the Simple Claims Solution

- Create a General Auto Claim case.

- Process the case to completion.

Remember to change roles in order to process each step of the case. You need to know which role performs each step in order to see the step in the in-basket.

Remember to select a user for the Car_repair workgroup. If you send a work item to a workgroup without selecting a workgroup, the work item goes into an error state. If this happens, you must start over again. Review the diagram in Exercise 1 to see the process flow.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 2:
Tasks and results

Case Manager Builder URL:	**http://ecmedu01:9080/CaseBuilder**
Username/password:	**p8admin/FileNet1**
Solution Name:	**Simple Claims Solution**

Task 1. Deploy the Simple Claims Solution.

- Log in to **Case Manager Builder**.

- Commit your changes to **Simple Claims Solution**.

- Deploy **Simple Claims Solution**.

Task 2. Manage roles.

- Test **Simple Claims Solution**.

- Verify **p8admin** is assigned to both roles.

Task 3. Test the Auto Claims case type.

- Create an **Auto Claim General** case using improvised data.

    - Add at least 1 vehicle

    - Add at least 1 phone number.

    - Remember the Surname, so that you can search for it later.

- As the **Customer Service Rep**, process the **Complete FNOL** step. Be sure to specify **p8admin** as a **Car_repair** workgroup member.

- As the **Claims Adjuster**, complete the **Review FNOL** step.

    - Confirm that the fields are read-only.

    - Send back to the Customer Service Rep.

- As the **Customer Service Rep**, process the **Complete FNOL** step again. If you forgot to add **p8admin** to the **Car_repair** workgroup, you can do this now.

- As the **Claims Adjuster**, complete the **Review FNOL** step again. This time, select the **Send to Car_repair** response.

- Complete the **Confirm Estimate** step.

  - Remember that this step is in your personal in-basket.

  - If you do not see the work item, ensure that you did not leave the workgroup field blank.

  - Confirm that only the estimate field is editable.

- Complete the **Process Claim** step. (click the Work tab to refresh)

- Search for the case.

- Verify that the case state is **Complete**.

- Log out of all applications and close all browsers.

Unit 6   Use preconditions and sets

IBM

Use preconditions and sets

IBM Case Manager V5.3.2

IBM Training

Unit objectives

- Organize tasks with preconditions
- Organize tasks with inclusive sets
- Organize tasks with exclusive sets

Use preconditions and sets

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Unit objectives

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Why use preconditions and sets?

- Tasks should start only if they are needed.
- You need to be able to control when tasks start.
- You must configure tasks in order to best meet the needs of your business scenario.
- Use preconditions and sets to determine if and when tasks can start.

Why use preconditions and sets?

You can use preconditions and sets to manage the starting of tasks.

Case management requires a highly flexible strategy for starting tasks. Not every task must be used in every case. However, after a task is started, the case cannot be completed until the task is either completed or disabled. For an efficient solution design, you must design case types so that tasks start only when they are needed.

Some tasks can start automatically, while other tasks must start only if a user creates the task. In some cases, one task might require a follow-up task, or a task might make another task unnecessary. Other tasks might be started only if certain conditions occur.

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What are preconditions?

- A precondition is a conditional requirement for a task to start.
- Types of preconditions
  - Document precondition
  - Property precondition
  - Case stages

Use preconditions and sets © Copyright IBM Corporation 2018

What are preconditions?

If a task has a precondition, the task does not start until that precondition is met. You can specify many preconditions:

- when a document is added to the system

- when a property reaches a certain value

- when a case reaches a certain stage

A document precondition is met when a document of the correct document class is added to the case. For example, the Get Estimate task is launched when a Request for Estimate document is added to the case.
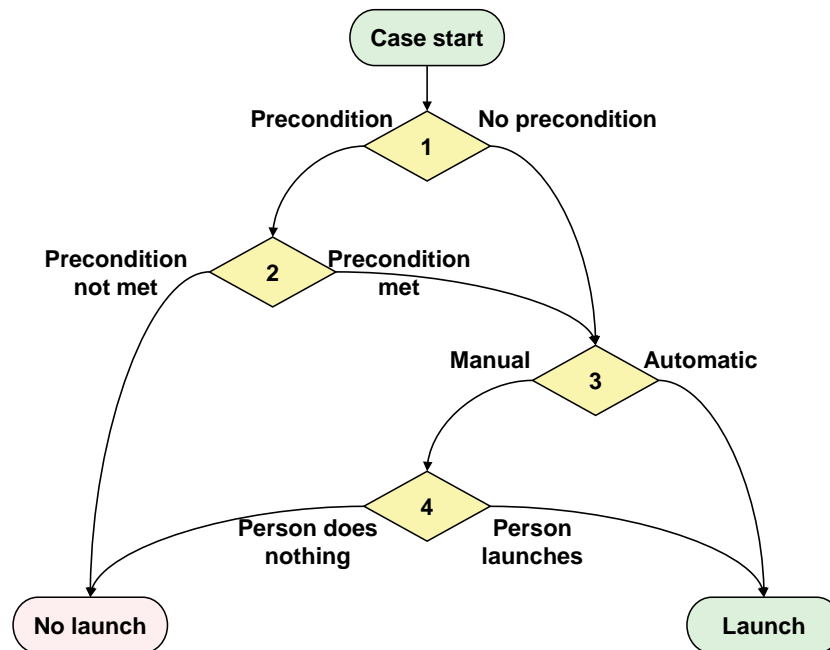
In order to meet the Document precondition, two things must be true:

- The document must belong to the correct document class.

- The document must be added to one of the case document folders.

Attachments cannot be used for meeting document preconditions because they are not added to case folders. When you add an attachment, you cannot add the document to the case document folder because case document folders are normally not displayed in the client interface.

The property precondition is met when a Case Property value meets defined criteria. For example, a Fraud Investigation task is launched when a PotentialFraud property value is greater than 0.4.

Decision tree for task launch

This diagram shows the decision tree for whether a specific task starts.

1. Does the task have a precondition?

2. If there is a precondition, is the precondition met?

3. Does the task start automatically or manually?

4. The worker chooses to launch or not to launch the process.

The graphic is a simplification. It does not show the effects of sets or container-tasks.

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Ordering tasks with preconditions: use-case examples

- Use a document precondition to force task order:
  - Place a Document precondition on Task 2 that is based on a specific document class.
  - Require that the document is added in Task 1.
- Use a property precondition to force task-order:
  - Create a Boolean property with default value of False.
  - Use a precondition on Task 2 that is met when the property is True.
  - Use a component step to change the value to True at the end of Task 1.

Ordering tasks with preconditions

You can use Process Designer to add component steps to a step map. See Unit 7, Automate case packaging (in this course) for more information.

Demonstration 1: Use preconditions

Demonstration 1:
Use preconditions

Purpose:
In this demonstration, you use a 'create a document' precondition to start a task, when a document is added to a case.

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Precondition Test Solution**

To complete this demonstration, you must be able to create solutions, properties, roles, document classes, case types and tasks with minimal instruction.

Task 1. Create the Precondition Test solution.

1. Start **Firefox**.

2. Log on to Case Manager Builder with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

3. Add a solution:

    - **Solution name**: **Precondition Test**

    - **Solution prefix**: **PT**

4. Add a String property: **Ticket Number**

5. Add a role: **Caseworker**

6. Add a document class: **Ticket**

7. Add a case type: **Precondition Test**

8. On the **Properties** tab, add the **Ticket Number** property.

9. On the **Views** tab, add the following properties to the views:

    - **Case Summary**: **Ticket Number**

    - **Case Search**: **Ticket Number**, **Added On**.

10. Click **Save**.

Task 2.   Create a task with a precondition.

1.   On the **Tasks** tab, click **Add Task** > **Task**.

2.   On the **General** tab, name the task: `Task with Precondition`.

3.   Verify that the task is set to start **Automatically**.

4.   Click the **Preconditions** tab.

5.   From the list, select **A document is filed in the case**.

6.   Clear the **Any document class** option.

7.   Select the **Ticket** document class.

8.   Click **OK**.

9.   Verify that the task shows the precondition indicator .

10.   Click **Edit steps** to open Step Designer.

Task 3.   Create a simple step map.

1.   Drag **Role Lane** onto the step map.

2.   Drag **Step** onto the role lane.

3.   **Name** the step: `Precondition verified`.

4.   Add the **Ticket Number** property to this step.

5.   Add a route from **LaunchStep** to the **Precondition verified** step. Remember to change the cursor to step connector type.

6.   **Save** the step map.

7.   **Validate** the step map.

8.   **Close** the step map.

Task 4.   Deploy the solution.

1.   **Validate** the **Precondition Test Solution**.

2.   **Save and Close** the **Precondition Test Solution**.

3.   **Deploy** the **Precondition Test Solution**.

4.   Verify that **Precondition Test Solution** was deployed.

5.   **Manage Roles** for **Precondition Test Solution** by adding **p8admin** to the **Caseworker** role.

Task 5. Create a case.

1. Click the **Work** tab.
2. Click **Add Case > Precondition Test**.
3. In the **Ticket Number** field, type **1**.
4. Click **Add**.

Task 6. Find the task.

1. Click the **Cases** tab.
2. Search for the case.
3. Click the case to open the Case Details page.
4. Click the **Tasks** tab.
5. Verify that the **Task with Precondition** is in a **Waiting** state.
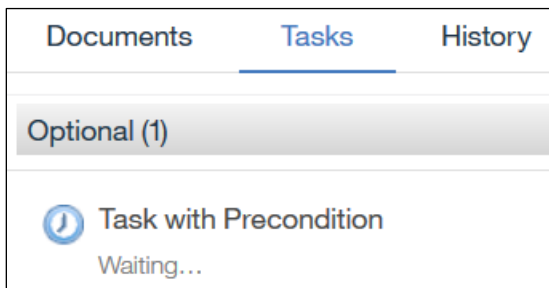
Task with Precondition is shown with a clock-face icon, and is in the Optional tasks area of the Tasks list.

Task 7. Add a document.

If you configured the precondition properly, adding a document of the Ticket type launches the task.

1. Click the **Documents** tab.
2. Click **Add** > **Add Document from Local System**.
3. Click **Browse**, and then browse to **C:\Training\F2910**.
4. Select any document, and then click **Open**.
5. From the **Class** list, select **Ticket**, and then click **OK**.
6. Click **Add**.

Task 8. Verify that the task started.

1. Click the **Tasks** tab.

2. Verify that **Task with Precondition** is now started.
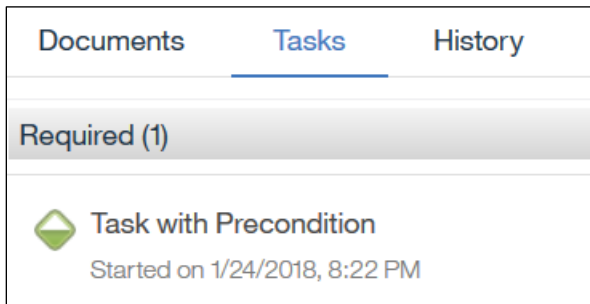
Task with Precondition now has a green half-filled diamond icon, and has moved into the Required tasks area. This task must now be completed before the case can be completed.

3. Click **Close**.

Task 9. Complete the tasks.

Complete the tasks to avoid clutter in the test in-basket.

1. Open the **Work** tab.

2. In the Caseworker in-basket, click **Precondition verified**.

3. Click **Complete**.

4. Close the window.

5. Leave Case Manager Builder open for the next demonstration.

> **Results:**
> **In this demonstration, you created tasks with preconditions to control when a task is started.**

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Why use task sets?

- Create task sets to organize tasks into groups.
- You can use two types of sets:
  - All inclusive sets
  - Mutually exclusive sets

All inclusive set

Set 1

Task 1 — Task 2 — Task 3

Mutually exclusive set

Set 2

Task 4   Task 5   Task 6
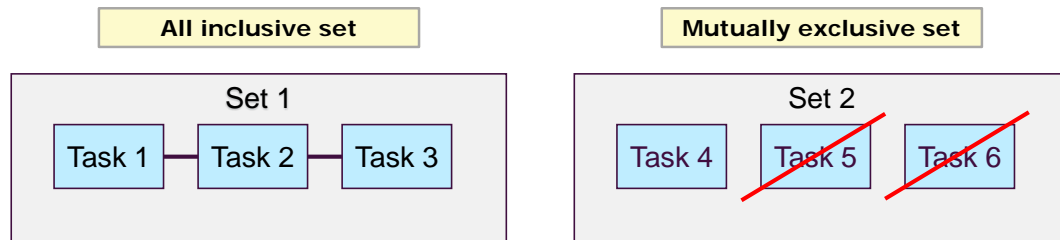
Use preconditions and sets   © Copyright IBM Corporation 2018

Why use task sets?

The graphic illustrates all-inclusive and mutually exclusive task sets.

You can group related tasks into sets in order to determine which tasks launch.

In all-inclusive sets, if one task in the set launches, then all of the tasks in this set must be completed.

In mutually exclusive sets, if one task in this set launches, then the other tasks in the set are disabled.
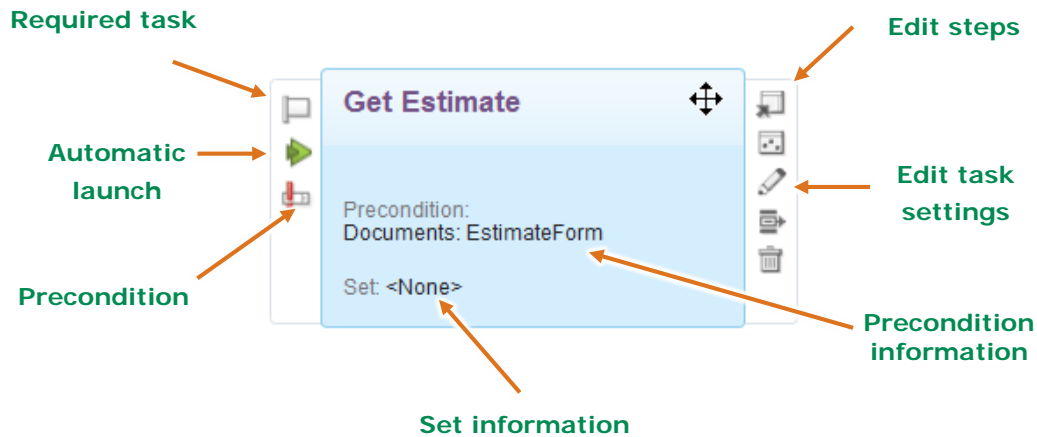
A task can belong to one set only.

You add sets with the Manage Sets button from the Tasks node of the case type.

You add tasks to sets from within the Edit Tasks page.

Finding task settings

This diagram shows a task. The task icon displays several icons that provide information about the task, such as whether the task is required or optional, and which conditions must be met for the task to launch.

On the tasks page, you must hover your cursor over the task to view these icons.

Demonstration 2: Use sets to manage tasks

Manage Sets

Add Set

* Name:
Exclusive Set

A description of the set

Type:
○ An all-inclusive set ◉ A mutually exclusive set

OK   Cancel

OK   Cancel

Demonstration 2: Use sets to manage tasks

Demonstration 2:
Use sets to manage tasks.

Purpose:
In this demonstration, use sets to control when tasks start. Create one set to start all tasks simultaneously, and another set to exclude mutually-exclusive tasks.

Case Manager Builder is already open from the previous demonstration. If this is not true, open Case Manager Builder in Firefox.

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Precondition Test Solution**

Task 1. Create a case type.

1. **Edit** the **Precondition Test Solution**.
2. Click the **Case Types** tab.
3. Click **Add Case Type**.
4. Name the Case Type: `Set Test`.
5. On the **Properties** tab, add all existing properties.
6. On the **Views** tab, add properties to the views as follows:

   - **Case Summary**: **Ticket Number**
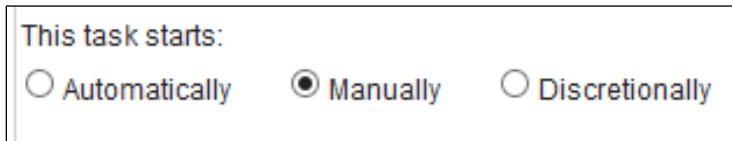   - **Case Search**: **Ticket Number**, **Added On**

Task 2. Create the set.

1. Open the **Tasks** tab.
2. Click **Manage Sets**.
3. Click **Add Set**.
4. **Name** the set: `Inclusive Set`.
5. Verify that **An all-inclusive set** is selected.
6. To the right of the Type option, click **OK** to create the set.
   Be careful not to click OK at the bottom of the dialog box, before adding the set.
7. Click **OK** to close the Manage Sets window.

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6-17

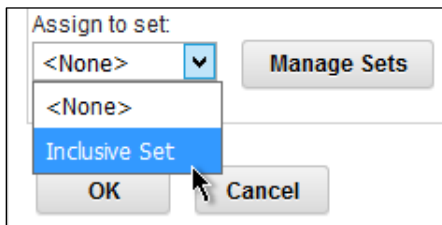## Task 3. Create Set Tasks.

Create three tasks for the first set.

1. On the Tasks page, Click **Add Task > Task**.
2. Name the task: `Set Task 1`.
3. Select the option to **Manually** start the task.

This task starts:
○ Automatically   ⦿ Manually   ○ Discretionally

4. Select **Inclusive Set** from the **Assign to set** list.

Assign to set:
<None> ▼   **Manage Sets**
<None>
Inclusive Set
OK   Cancel

5. Click **OK**.
6. Add another **manual** task: `Set Task 2`. Add the task to the **Inclusive Set**.
7. Add another **manual** task: `Set Task 3`. Add the task to the **Inclusive Set**.
8. **Save** the Precondition Test Solution.

Task 4. Create a step map.

The tasks for this demonstration do not need to be complicated because you are simply testing whether or not the tasks start.

1. Open **Set Task 1** in **Step Designer**.
2. **Add** a role lane.

There is only one role, so the role is automatically selected.

3. **Add** a **step**.
4. Rename the step: `Set Task 1 has started.`

At runtime, you can see this step in the in-basket.

5. Draw a **route** from **LaunchStep** to **Step1**.
6. Click **Save** to save the step map.
7. Click **Validate**.
8. Click **Close**.

Task 5. Create the other two step maps.

1. Create step maps for Set Task 2 and Set Task 3 by using the same procedure as in Task 4, only with the following changes:

    - For **Set Task 2**, name the step `Set Task 2 has started`.

    - For **Set Task 3**, name the step `Set Task 3 has started`.

2. **Validate** the solution.
3. Click **Save and Close**.

Task 6. Deploy the solution and add a case.

1. On the **Solutions** page, commit your changes to the **Precondition Test Solution**.
2. **Deploy** the **Precondition Test Solution**.
3. Click **Test**.
4. Click **Add Case** > **Set Test**.
5. Enter a value for **Ticket Number** that you can search for later.
6. Click **Add**.

Task 7. Open the case and start a task.

1. On the **Cases** page, enter your ticket number value for the case that you just created.
2. Click **Search** to find your case.
3. Click the case to open the Case Details page.
4. Open the **Tasks** tab.

5. Confirm that you can see the three tasks:
    Set Task 1, **Set Task 2**, **and Set Task 3**.
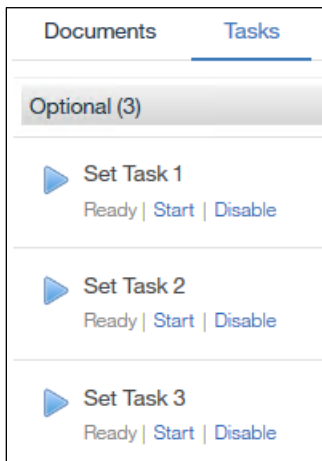
You might need to minimize the **Timeline Visualizer** widget to see the tasks.
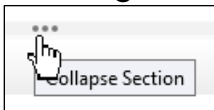
6. Click **Start** for **Set Task 1**.

7. Click **Yes** to confirm that you want to start the task.

8. Confirm that all three tasks are no longer showing as Optional, but now appears as **Required** (indicated on the bar at the top of the Tasks area, above all of the listed tasks).

9. Confirm also, that Set Task 2 and Set Task 3 are still in a **Ready** state.
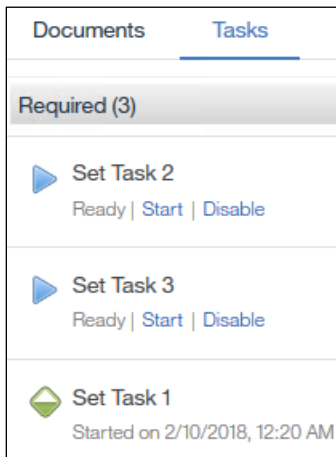
10. Click **Close**.

Task 8. Complete Set Task 1.

1. Open the **Work** tab.
2. Click the step: **Set Task 1 has started**.
3. Click **Complete**.
4. Click **Cases**.
5. Click **Search**.
6. Verify that Case State for your case is still in a **Working** state.

    In the Case State column of the search returns, the state shows it is Working.

    Because the three tasks are part of an inclusive set, all three tasks must be completed if one is started. To close the case, you must start and complete (or disable) the other two tasks.

Task 9. Start Set Task 2, and Disable Set Task 3.

1. Click the case to open the **Case Details** page.
2. Open the **Tasks** tab.
3. Start **Set Task 2**.
4. Click **Yes** to confirm that you want to start the task.
5. Disable **Set Task 3**.
6. Click **Yes** to confirm that you want to disable the task.

    Results appears similar to the following:
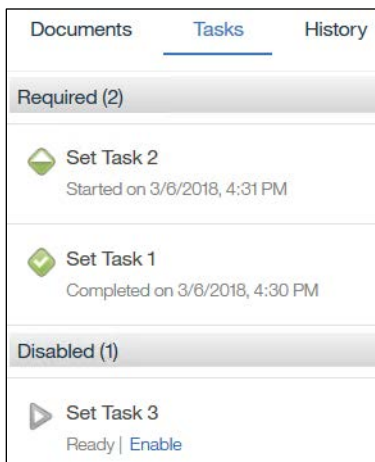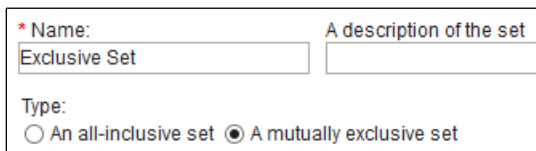

7. Click **Close**.

Task 10. Complete Set Task 2.

1. Click the **Work** tab.
2. Click the step: **Set Task 2 has started**.
3. Click **Complete**.
4. Open the **Cases** page.
5. Click **Search**.
6. Verify that the Case State of the case is now **Complete**.
7. Close the test window.

Task 11. Change the set type.

You are going to change the set type to Mutually Exclusive, then re-test the case type to see how the set type changes the behavior of the tasks. Case Manager Builder is open to the Manage Solutions page.

1. Edit the **Precondition Test Solution**.
2. Click the **Case Types** tab.
3. Click the **Set Test** case type.
4. Click **Tasks**.
5. Click **Manage Sets**.
6. Click **Inclusive Set** to open the settings.
7. Change the set name to `Exclusive Set`.
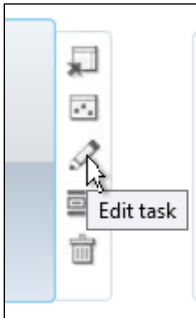8. Change the type to **A mutually exclusive set**.

* Name:	A description of the set
Exclusive Set	

Type:
○ An all-inclusive set ◉ A mutually exclusive set

9. Click the upper **OK** button to change the set type.
10. Click the other **OK** button to close the Manage Sets window.

Task 12.   Verify that the set name has changed on the tasks.

1.   Click **Edit Task** for **Set Task 1**.

2.   Verify that the task type is assigned to **Exclusive Set**.
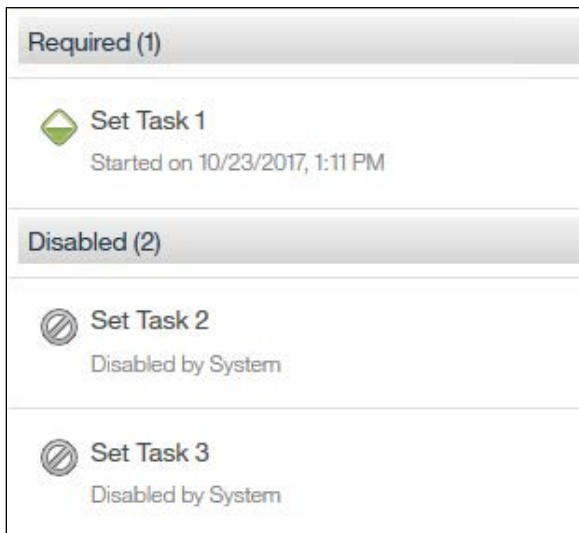

3.   Click **Cancel**.

Although the name and characteristics of the set changed, the link between the tasks and the set remains intact.

4.   Click **Save and Close**.

Task 13.   Deploy and test the solution.

1.   **Deploy** the **Precondition Test Solution**, accepting the Commit option.
2.   Click **Test**.
3.   On the **Cases** page, click **Add Case > Set Test**.
4.   Enter a value for **Ticket Number** that you can search for later, then click **Add**.
5.   **Search** for your case.
6.   Click the case to open the Case Details page.
7.   Click the **Tasks** tab.
8.   For **Set Task 1**, click **Start**.
9.   Click **Yes** to confirm that you want to start the task.

10. Confirm that after **Set Task 1** starts, **Set Task 2** and **Set Task 3** are automatically disabled.

Required (1)

◇ Set Task 1
Started on 10/23/2017, 1:11 PM

Disabled (2)

⊘ Set Task 2
Disabled by System

⊘ Set Task 3
Disabled by System

11. Click **Close**.

Task 14.   Complete Set Task 1.

1. Click the **Work** tab.
2. Open and complete **Test Task 1 has started**.
3. Click the **Cases** tab.
4. Search for your case.
5. Verify that the Case State appears as **Complete**.
6. Log out of all applications and close all browsers.

Results:
In this demonstration, you created an inclusive set with three tasks. You deployed and tested the solution to verify that the tasks started when one task started. You changed the set type to exclusive and then retested the solution to observe the difference.

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Unit summary

- Organize tasks with preconditions
- Organize tasks with inclusive sets
- Organize tasks with exclusive sets

Use preconditions and sets

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Unit summary

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Exercise 1: Organize tasks with preconditions

| General | **Preconditions** | Task Properties | Design Comment |

What preconditions must be met for this task to start?

A document is filed in the case ▾   ☐ Task is repeatable

☐ Any document class

Document Classes:

Arbitration form
FNOL
Supporting Document

Exercise 1: Organize tasks with preconditions

Exercise 1:
Organize tasks with preconditions

If two insurance companies are involved in a case and the facts of the case are in dispute, then both companies might settle the dispute through inter-company arbitration. To start inter-company arbitration, a claim adjuster states that it is not possible to resolve responsibility for the accident through more discussion. The companies must agree upon an arbiter. After the arbiter is selected, the claim adjuster fills out the arbitration form. The filing Claim Adjuster must send a copy of the filing and all attachments to the responding company. Strict deadlines apply to all submissions.

In your solution, if arbitration is required, the following tasks must be performed:

- Arbiter Selection

- Send Arbitration Files

To ensure that the Arbitration files are not sent out without the Arbitration form, make the Arbitration form a precondition for the Send Arbitration Files task.

Use the Case Manager Builder application on your student system to complete this exercise.

- Create new properties for arbitration.

    - **Other Insured Name**, type: **String**

    - **Other Insurance**, type: **String**

    - **Arbiter**, type: **String**

- Create a document class named Arbitration forms.

- Create a case type for arbitration.

- Create a task for selecting an arbiter and for adding the Arbitration Form.

- Create a task for sending the documents. Ensure that the Arbitration Form is a precondition for this task.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Simple Claims Solution**

Task 1. Create new properties.

- In Case Manager Builder, edit the **Simple Claims Solution**.

- Create the following properties, all of type: **String**:

    - **Other Insured Name**

    - **Other Insurance**

    - **Arbiter**

Task 2. Add a document class.

The trigger for one of the tasks is an Arbitration Form. You need to create an Arbitration Form document class.

- Create a document class named **Arbitration Form**.

- Add the following properties to the document class:

    - **Policy Number**

    - **Arbiter**

Task 3. Create a case type.

- Create a case type named **Arbitration**.

- Add all of the case properties to this case type.

- Add the following properties to the views for the indicated case type:

- **Case Summary**:

  - **Policy Number**

  - **Other Insurance**

  - **Arbiter**

- **Case Search**:

  - **Date Of Loss**

  - **Policy Number**

  - **Surname**

- Add a subfolder to the **Arbitration** folder and name it:
  Files for Arbitration.

Task 4. Create the Select Arbiter task.

Create a **workflow task** with the following settings:

- Name: **Select Arbiter.**

- Task Starts: **Automatically**.

- Make the task: **Required**.

  This task has no preconditions.

Task 5. Create the Send Arbitration Files task.

  To ensure that the Send Arbitration Files task can launch only when the Arbitration Form is added to the case folder, you need to make the addition of the document a precondition for this task.

- Create a **workflow task** with the following settings:

  - Name: **Send Arbitration Files**.

  - Task start type: **Automatically**.

  - Make the task: **Required**.

  - Precondition: **A document is filed in the case**.

  - Document class: **Arbitration form**.

Task 6. Edit the Select Arbiter task.

Use Step Designer and the following data to create the workflow for the Select Arbiter task.

- Add the **Claim Adjuster** role lane.

- Create a step in the Claim Adjuster lane. Name: `Select The Arbiter`.

- Add the instruction for this step: `Communicate with the other insurance company and your client in order to agree upon an arbitration company.`

- Add the following case properties to this step:

  - **Arbiter**, [r/w]

  - **Other Insurance**, [r/w]

  - **Other Insured Name**, [r/w]

  - **Surname**, [r/w]

  - **Policy Number**, [r/w]

- Create another step in the **Claim Adjuster** role lane.

- Name the step: `Add Arbitration Form`.

- Add the instruction: `Complete the arbitration form for this case and add it to the case document folder. Make sure to select the Arbitration class.`

- Add the following case properties:

  - **Arbiter**, [r/w]

  - **Other Insurance**, [r/w]

  - **Other Insured Name**, [r/w]

  - **Surname**, [r/w]

  - **Policy Number**, [r/w]

- Create a route from the **LaunchStep** to the **Select The Arbiter** step.

- Create a route from the **Select The Arbiter** step to the **Add Arbitration Form** step.

- **Save** and **Validate** the task.

- Close **Step Editor**.

Task 7. Edit the Send Arbitration Files task.

Use Step Designer and the following data to create the workflow for the Send Arbitration Files task.

- Create a role lane for the **Claim Adjuster**.

- Add a step to the role lane.

- Name the step: `Send Arbitration Files`.

- Add the instruction: `Send the arbitration form and all relevant case documentation to the other insurance company and to the arbiter`.

- Add the following case properties:

    - **Arbiter**, [r/w]

    - **Other Insurance**, [r/w]

    - **Other Insured Name**, [r/w]

    - **Surname**, [r/w]

    - **Policy Number**, [r/w]

- Create a route from the **LaunchStep** to the **Send Arbitration Files** step.

- **Save** and **Validate** the task.

- Close **Step Editor**.

Task 8.   Test the Simple Claims solution.

- Validate the **Simple Claims Solution**.

- Save and close the **Simple Claims Solution**.

- Deploy the **Simple Claims Solution**.

- Click **Test**.

- Create an **Arbitration** case. Use any data that you want for the test case properties.

  Make sure that you are logged in as a **Claims Adjuster**.

  Note the **Surname** when you add the case, so that you can easily search for the case.

- Complete the **Select The Arbiter** task.

  - Add an **Arbitration Form** to the case to launch the Send Arbitration Files task.

  - Use the **Arbitration Form** document class.

  - Document content location: **C:\Training\F2910**.

  - Document to add: **Form of arbitration.jpg**.

- Verify that the **Send Arbitration Files** task starts.

  - If the task starts, then you have configured the precondition properly.

  - If the task was already started before you added the Arbitration Form, then the task is set to start automatically without a precondition. You must go back and edit your solution.

  - If the task does not start, make sure that you have selected the correct document class. If it fails to start with the correct document class, carefully review your solution to ensure that the settings are correct.

- Complete the **Send Arbitration Files** task.

- Log out of all applications and close all browsers.

Unit 7   Automate case packaging

Automate case packaging

IBM Case Manager V5.3.2

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Unit objectives

- Open a task in Process Designer
- Add a component step to a task
- Use a component step to package a case

Automate case packaging

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Unit objectives

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What is Case Packager?

- Case Packager creates a package that contains all case-related artifacts.
- Share the case package with stakeholders who do not have access to case information.
- Methods for creating a case package:
  - users can click a button at runtime
  - automatically with a component step

What is Case Packager?

There are situations in which case workers want to share case information with people who do not have access to the case management system. To share this information, they can create a case package using Case Packager. This option must be configured during the solution building phase.

You can configure your solution interface to include Case Packager buttons in the Case Details page. The buttons provide a way for users to create a case package.

With Process Designer, you can also configure a component step that automatically packages the case and stores the package in the case folder without user input.

To add a component step to a solution, you must open the task in Process Designer and then add a component step to the workflow. After you add the component step, you must configure the component parameters.

The ICM_Operations component provides two operations that you can use:

- createCasePackage creates a case package with configurable output. You must specify packagingOptionNames and packagingOptionValues in order to view their output.

- createDefaultCasePackage creates a case package with a default configuration. You do not need to specify the packagingOptionNames or packagingOptionsValues.

If you use the createCasePackage operation, you must specify the following parameters:

- packagingOptionNames is the list of artifacts that are to be included in the case package.

- packagingOptionValues is the list of values corresponding to the options that are specified for the packagingOptionNames parameter.

The parameters, packagingOptionNames and packagingOptionValues, can be considered as key-value paired arrays where all the keys are in packagingOptionNames and all the values are in packagingOptionValues. The lengths of both arrays must be the same.

For more information, refer to the topic, createCasePackage operation, in the IBM Knowledge Center: https://www.ibm.com/support/knowledgecenter/SSCTJ4_5.3.2/com.ibm.casemgmt.help.doc/acmpdh48.htm.

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Why use Process Designer integration capabilities?

- The Step Designer does not have equivalent functionality with the Process Designer.

- Your solution might need to use functions that are available only by using Process Designer capabilities.

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Why use Process Designer integration capabilities?

You can create many tasks with Step Designer, but there are some capabilities that you can get from using Process Designer that are not available in Step Designer. A skilled solution builder must be able to use Process Designer when more advanced features are required.

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Examples of functions available in Process Designer

- Submaps
- System steps and system functions
- Component steps
- Property-value driven conditional routes
- Voting
- Advanced business logic

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Examples of functions available in Process Designer

System functions that are supported Process Designer include, but are not limited to:

- Assign system function
- Call system function
- Create system function
- DbExecute system function
- Delay system function
- Log system function
- Return system function
- TerminateBranch system function
- TerminateProcess system function
- Checkpoint processing
- Wait for conditions
- Web services

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Using Process Designer

- You can start Process Designer in two ways:
    - from a browser that supports Java applets, such as Internet Explorer 11.
    - using the standalone Process Designer application.

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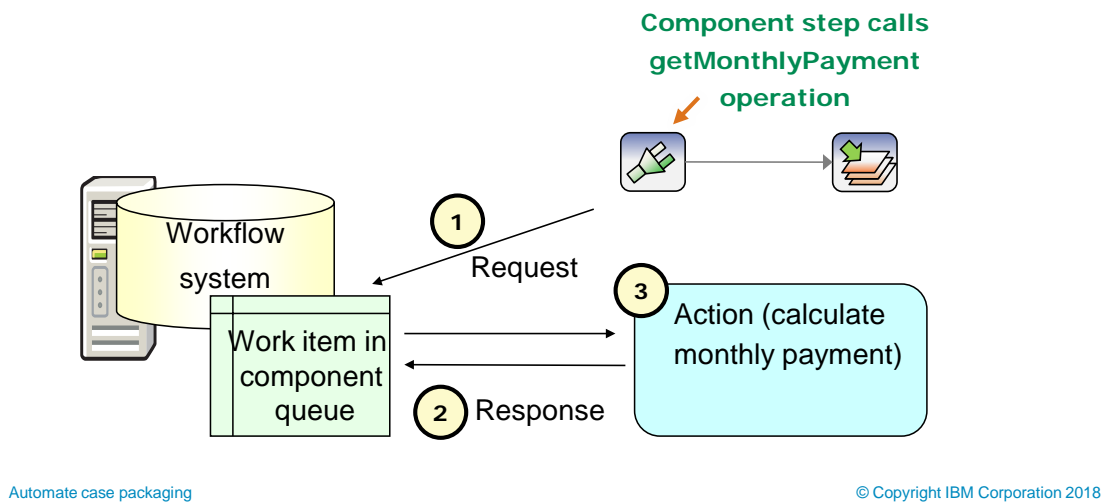© Copyright IBM Corporation 2018

Using Process Designer

Both options require some configuration.

The stand-alone application must be installed on the client machine. It requires installation of a JRE and is launched from a command window or a Windows shortcut. The applet and the application are functionally identical: The differences are in how they are installed, configured and launched.

For more information about the stand-alone Process Designer, see: http://www-01.ibm.com/support/docview.wss?uid=swg22004842

What is a Component step?

After the workflow system is prepared for component use, the workflow author places a component step on a workflow map to route work to an operation

A component step makes it possible to route work to operations in custom Java™ or Java Message Service (JMS) components. In the workflow, the component step connects to a component queue configured for one or more operations in the custom component. You can place a component step on any workflow map.
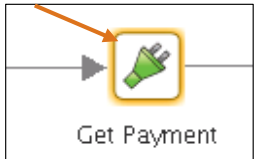
At run time, the work item is placed in the component queue that is configured for the component and the specified operation (in this case, the getMonthlyPayment operation) is called. The external component manages the operation action and sends a response to the Process Services of the Content Platform Engine (CPE). Only Java components can provide a return response.

The diagrams show part of a workflow map for a loan processing workflow that includes a component step named Get Payment. The Get Payment step calls a Java component operation that calculates and returns a monthly loan payment based on user input.

Using a component step in a solution

The diagram shows an example component step along with its defined operation and operation parameters.

To use component operations, you add a component step to a workflow definition with Process Designer. A component step represents an activity in the workflow that is assigned to one or more operations in a component queue.

In Process Designer, in the General tab of the component step Properties pane, select a component, and then select one or more operations for use in this step.

The operation parameters are automatically added to the Operation Parameters list, including the parameter types and access rights. Parameters cannot be added or modified for an operation.

In the Expression field, specify an expression for each parameter. You can select from a list of workflow data fields, create a new data field, or use the Expression Builder. Each parameter that is specified in the operation must be assigned an expression that evaluates to the correct data type in the Expression field. Always press Enter after each entry.

You can also specify the incoming and outgoing routing properties for the component step, similar to other step types in Process Designer.

To learn more about using Process Designer, you can enroll in one of the IBM Case Foundation courses at the IBM Sklls Gateway: https://www-03.ibm.com/services/learning/ites.wss/zz/en?pageType=page &c=a0011023.

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What to expect back from the component step

- When you add a component step to a task by using Process Designer:
  - The added System Component Step is visible within Step Designer.
  - The step cannot be modified in Step Designer.

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What to expect back from the component step

When the enhanced functionality has been added to the solution, the enhancements are tested using the Case Manager Client to verify correct functionality.

Any enhancements that are added using the Process Designer can be processed by the Content Platform Engine at run time, but they cannot be modified when viewed with the Step Designer.

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Demonstration 1:
Add a case packager component step to the solution

Case Package	Case ID:PT2_PreconditionTest_000000100001

Contents

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Demonstration 1: Add a case packager component step to the solution

Demonstration 1:
Add a case packager component step to the solution

Purpose:
Case packager is a Case Manager feature that creates case documentation for people who do not have access to the Case Manager system. For example, if you need to provide case information to a lawyer or legal specialist for review. In this demonstration, you configure a solution to automatically generate a case package without any user input. To accomplish this goal, you use Process Designer to add and configure a component step within a case workflow.

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Packager Test Solution**

Task 1. Create the Package Test solution.

You can create a new solution from the beginning, but it is faster to use an existing solution. In this task, you copy an existing solution and rename it so that you have a starting point for adding features. If you have not created the Precondition Test solution, complete the demonstrations in the unit *Use preconditions and sets*.

1. Start **Internet Explorer**.

    You are using **Internet Explorer** in this exercise because **Firefox** has dropped support for Java Applets. You are going to be using Process Designer, which runs as a Java Applet.

2. Log on to Case Manager Builder with the following credentials:

    - User name: **p8admin**

    - Password: **FileNet1**

3. Click the menu button (vertical line of 3 dots) to open the edit menu for the **Precondition Test Solution** that you created earlier.

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4. Click **Copy**.
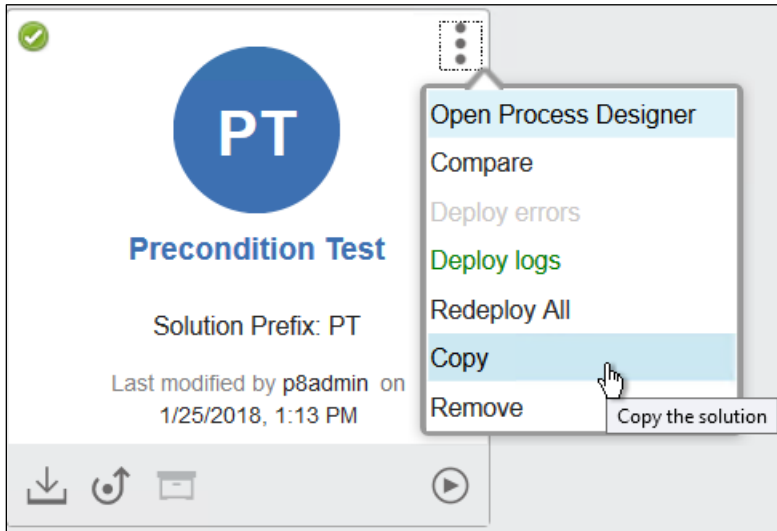
5. Name the solution: `Packager Test`.
6. In the **Solution Prefix** field, enter `PT2`.
7. In the **Description** field, type a description:
    `A solution to test case packaging`.
8. Click **OK**.
9. Open the **Packager Test** solution for editing.
10. Click the solution icon.
11. Select the **File system** icon to represent this solution.

12. Click **Save**.

## Task 2. Open the workflow task in Process Designer.

1. Click the **Case Types** tab**.**
2. Hover your cursor over the **Precondition Test** case type.
3. Click **Edit** .
4. Change the **Case Type Name** to `Packager Test`.
5. Click **Save**.
6. Click **Tasks**.
7. Hover your cursor over the **Task with Precondition**.
8. Click **Edit task**.
9. Rename the task: `Task with Packager`.

10. Click the **Preconditions** tab.
11. From the **Preconditions** list, select **No preconditions**.
12. Click **OK**.
13. Click **Save**.
14. Click **Open Process Designer** .

    The task opens as a workflow map within Process Designer. If Process Designer does not open, make sure that you are using Microsoft Internet Explorer.

    If you see a message that indicates that Internet Explorer blocked a popup, select the option, **Always allow**.
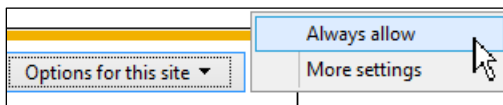
    If you see a message to update Java, select the option: **Do not ask again until the next update is available**, and then click **Later**.
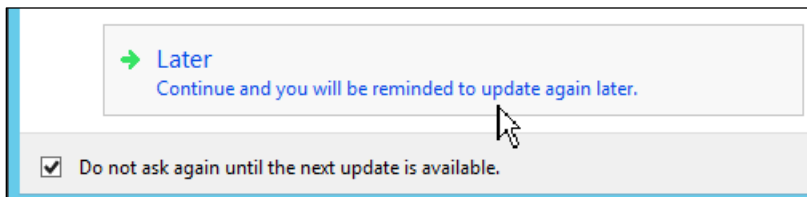
    If you see a prompt asking if you want to run this application, select the **Do not show this again for apps from the publisher and location above** option, and then click **Run**.
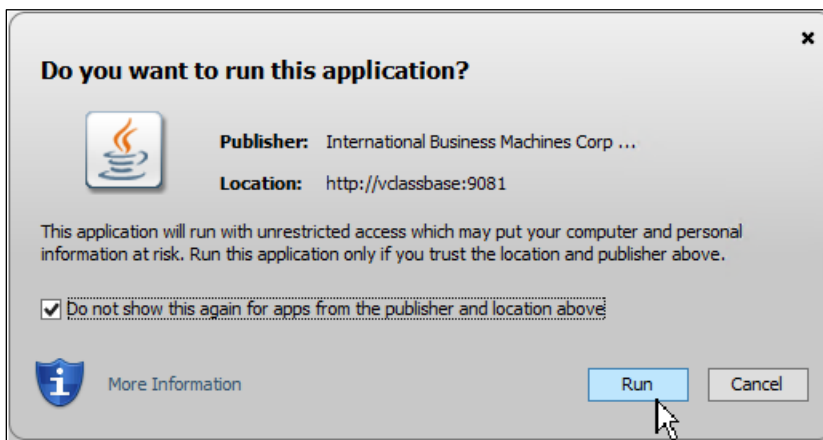
Task 3. Rename the Precondition verified step.

1. Click the **Precondition verified** step.
2. In the step name field, replace the step name with: `Package for you`.

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Task 4. Add a component step.

1. Drag a **Component step** from the step palette to the workflow map.

2. In the **Step Name** field, type: `Case Packager`.

3. Hover your mouse cursor over the edge of the **Package for you** step until you see the create route icon .

4. Click and drag a route from the **Package for you** step to the new **Case Packager** step.

Task 5. Configure the Case Packager step.

In this task, you configure the Case Packager step to use the createDefaultCasePackage operation from the ICM_Operations component.

1. Click the **Case Packager** step.

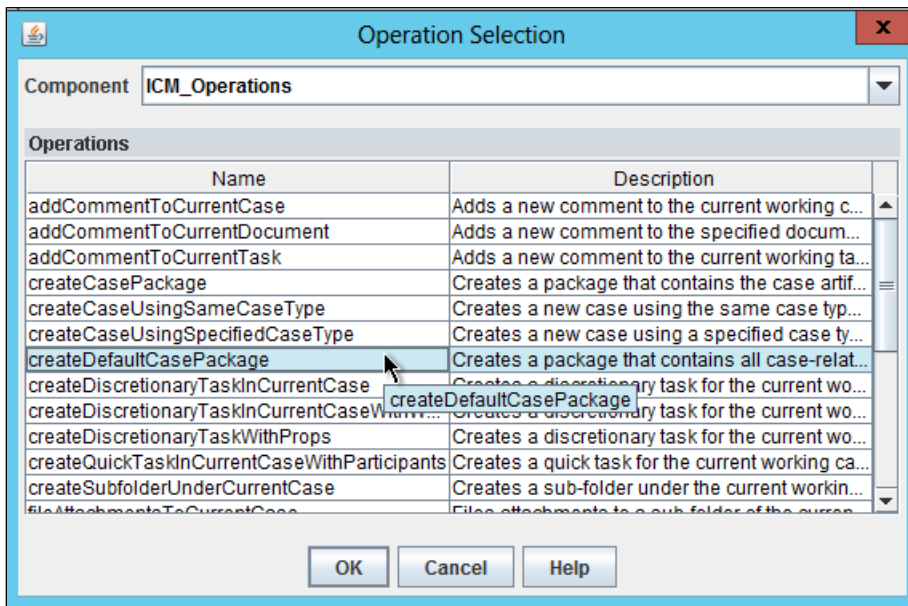2. On the General tab, click **Add** to add a new component.
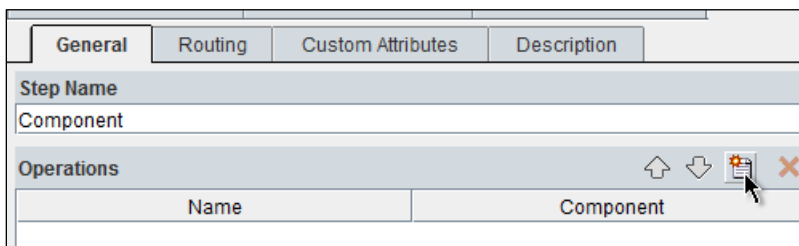
3. From the **Component** menu, select **ICM_Operations**.
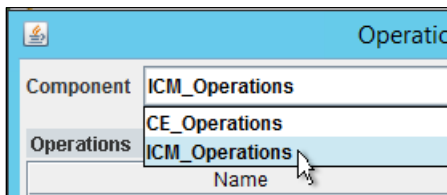
The list of operations for the **ICM_Operations** component is displayed.

4. From the **ICM_Operations** list, click **createDefaultCasePackage**, and then click **OK**.

The operation parameters fields are displayed in the lower right pane. You must configure these parameters.

5. For each operation parameter, enter the data exactly as shown in the Expression column:

    - caseId: **F_CaseFolder**

    - casePackageName: **casePackageName**

    - locale: **"en_US"**

    Be sure to press the **Enter key** after typing each input, to save the field values. Do not forget the quotation marks.

6. At the top of the interface, click **Validate Workflow Collection** .

    - If validation succeeds, click **OK** and continue with the exercise.

    - If validation fails, carefully review your work, especially the expressions; the expressions must match exactly.

7. Click **File** > **Solution** > **Save and Close**.
    The workflow is saved back into your solution.

Task 6.   (Optional) View the change to the step map.

In Process Designer, you updated the step map as a workflow. The changes are visible in Step Designer, but you cannot alter the component step from Step Designer.

1.   Hover your cursor over the task.

2.   Click **Edit Steps** .

3.   Inspect the step map. Verify that a component step is shown in the **System** swim lane.

4.   Click the **Case Packager** step. Verify that you cannot edit the configuration or parameters of this step.

5.   **Close** the step map. Do not save any changes to the step map.

6.   Click **Discard**.

Task 7.   Deploy the solution.

1.   **Validate** the **Packager Test** Solution.

2.   **Save and Close** the **Packager Test** Solution.

3.   **Deploy** the **Packager Test** Solution.

4.   Verify that **Packager Test** Solution was deployed.

5.   Click **Test**.

6.   Manage roles for **Packager Test** solution by adding **p8admin** to the **Caseworker** role.

Task 8.   Create a case.

Create a case with property values and a document in order to view these items in the case package.

1.   Click **Add Case > Packager Test**.

2.   In the **Ticket Number** property field, enter a ticket number.

3.   Click **Add**.

Task 9.   Process the case.

1.   Click the **Work** tab to open the Caseworker in-basket.

2.   Click **Package for you** to open the work item.

3.   Click **Complete**.

The final step of the workflow is the Case Packager step. There is no more work to do, but you can review the case package by opening the case details.

Task 10.   Find the task.

1.   Click the **Cases** tab.

2.   Click **Search** to find your latest case.

3.   Click the case to open the Case Details page.

Task 11.   Open the case package.

1.   On the Documents tab, verify that you see the case package document. You might have to click the Documents tab to refresh the view.
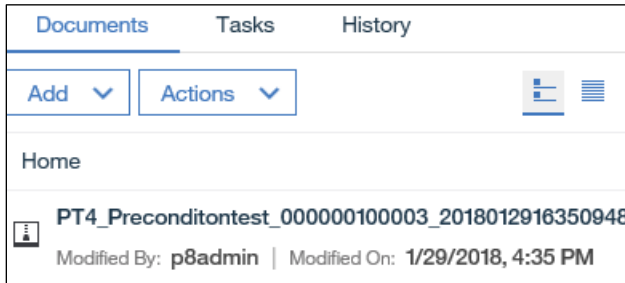
2.   Click the case package title to open it.

3.   Click **Open** to open the file with Windows Explorer.

4.   Verify that Windows Explorer opens to show a PDF file with the case name.

5.   Double-click the **PDF** file.

6.   Inspect the PDF file to review the case properties.

7.   Log out of all applications and close all applications and browsers.


Results:
You used Process Designer to add a component step to a task. You used a component step to automatically create a case package. You tested the solution to verify that the case package was created.

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Unit summary

- Open a task in Process Designer
- Add a component step to a task
- Use a component step to package a case

Unit summary

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Exercise 1: Integrate a case packager component step
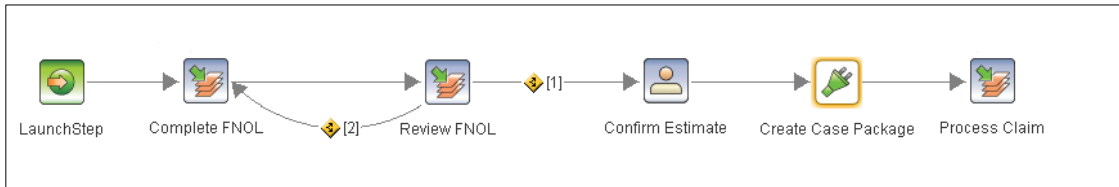
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Exercise 1: Integrate a case packager component step

Exercise 1:
Integrate a case packager component step

Insurance companies often need to work with lawyers, doctors, and other insurance companies. To provide these people with case information, you need to add a step to create a case package to the solution. The case packager component automatically creates a case package that can be sent to 3rd parties.

You must do the following tasks:

- Add a case packager component step to the Gather Claim Data task of the Auto Claim case type in the Simple Claim solution.

- Deploy and test the solution.

- Verify that the case package is created.

Remember to use Microsoft Internet Explorer when you are using Process Designer.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL:　　　　**http://vclassbase:9081/CaseBuilder**
User/Password:　　　　　　　　　**p8admin/FileNet1**
Solution:　　　　　　　　　　　　**Simple Claims Solution**

Task 1. Edit the solution.

Use **Microsoft Internet Explorer** for this exercise.

- Use **Case Manager Builder** to open the **Simple Claims Solution**.

- Use **Process Designer** to edit the **Gather Data** task in the **Auto Claim General** case type.

- Add a **Component** step to the workflow map.

- Connect the **Confirm Estimate** step to the **Component** step, and the **Component** step to the **Process Claim** step.

  - Remove the direct route from **Confirm Estimate** to **Process Claim**.

- Configure the **Component** step to create the case package using the following information:

  - Component:　　　　　　　**ICM_Operations**

  - Operation:　　　　　　　　**createDefaultCasePackage**

    - caseId:　　　　　　　　**F_CaseFolder**

    - casePackageName:　　**casePackageName**

    - locale:　　　　　　　　**"en_US"**

  - Place the **Component** step between the **Confirm Estimate** step and the **Process Claim** step.

- **Validate** the workflow, and then exit **Designer** - saving changes (if the Validate step does not complete, remember to go back and check the expressions you entered, and ensure they match exactly as indicated).

Task 2. Test the solution

- **Validate** and **Deploy** the solution.

- **Test** the solution by creating an **Auto Claims General** case. Enter property values that you can look for in the case package. Remember to use a Family Name that you can remember easily to find your case.

- Process the case. You must remember to do the following tasks:

  - Refer to the diagram that introduces Exercise 1 in Unit 5 to review the case flow.

  - Switch between roles in order to process the case.

  - Specify a user (yourself) as the **Car_repair** workgroup. The **Confirm Estimate** step goes into the personal in-basket of the user that you select.

  - Add a document that uses the **FNOL** document class.

- Open the case after the **Get Estimate** step has completed.

- Verify that the case package was created and that it includes the expected data and format.

- Verify that the case package includes any documents that you added to the case.

- Complete any remaining work items.

- Log out of all applications and close all browsers.

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Add case stages

IBM Case Manager V5.3.2

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Unit objectives

- Add case stages to a solution
- Use a system step to perform a case stage operation
- Use a case stage as a task precondition

Unit objectives

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What are case stages?

- Case Stages logically represent a case life cycle.
- At runtime, stages are automatically generated when a case is created.
- The Case Stages shows the current stage of the case.

Planning   Developing   QA   Publishing
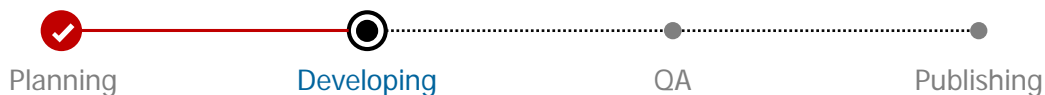
Add case stages   © Copyright IBM Corporation 2018

What are case stages?

Case stages are an optional way to add a case lifecycle to the case. Once created, the first stage is automatically started. Stages are advanced sequentially and cannot be skipped. Case stages can be advanced, placed on hold, or restarted. Case stage operations can be handled automatically or manually.

Stages can be completed and moved to the next stage either through case operations or case stage actions.

Case operations (or user interface actions) can be used to complete, place on hold, or restart stages. Public API can be used to complete, place or release holds, or restart stages.

Case Stages cannot be added to existing cases.

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Using case stages

- Use case stages to provide insights on how far a case is in its lifecycle.
- Use case stages as preconditions to start tasks.
- Case stages are used to compute case health.
- View case stage information in the Calendar widget.

Add case stages

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Using case stages

Case stages show the lifecycle of a case. A case does not close until the final stage is complete. If all of the required tasks are complete, and the case is still in a working state, the case stages might need to be advanced to the end. It is convenient to automate case stage advancement to ensure that the case closes promptly.

You can also use case stages as preconditions for tasks. For example, when a case enters the QA stage, the QA task starts.

Case stages are part of the Case Health algorithm. If a stage is taking too long, the case can be flagged for attention.

The Case Health tool is an optional analytical tool for examining cases. It uses a colored dot to indicate whether a case is likely to be completed on time. Various states are displayed, including No Information, Good, Warning, and Poor Health. Case health uses an algorithm that aggregates data on tasks, quick tasks, and case stages. The algorithm assigns a health state based on comparing the current case with other cases of the same type.

Case stages are also visible on the Calendar widget, so they can be used for estimating timelines and scheduling tasks.

The calendar widget displays a calendar with case management events. Case tasks, due dates, and stages are all shown on the calendar. Calendar events can be subscribed, for example, Indian Holidays to help with case scheduling.

For more information about Case Health and the Calendar widgets, review the information on the IBM Knowledge Center: https://www.ibm.com/support/knowledgecenter/SSCTJ4_5.3.2/com.ibm.casemgmt.inst alling.doc/acmov008.htm

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Adding case stages to a case type

- Case stages are configured on each case type.
- Avoid crowding the Case Stage widget with:
  - too many stages
  - long stage names

Stage name	Duration	Description
Triage	1 days	Determine how to proceed
Investigating	3 days	
Processing	5 days	

Add case stages © Copyright IBM Corporation 2018

Adding case stages to a case type

You create and configure case stages in Case Manager Builder on the Case Type. You can add as many stages as you need for a case type.

In Case Manager Client, stages are all shown on a single line. If you have too many stages or your stage names are too long, the stage names can overlap. To avoid crowding, limit the number of stages or shorten the stage names so that they all fit.

How do case stages change during runtime?

- Case stage operations affect the current stage:
  - Complete
  - Toggle Hold
  - Restart
- The methods for using stage operations:
  - Manual
  - System step
  - API

How do case stages change during runtime?

The following case stage actions can affect the current stage of the case:

- Complete: Advance to next stage

- Toggle Hold: Place stage on hold or Release hold

- Restart: Restart the previous stage

You can implement case stage actions with the following methods:

- Manually: users can click a button on the stage widget to Complete, Restart, or Toggle Hold of the case stage. When you add the Case Stage widget to the Case Details page, you can specify whether to allow case workers have the controls to affect the case stage.

- With a system step: A workflow step can use stage operations. In Step Designer, you can add a case stage system step to the system swimlane of the step map. You specify which stage operation to complete at that step.

- Programmatically: Developers can use the new public API to control stage operations.

In Process Designer you can use case operations in a workflow to automatically change the case stage. Case operations include the following:

- completeCurrentCaseStage - Completes the current case stage and advances to the next case stage if there is a next case stage.

- placeCurrentCaseStageOnHold - Puts the current case stage on hold.

- releaseCurrentOnHoldCaseStage - Releases the hold on the current case stage.

- restartPreviousCaseStage - Restarts the previous case stage.

If you choose to change case states programmatically, a new public API in both Java and JavaScript is provided for Case Stages.

The API exposes methods to control stages:

- Complete Stage (and advance to the next one)

- Put stage on hold

- Release hold on stage

- Restart stage (aka return to previous stage)

- Other utility functions: retrieve stages, get current stage

- The API is used at runtime when opening cases that have stages
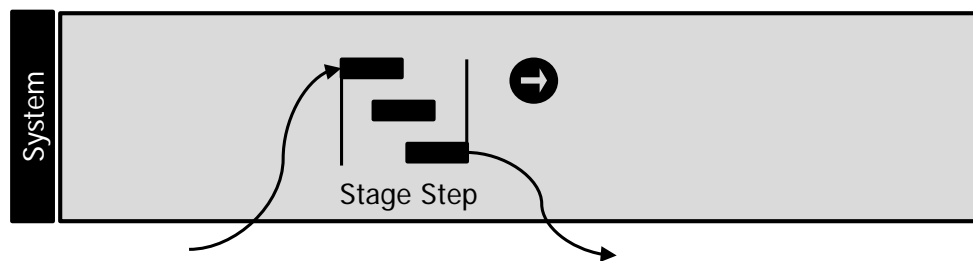
Adding a stage step to a workflow

The graphic shows a stage step in the system swim lane of a step map.
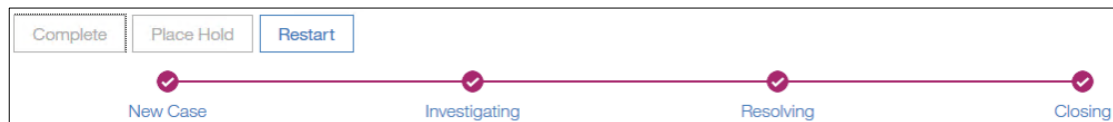
Use these stage steps to cause automatic transitions between stages. The stage step can perform any of the standard stage operations, including advancing, placing a hold on the stage, or returning to a previous stage.

Demonstration 1: Add stages to a case type

Demonstration 1:
Add stages to a case type

Purpose:
Stages provide a way to assess the lifecycle progress of a case. In this demonstration, you add stages to a case type, and then view the results in Case Manager client.

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Case Stages Demonstration**

Task 1. Create a solution.

1. Start **Firefox**.
2. Log on to Case Manager Builder with the following credentials:

   - User name: **p8admin**

   - Password: **FileNet1**

3. Add a solution:

   - Solution name: **Case Stages Demonstration**.

   - Solution prefix: **CSD**.

4. Add a string property: **Invoice Number**.
5. Add a role: **Inspector**.

Task 2. Add a case type.

1. Click the **Case Type** tab.
2. Add a case type: **Inspection**.
3. On the **Properties** tab, add all properties.
4. On the **Views** tab, for the Case Summary, add all properties.

Task 3. Add case stages.

Add four case stages: New Case, Investigating, Resolving, and Closing.

1. Click the **Stages** tab.
2. Click **Add Stage**, and enter the following values:

   - Name: **New Case**

   - Description: **Determining a course of action**.

   - Duration: **1** hours

3. Click **Add Stage**, and enter the following values:

   - Name: `Investigating`

   - Description: `Investigating the issue`.

   - Duration: `2` hours

4. Click **Add Stage**, and enter the following values:

   - Name: `Resolving`

   - Description: `Resolving the issue`.

   - Duration: `1` hours

5. Click **Add Stage**, and enter the following values:

   - Name: `Closing`

   - Description: `Closing the case`.

   - Duration: `1` hours

6. Click **OK All**.
7. Verify that you can see all of the stages with their durations and descriptions.

Stage Name	Duration	Description
New Case	1 hours	Determining the course of action
Investigating	2 hours	Investigating the issue
Resolving	1 hours	Resolve the issueing
Closing	1 hours	Closing the case

8. Click **Save**.

Task 4. Add tasks.

1. Click the **Tasks** tab.
2. Click **Add Task** > **Task** to add a workflow task.
3. On the General tab, enter Name: `Open the Case`.
4. Click **OK**.
5. Add another workflow task named: `Investigate and Resolve`.
6. Add another workflow task named: `Close the Case`.

Task 5.   Edit the Open the Case task.

1.   Hover your cursor over **Open the Case**, and then click **Edit steps**.
2.   Add a **Role Lane** for the **Inspector.**
3.   Add a **Step** to the new role lane.
4.   Name the step: `Opening`.
5.   Select all properties for this step.
6.   Click **Add connectors between steps** .
7.   Create a route from **LaunchStep** to **Opening**.
8.   Click **Save**.
9.   **Validate** the workflow.
10. Click **Close**.

Task 6.   Edit the Investigate and Resolve task.

1.   Hover your cursor over **Investigate and Resolve**, and then click **Edit steps**.
2.   Add a **Role Lane** for the **Inspector**.
3.   Add a **Step** to the new role lane, and name the step: `Investigating`.
4.   Add another **Step** to the new role lane, and name the step: `Resolving`.
5.   Add all properties, to both steps.
6.   Add a route from **LaunchStep** to **Investigating**.
7.   Add a route from **Investigating** to **Resolving**.
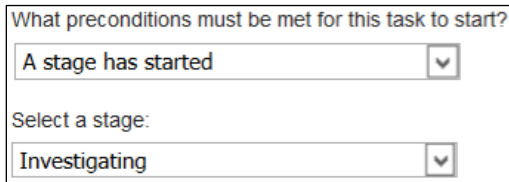8.   **Save**, **Validate**, and then **Close** the task.

Task 7.   Edit the Close the Case task.

1.   Hover your cursor over **Close the Case**, and then click **Edit steps**.
2.   Add a **Role Lane** for the **Inspector**.
3.   Add a **Step** to the role lane, and then name the step: `Close the Case`.
4.   Select all properties for this step.
5.   Add a route from the **LaunchStep** to **Close the Case**.
6.   **Save**, **Validate**, and then **Close** the task.

Task 8. Use a case stage as a precondition.

You can use case stages as preconditions for starting tasks. If you configure a stage as a precondition for a task, the task will not start until the stage is started.

1. Hover your cursor over **Investigate and Resolve**, and then click **Edit task**.
2. Click the **Preconditions** tab.
3. From the **What preconditions must be met for this task to start** list, select **A stage has started**.
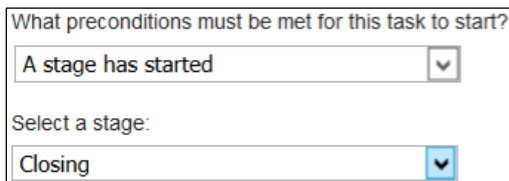4. From the **Select a stage** list, select **Investigating**.

> What preconditions must be met for this task to start?
>
> A stage has started   ⌄
>
> Select a stage:
>
> Investigating   ⌄

5. Click **OK**.
6. Hover your cursor over **Close the Case** and then click **Edit task**.
7. Click the **Preconditions** tab.
8. From the **What preconditions must be met for this task to start** list, select **A stage has started**.
9. From the **Select a stage** list, select **Closing**.

> What preconditions must be met for this task to start?
>
> A stage has started   ⌄
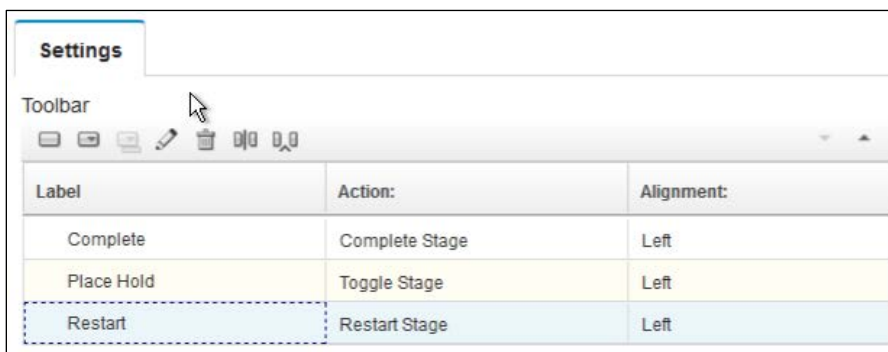>
> Select a stage:
>
> Closing   ⌄

10. Click **OK**.
11. Click **Save**.
12. Click **Back**.

The Open the Case task launches when the case starts. However, the other two tasks do not launch until the case has started the applicable stage.

Task 9. Edit the Case Stages widget toolbar.

By default, the Case Stages widget is included on the Case Details page, but it does not include buttons. You want to give case workers some control over the case stages, so you need to add buttons to the Case Stage toolbar.

1. Click the **Pages** tab.
2. Expand **Case Details Pages**.
3. Copy the **Case Details** page, then name the new page:
   `Case Details with Stages`, and then click **OK**.
4. Click **Case Details with Stages** to open the page in **Page Designer**.
5. Click **Edit settings** ⚙ for the **Case Stages** widget.
6. Click **Add Button** ⬜ .
7. From the **Action** list, select **Complete Stage**, and then click **OK**.
8. Repeat to add the **Toggle Stage** button and the **Restart Stage** button.

Settings		
Toolbar		
⬜ ⬜ ⬜ ✎ 🗑 ◧ ◨		▾ ▴
Label	Action:	Alignment:
Complete	Complete Stage	Left
Place Hold	Toggle Stage	Left
Restart	Restart Stage	Left

9. Click **OK** to close the configuration window.
10. **Save** the **Case Details with Stages** page, and then click **Close**.

Task 10.   Specify the new Case Details page for the case type.

To see the Case Details with Stages page, you must associate the updated page with the case type.

1. Click the **Case Types** tab.
2. Click the **Inspection** case type.
3. From the **Default layout for the Case Details page** list, select **Case Details with Stages**.
4. Click **Save**.

Task 11.   Deploy and test the solution.

1.   Click **Save and Close**.

2.   **Deploy** the **Case Stages Demonstration** solution.

3.   Click **Test**.

4.   **Manage Roles** for the **Case Stages Demonstration** solution, by adding **p8admin** to the **Inspector** role.

5.   Click the **Cases** tab to refresh the page.

6.   Click **Add Case > Inspection**.

7.   Enter a value for **invoice number**, and then click **Add**.

8.   Click **Search** to find the case, and then click the case link to open it.

9.   Verify that you can see the following objects:

     The Case Stages widget shows the New Case stage as the current stage, and three buttons for controlling the case stage operations.
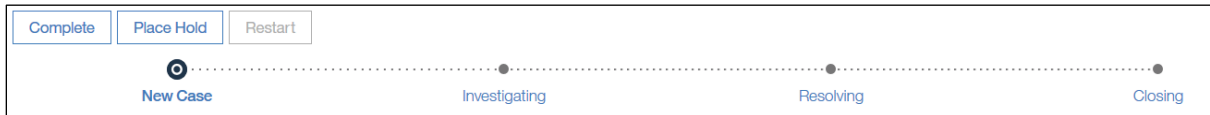
10.   On the **Tasks** tab, verify that **Open the Case** has started, but **Close the Case** and **Investigate and Resolve** are currently waiting.

     You might need to collapse the timeline visualizer to see the tasks.

Task 12.   Complete the Open the Case step.

1.   Click the **Work** tab.

2.   Click the **Opening** work item.

3.   Click **Complete**.

4.   Verify that the **Work** page is empty.

Task 13.   Advance the stage to Investigating.

1.   Click the **Cases** tab. If the case is not already displayed, search for it.

2.   Click the case link to open the Case Details with Stages page.

3.   Click **Complete** (on the left of the screen) to complete the Opening stage.

4.   Verify that the current stage has changed, and is now **Investigating**.

5.   Click the **Tasks** tab to refresh the information.

6.   Verify that the Investigate and Resolve task has started.

## Task 14.   Complete the Investigating step.

1. Click the **Work** tab.
2. Open the **Investigating** work item.
3. Click **Complete**.

Task 15.   Complete the Resolving step.

1. Open the **Resolving** work item.
2. Click **Complete**.
3. Click the **Case Details with Stages** tab.
4. Click the **Tasks** tab to refresh the information.
5. Verify that only the Close the Case task is still waiting to be started (you may need to scroll down to view the task).

Task 16.   Advance the case stage to Closing.

1. On the Case Stages widget, click **Complete**.

   The current stage is now reflected as Resolving.
2. Click **Complete** again.

   The current stage is now reflected as Closing.
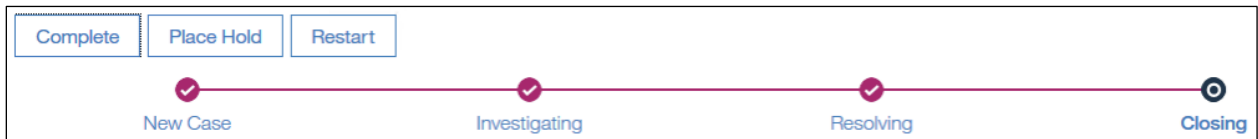
3. Click the **Tasks** tab to refresh the information.
4. Verify that the **Close the Case** task has started.

Task 17.   Complete the Close the Case step.

1. Click the **Work** tab.
2. Open the **Close the Case** work item.
3. Click **Complete**.
4. Click the **Cases** tab. If the case is not already displayed, search for it.
5. Verify that the Case State still appears as **Working**.

   The case cannot be complete until all stages are complete.

Task 18.   Complete the closing stage.

1. Click the case to open the Case Details with Stages page.
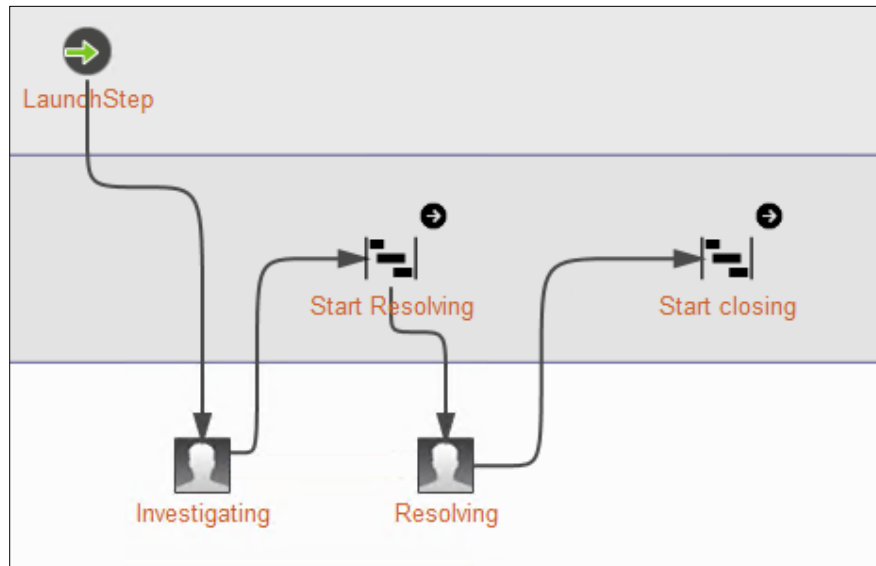2. Click **Complete** to complete the Closing stage.

   The last stage is now reflected as complete.
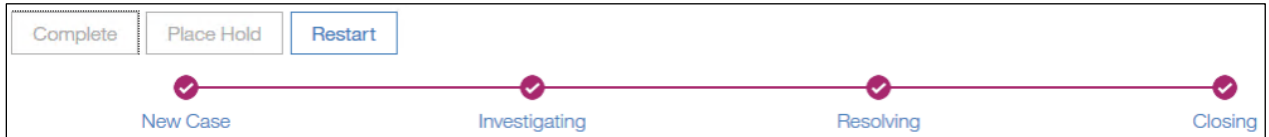
3. Click **Close**.
4. Refresh the Cases page.
5. Verify that the Case State appears as **Complete**.
6. Close the test window, but leave Case Manager Builder open for the next demonstration.

Results:
In this demonstration, you added case stages to a solution. You were able to view the Case Stages widget. You were able to advance the case stage by using the buttons on the Case Stages widget toolbar. The Close the Case task launched when the Closing state started. You confirmed that the case is not complete until all case stages are complete.

Demonstration 2: Use a system step to change stages

Demonstration 2:
Add a case stage step to a workflow

Purpose:
You can use a workflow system step to advance a case stage (or hold or restart a case stage) automatically. You are going to edit the Case Stage Demonstration tasks in order to automate the case stage transitions.

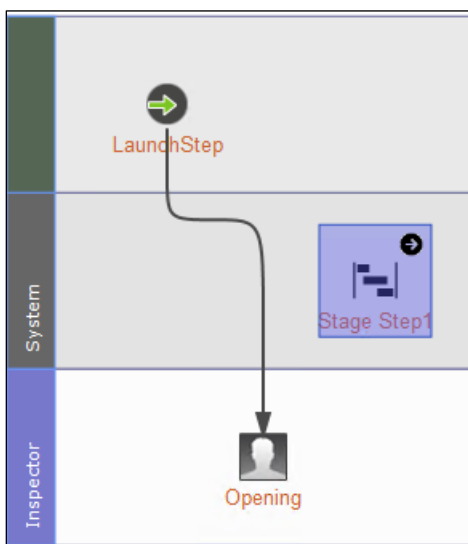Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Case Stages Demonstration**

Task 1. Edit the Case Stages Demonstration solution.

1. If **Firefox** is not already started, start it.

2. If you are not already logged in, log into Case Manager Builder.

   - User name: **p8admin**

   - Password: **FileNet1**

3. Click the **Case Stages Demonstration** solution to open it.

4. Click the **Case Types** tab.

5. Click the **Inspection** case type.

6. Click the **Tasks** tab.
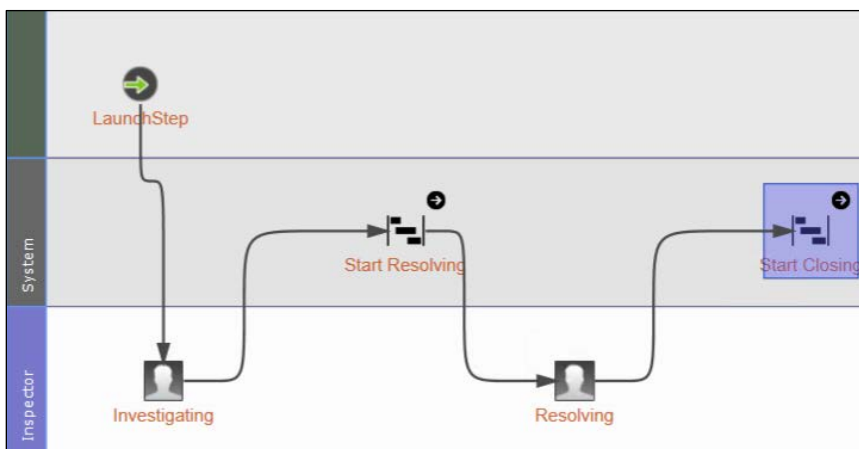
Task 2. Edit the Open the Case task.

1. On the **Open the Case** task, click **Edit steps** to open Step Designer.

2. Drag a **Stage Step** [icon] (not a Step) onto the **System** swim lane.

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3. Edit the step:

  - Name: `Complete Opening`.

  - Action: **Advance to next stage**.

4. Add a route from the **Opening** step to the **Complete Opening** step.
5. Click **Save**.
6. Click **Validate**.
7. Click **Close**.
8. Click **Save**.

Task 3.   Edit the Investigate and Resolve task.

1. On the **Investigate and Resolve** task, click **Edit steps** to open Step Designer.
2. Drag two **Stage Steps** into the **System** swim lane.
3. Edit the first Stage Step:

  - Name: `Start Resolving`.

  - Action: **Advance to next stage**.

4. Edit the second Stage Step:

  - Name: `Start Closing`.

  - Action: **Advance to next stage**.

5. Add a route from the **Investigating** step to the **Start Resolving** step.
6. Add a route from **Start Resolving** to the **Resolving** step.
7. Add a route from the **Resolving** step to the **Start Closing** step.
8. Delete the route from **Investigating** to **Resolving**.

9. **Save**, **Validate**, and then **Close** the task.
10. **Save** the solution.

Task 4. Edit the Close the Case task.
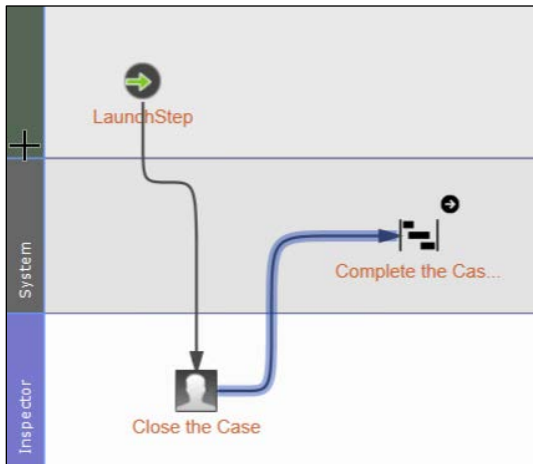
1. On the **Close the Case** task, click **Edit steps** to open Step Designer.

2. Drag a **Stage Step** into the **System** swim lane.

    - Name: `Complete the Case`

    - Action: **Advance to next stage**.

3. Add a route from the **Close the Case** step to the **Complete the Case** step.

4. **Save**, **Validate**, and then **Close** the task.

5. **Save and Close** the solution.

Task 5. Deploy and test the solution.

1. **Deploy** the solution

2. Click **Test**.

3. Click **Add Case > Inspection**.

4. Enter an **Invoice number**.

5. Click **Add**.

6. Click **Search** to search for the case by using the current date setting.

7. Click the case to open the **Case Details with Stages** page.

8. Click **Tasks**.

9. Verify that the current case stage is **New Case**.

10. Verify that the task, **Open the Case**, is started, but the other tasks are waiting.

Task 6. Complete the Opening step.

1. Click the **Work** tab.
2. Click **Opening** to open the work item.
3. Click **Complete**.
4. Click **Cases**.
5. Search for the case if it is not already displayed.
6. Click the case to open the **Case Details with Stages** page.
7. Verify that the current case stage is now **Investigating**.

Task 7. Complete the Investigating step.

1. Click the **Work** tab.
2. Click **Investigating** to open the step.
3. Click **Complete**.
4. Click **Cases**.
5. Search for the case if it is not already displayed.
6. Open the case.
7. Verify that the current case stage is now **Resolving**.
8. Click **Tasks**.
9. Verify that the **Investigate and Resolving** step is started.

Task 8. Complete the Resolving step.

1. Click **Work**.
2. Click **Resolving** to open the step.
3. Click **Complete**.
4. Click **Cases**.
5. Search for the case if it is not already displayed.
6. Open the case.
7. Verify that the current case stage is now **Closing**.
8. Click **Tasks**.
9. Verify that the **Close the Case** Task is started.

Task 9. Complete the Close the Case step.

1. Click **Work**.
2. Click **Close the Case** to open the step.
3. Click **Complete**.
4. Click **Cases**.
5. Search for the case if it is not already displayed.
6. Verify that the Case State reflects as **Complete**.
7. Open the case.
8. Verify that all tasks and all stages are complete.

9. Log out of all applications and close all browsers.

Results:

In this demonstration, you edited the Case Stage Demonstration tasks in order to automate the case stage transitions. After you added the case stage system steps to the tasks, the case stage changed after completing each work item. The final case stage completed after the final work item was completed.

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Unit summary

- Add case stages to a solution
- Use a system step to perform a case stage operation
- Use a case stage as a task precondition

Unit summary
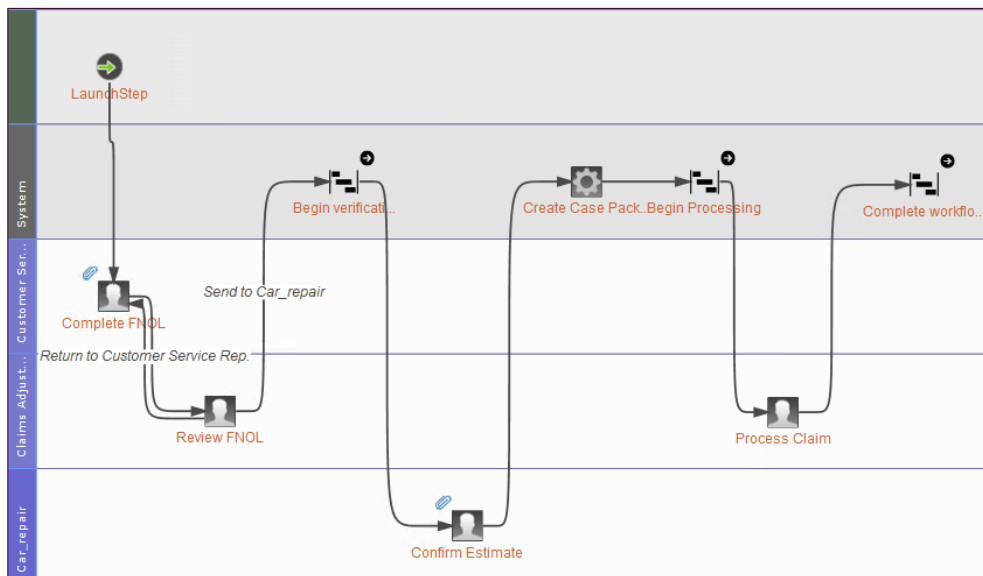
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Exercise 1: Add case stages to a solution

Exercise 1: Add case stages to a solution

Exercise 1:
Add case stages to a solution

The auto insurance company manager wants better visibility into the auto claim cases. Specifically, the manager wants to track these main stages:

- The initial claim is filed and corrected.

- The claim is with the car repair company, being evaluated and confirmed or corrected.

- The claim is being processed by the claim adjuster.

The manager does not want for the case workers to have direct control over the stages.

Edit the Simple Claims Solution. Add the following case stages to the Auto Claims General case type:

- Filing

- Verifying

- Processing

Add case stage steps to the task to advance the case stages at appropriate times. Make sure that the case closes after the final step.

For more information about where to work and the exercise results, refer to the Tasks and results section that follows. If you need more information to complete a task, refer to earlier demonstrations for detailed steps.

Exercise 1:
Tasks and results

Case Manager Builder URL: **http://vclassbase:9081/CaseBuilder**
User/Password: **p8admin/FileNet1**
Solution: **Simple Claims Solution**

Task 1. Add case stages to the solution

- Open **Firefox**.

- In **Case Manager Builder**, add three case stages to the **Auto Claim General** case type of the **Simple Claims Solution**.

    - Filing

    - Verifying

    - Processing

Task 2. Add case stage steps to the task

- Add case stage steps to the **Gather Claim Data** task to advance the stages at appropriate points to meet the following criteria:

    - The case is in the **Filing** stage until the estimate is sent to Car_repair.

    - The case is in the **Verifying** stage while the Car_repair workgroup is working to confirm the estimate.

    - The case is **Processing** while the Claim Adjuster is working on the Process Claim step.

    - After the Process Claim step is completed, all stages are completed.

Task 3. Deploy and test the solution

- Confirm that the stages are activated at the correct times.

- Confirm that all stages are completed after all of the tasks are completed.

  To complete the case, remember the following facts:

  - You must switch between roles.

  - You must specify p8admin as the Car_repair workgroup or else the case goes into an error state.

  - Workgroup items go to your personal in-basket, not a role in-basket.

  At the end of the exercise, the results appear as follows:
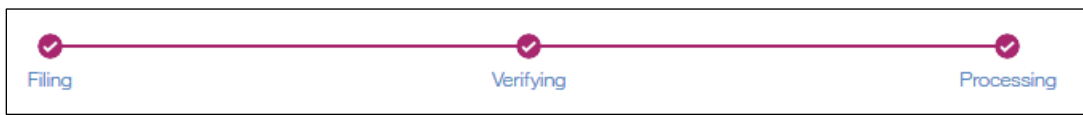
- Log out of all applications and close all browsers.

Unit 9   Solution design principles

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Unit objectives

- Describe solution design principles

Unit objectives

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Why study solution design principles?

- Save time and money.
- Improve customer experience.
- Avoid functional fixedness.
- Remember: these guidelines are not rules.

Solution design principles

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Why study solution design principles?

A poorly designed solution can frustrate users, slow performance, and ultimately affect the throughput of your business activity. Before you begin to design a solution, you must learn some design principles.

You might already know workflow design and content management. Experience can cause "functional fixedness."

Functional fixedness is a psychological term that means a mental block against using an object in a new way that is required to solve a problem.

- Workflow focused methods create case management solutions that are complicated and inflexible.

- Content focused methods lack consideration of processes to acquire that content.

- Using old methods to create case management solutions creates inelegant, inefficient solutions.

- To create a case management solution, you must develop a new methodology.

If you use a workflow design approach, you might design a case management solution the way you would design a process definition.

A common approach is to start defining the process flow without taking exceptions into account. This approach describes the sequence of steps in an ideal scenario where the work can be processed following a well-defined predictable sequence of steps.

In reality, many cases do not follow such a sequence. External events cause exceptions. The challenge for a BPM solution design is to predict all possible exceptions and include optional routes to handle such exceptions.

Use these design principles to design efficient solutions. Keep in mind that they are guidelines and not rules.

Solution design approach

When you gather requirements from business stakeholders, start with assessing how users currently handle cases. You need to obtain and document all information about the business requirements in this phase. The business requirements include but are not limited to the following areas:

Tasks

- Identify the main tasks. What tasks need to be done?
- Identify steps in a task.

Content

- Identify content that is needed to perform the tasks.
- Unstructured content includes documents, spreadsheets, emails.
- Structured content includes data from case properties, task properties, and document metadata.

Roles

- Who works on the case?
- Is there a case handler who delegates tasks?

When you clarify results, remember to ensure that the solution meets the stakeholders' expectations. Conduct ongoing meetings with stakeholders and participants.

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Organizing business activities

Concept	Analogy
Solution	Medical care
Case type	Emergency room visit
Task	X-ray
Step	Doctor: write instructions to radiologist
	Transporter: move patient to radiology
	Radiologist: Analyze X-ray

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Organizing business activities

When you plan your solution design, you need to organize business activities into a case management framework. You need to be able to analyze a business activity and determine whether it is a case type, a task, or a step.

The graphic shows analogies for Case Manager concepts.

A solution is the highest level of organization and represents a main area of the business. Although a case is the focus of a case management solution, a solution might be composed of multiple case types.

For example, a Customer Complaint solution might have multiple types of complaints that depend on the product or service the customer is complaining about. Each type of complaint can be handled differently and managed by different case workers. A solution consists of one or more types of cases.

A case consists of the collection of information that is used to achieve a business goal. The main focus of the case is the outcome. A case folder represents a case, which is an instance of a case type. The case folder contains all the information that is used to process and manage a particular case, including:
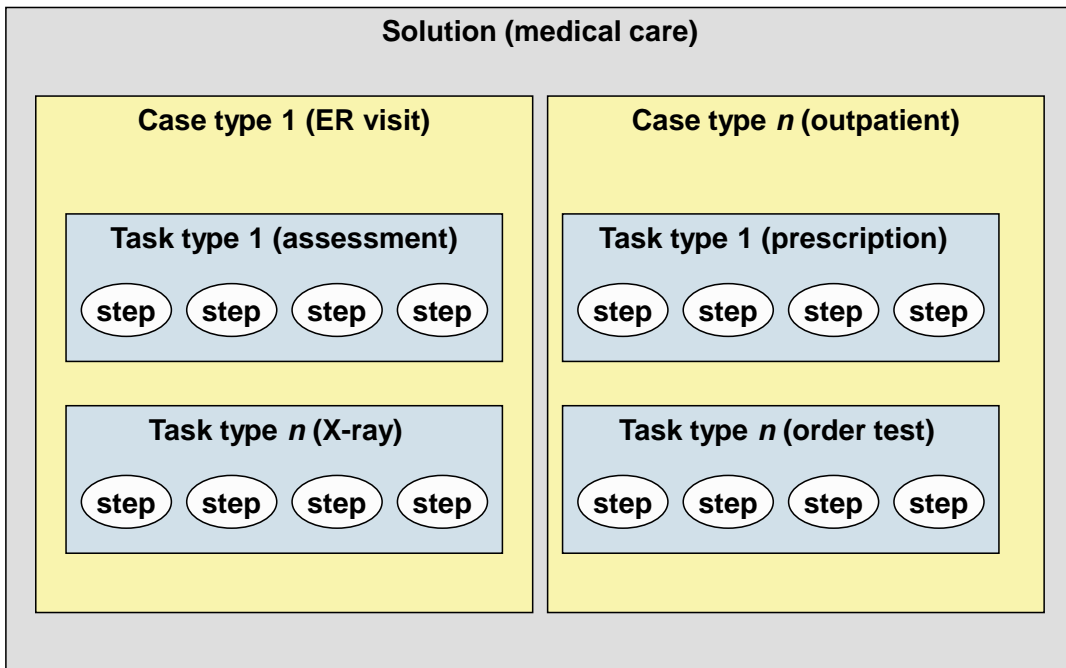
- Documents: All documents, forms, images that are needed for processing a case.

- History: Everything that happens to the case and its contents is recorded as history. The case folder provides the container to keep that history. The history includes when the case is created, when documents are added, case comments, when tasks are completed, and so on.

- Properties: Case properties hold information for identifying the case and information about the case status, such as customer name, case priority, account number .

- Tasks: The case folder contains the tasks that can be used in a case. Each task can contain state information. Some tasks can be waiting to be executed, while others can be completed or in a working state.

A task is job that must be done. Several types of tasks exist, such as To-Do tasks, Quick Tasks, and workflow tasks. A workflow task has steps and routes.

- When you define a task, it is available as a task to the case workers during run time.

- Steps can be automated or they can be automatically queued for a case worker.

- A task can involve one or more roles on a case. For example, if you are in a hospital, the doctor can start an X-ray task. When the X-ray task starts, several roles are required to complete the task, including the doctor, the transporter, and the radiologist. The task is complete when each step of the task is complete.

- Tasks can be required, optional, or user-created. Optional or discretionary tasks are the tools that case workers use to process a case. A case worker must decide which tasks need to be executed to complete a case.

A task contains one or more steps. A step is assigned to a role or a workgroup and is the smallest unit of work that is represented in the solution.

Solution hierarchy example

The graphic shows an example of how a solution is organized into case types, tasks, and steps.

When you design a new solution, you need to be able to have a starting point for breaking the business model into case types, tasks, and steps.

You might start by defining a case type in terms of the outcome. The outcome of a serious injury case, for example, might be patient recovery.

The tasks are all of the activities that must occur to achieve the outcome, such as conducting tests and administering treatments. At this level, you are not concerned with who does the work. After you determine what needs to happen, you determine whether it is a task that always occurs, or whether the task is optional or discretionary.

The steps are the actions to complete tasks. When you define steps, you decide who must perform each step and what information they need. The information might include step properties or documents.

Defining tasks

When you design a new solution, it is often useful to start by listing the tasks. Each task has a definite starting condition and a conclusion. You can configure these tasks without having to consider the flow between tasks at first, which shortens the initial design and development time. This design method creates lean tasks.

Guidelines for defining tasks:

- When you determine what needs to happen, you have define the goal of the task.

- Identify why and when the task needs to happen. Model this information as preconditions.

  - Which tasks can participants start?

  - Which tasks can start automatically?

  - What must occur for the task to start?

- Identify any tasks that must be done to complete a case. These tasks are required tasks.

If you are starting with a workflow or set of workflows, you might need to break them down into individual tasks. The graphic shows how a process might be broken into tasks.

Tasks are typically much shorter than workflows, and they focus on a single specific activity, triggered by external conditions, rather than by the workflow process.

If business processes already exist, you can reuse those processes in your case management solution. However, if you are redesigning with new tasks based on existing processes, you might think of ways to break the process into process fragments. Each fragment must have a definite starting condition and outcome. Each of these fragments might then become a separate task.

Keep the following in mind:

- If you can divide a process into submaps, consider submaps as tasks.

- Consider the initiating conditions as breaking points between tasks.

- The steps in the process can be regrouped into individual tasks along natural breakpoints.

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Defining properties

- Use these guidelines when you design properties:
- Design properties for document classes that aid in searching for documents.
- Design properties for case types for the following goals:
  - case handling
  - business rules
- Design properties for task steps that enable the following functions:
  - processing a step.
  - updating case property values
- Decide whether a property must be read-only or editable.
- Decide whether a property requires values.

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Defining properties

Properties are another design element in a solution that must be considered carefully. Unnecessary properties can affect performance. Carefully consider how your properties are going to be used.

You define properties at the solution level, and these properties can be used as case properties, document properties, or task properties.

Each property that you add can affect performance in a number of ways:

- When you add properties to document classes, you slow database performance.

- Consider the time for a case worker to enter property values that are unnecessary. Imagine a case worker who must complete 10 fields when only two fields are needed for case processing. These eight extra fields might add 2 minutes to each step. Over time, the additional properties can become expensive.

Use documentation instead of metadata. Case information can be retained in the content of the documents that are used in a case. For example, a customer's address does not need to be a case property if that information is available in one of the case documents. The information that you might want to be exposed at the metadata level is information that someone might use to search for a case.

For document classes, properties are used for performing searches outside Case Manager Client. Because case documents are attached to the case, the document is available through the Case Manager Client interface when the case is open. However, after a case is closed the documents remain in the object store. If you want to be able to find those documents after the case is closed, include document properties that you can use for searching.

The properties that you specify for case types need to be properties that are used for handling the case. For example, if a property value affects a decision, process, or rule, then that property needs to be a case type property. Otherwise, the property is unnecessary. For example, if a customer's address is not relevant to the way a case is resolved, then the address does not need to be a case property. The dollar amount for a loan application might determine who processes the case. Therefore, the dollar amount needs to be a case type property.

Properties in task steps provide information that is necessary for processing the step. This information is dynamic information because static information can be retained in the case document contents. Task steps are where case workers might add or change values of properties. If an editable case property affects the management of the case, then you must add the property to a step. For example, if the estimated repair cost determines whether the case goes to an adjuster or a supervisor, then a case worker needs to be able to update the estimated repair cost when the estimate is done.

Properties with required values can become problematic, especially for automatic processing. If a case step is processed automatically, and the process does not supply a value that is required, the step cannot be completed.

The object store supports empty values for numeric properties, but the workflow isolated region does not. If an empty value is not supported, the system interprets the fields as required. Prevent empty property values under the following conditions:

- Numeric fields on a Work Details page.

- Reused numeric properties that are marked as write-only for a step.

- Fields that represent single string step parameters with choice lists.

Assign default value(s) to properties to prevent them from being empty.

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Guidelines for using automation

- Automate any tasks that can be automated:
  - high volume of similar case flows
  - routine case types, at least in early stages
  - pre-existing well-defined automated processes
- Example: customer service questions.

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Guidelines for using automation

IBM Case Manager can use automation that workflows or object store event subscriptions provide. You can use automation to make your solution more efficient.

Guidelines for automation

You can use automated processes to perform many tasks that do not require complex human processing.

Here are some guidelines for when to use automation:

- When you automate tasks, you allow knowledge workers to focus in which their input is required. For example, Customer service questions can often be handled automatically.

- Specialists take over cases that automated processes cannot solve initially.

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Case study

- An appeals process took years to complete.
- Tasks sat in work queues for the entire duration of the case.
- Solution: Redefine the appeal as a separate process.

Case study

Sometimes a solution is more efficient if you redefine the activity hierarchy. For example: An appeals process that takes years to complete initially had tasks that sat in work queues for the entire duration of the case. The case remained open during the appeals process. Finally, when the appeal came and was processed, the case was closed.

Solution designers redesigned the solution so that the appeals process was a separate case type.

The appeals case type is launched when an appeal document is added to the system.

Using a case type instead of a task allowed workers to close their cases more efficiently.

In summary, changing the design of a case type can have a powerful effect on the efficiency of the process.

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Unit summary

- Describe solution design principles

Unit summary

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Exercise 1: Apply your knowledge

- Solution Design Principles Checkpoint

Solution design principles

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Exercise 1: Apply your knowledge

Apply your knowledge

In this unit, you learned about high-level solution design and architecture. Complete the short quiz to confirm that you understand the concepts.

Questions

Use solution design principles to make solution design decisions.

For each question, indicate the correct answer or the best answer.

1. What is the first step in designing a solution?
   a. Stating results.
   b. Defining tasks.
   c. Creating properties.
   d. Gathering requirements.

2. What is the first thing you must determine when listing tasks for design purposes?
   a. Who does the task?
   b. What needs to happen?
   c. Why is the task done?
   d. When does the task start?

3. When do you need to consider who processes work?
   a. When you are designing the case type.
   b. When you are designing the task.
   c. When you are designing the steps.
   d. When you are designing the document classes.

4. Your company already has some well-defined workflows when it installs Case Manager. You are responsible for quickly implementing a new solution. How can you use your existing workflows? (Choose all that apply.)
   a. Reuse them.
   b. Break them into fragments.
   c. Re-create them.
   d. Reassign them.

5. Which one of the following activities is likely to be a task?
   a. A vehicle inspector fills out a vehicle inspection form.
   b. Vehicle inspection.
   c. Auto insurance claim.
   d. Auto insurance.

6. Which one of the following activities is most likely to be a step?

    a. A clerk places the evidence in the folder.

    b. Gather evidence.

    c. Conduct a legal defense.

    d. Appoint attorney.

7. You are designing a solution for a health insurance company. Most of the business is straightforward claim processing in which a medical provider sends claims and the claims are processed according to a well-established workflow. In some cases, a customer wants to appeal a decision. There are other times when a customer has a complaint about services and begins the grievance process. Given only this information, what is the most likely breakdown of the solution?

    a. One solution for insurance, one case type for health insurance, three tasks for normal processing, appeals, and grievances.

    b. Three solutions, one for normal processing, one solution for appeals, one solution for grievances

    c. One solution for health insurance, one case type for normal case processing, one case type for abnormal case processing, two tasks for appeals and grievances.

    d. One solution for health insurance, three case types for normal processing, appeals, and grievances.

Answers

1. **d. Gathering requirements.**
2. **b. What needs to happen?**
3. **c. When you are designing the steps.**
4. **a. Reuse them.**
   b. Break them into fragments.
5. **b. Vehicle inspection.**
6. **a. A clerk places the evidence in the folder.**
7. **d. One solution for health insurance, three case types for normal processing, appeals, and grievances.**

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