



2. Lab Goals

Today's Goals

In today's lab, you will be granted access to your own temporary ServiceNow instance to use for the duration of the day.

Our goals for this workshop are to allow you to:

1. Gain valuable experience through hands-on exercises with **App Engine Studio**.
2. Convert a real-world use case with process bottlenecks to a streamline, cross enterprise workflow.
3. Take back to your organization the knowledge of how you can make your world of work better.

3. Use Case

Overview

Today, you step into the shoes of a ServiceNow Developer, tasked with transforming a critical business process. The best part? You don't need a technical background to succeed. With the power of **App Engine**, you'll see how anyone can master this task without prior application development knowledge.

Background

Meet Amanda, an employee in the government's Office of Regulatory Affairs. Amanda's team handles various requests and cases, with a specific focus on authorizing and equipping employees for remote work, also known as **Telework Cases**. Currently, employees follow a cumbersome process: they print a PDF form, fill it out by hand, scan it, and then email it to Amanda's team. This manual process is time-consuming.

Once the requests reach Amanda's team, they rely on a shared email inbox and a spreadsheet to manage them. Unfortunately, this disjointed approach leads to inefficiencies and poses security risks, as these cases involve three departments: the employee's department, HR, and IT.

Current tools being leveraged

- **PDF / Word Form:** A PDF form to fill the details about the request
- **Emails:** They send the request in PDF format via email, receive submissions, and communicate task updates.
- **Spreadsheet:** A shared spreadsheet tracks approvals and tasks across departments, including IT requests for remote access and HR safety and management updates for Telework cases.

Challenges

This fragmented system results in:

- **Wasted Time:** Amanda's team struggles to coordinate and communicate effectively.
- **Unnecessary Firefighting:** They often find themselves tackling urgent issues to prevent security and safety concerns.
- **Staff Burnout:** The workload focuses on immediate crises, leading to staff burnout.
- **Poor Visibility:** Departments lack clear visibility into the status of their work.

Amanda sought help from the IT department, but their plate is full. However, Amanda has gained access as a Citizen Developer to the organization's ServiceNow development instance.

Your mission, should you choose to accept it, is to step into Amanda's role and create a solution to efficiently manage cross-departmental work. Let's make her world of work better...

How will you tackle this challenge? What solutions can you envision?

4. Planning

Before Amanda embarks on her Citizen Developer journey on ServiceNow's App Engine, she wants to make sure she is well-prepared.

Here's a checklist the I.T Department gave her to help guide her through the necessary steps:

INFO

Remember, this is a fictitious scenario, but the guidance below is very much like the type of guidance you are likely to receive at your company before building your own app for the first time.

Prework to Start Your Citizen Developer Journey on ServiceNow

1. **List Your Data:** Start by making a list of the data you'll need to track. For example, think about the categories of work you want to manage.
2. **Seek Help:** If you have any questions or need assistance, reach out to the internal MS Teams group "TransformNow".
3. **Data Transition:** If you're currently using a spreadsheet to manage your data, make a copy and keep only the data that is essential. See the "Don'ts" section for data that ServiceNow will manage for you.
4. **Record Producer:** Utilize a record producer to create a form quickly and reuse any relevant question sets.

5. **Task Management:** If your case workers need to create and manage tasks related to cases, add the related list "Task→Parent" to your form. Learn more in the [documentation](#) .

6. **Educational Resource:** Take time to complete the NowLearning course [Introduction to App Engine Studio for Citizen Developers](#) .

Don'ts

Here are a few things you should avoid doing as you start your Citizen Developer journey:

-
1. **Hands-Off Data:** You don't need to create or import the following data, as ServiceNow will handle it for you:
 - Approval tracking data, such as approval status and dates.
 - Dates related to the case, such as submission dates.

Amanda has already prepared a list of the key data her team is tracking, and she's excited to get started.

5. Takeoff Checklist

Let's make sure you have everything you need to get started.

Before beginning the lab exercises, you should have the following:

- A ServiceNow instance URL and credentials.
- Download the lab files: [Telework_Lab_Files.zip](#)
- Extract the lab files archive and check that you have the following files:
 - File 1: `App_Logo.png`
 - File 2: `Form_Annotation.docx`
 - File 3: `Telework_Data.xlsx`

1. Build the Foundation: Overview

In the first exercise of the lab, **Build the Foundation**, you will create your app, import data into it, and begin configuring the forms that will be used on the backend to view the requests.

1.1 Review the input data

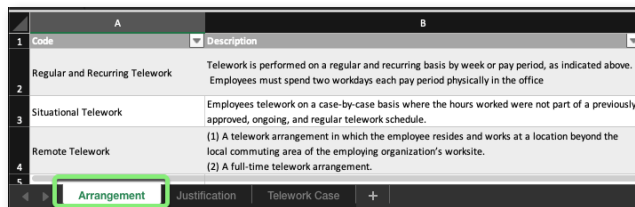
Overview

In the use case story for this lab, Amanda and her team of fulfillers have been tracking the Telework Case requests in a spreadsheet called `Telework_Data.xlsx`.

Review the spreadsheet so that you understand the data you will be converting to a digital experience in a ServiceNow application.

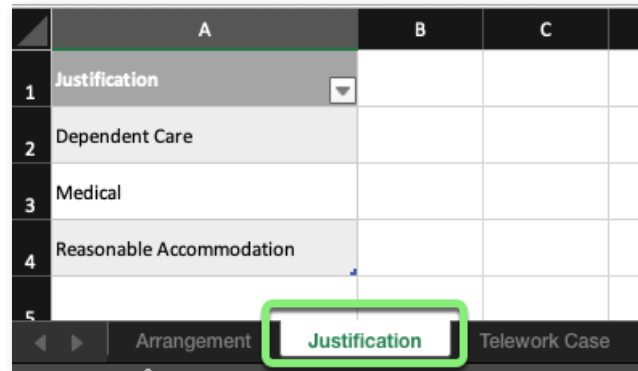
Instructions

1. Open the file `Telework_Data.xlsx` on your local laptop.
2. Notice that it has three separate sheets in it.
3.
 - Click on the the first sheet "Arrangement".
 - Users select these to specify what type of Telework they need.



Code	Description
Regular and Recurring Telework	Telework is performed on a regular and recurring basis by week or pay period, as indicated above. Employees must spend two workdays each pay period physically in the office
Situational Telework	Employees telework on a case-by-case basis where the hours worked were not part of a previously approved, ongoing, and regular telework schedule.
Remote Telework	(1) A telework arrangement in which the employee resides and works at a location beyond the local commuting area of the employing organization's worksite. (2) A full-time telework arrangement.

4.
 - Click on the second sheet "Justification".
 - Users select these to specify why they need to Telework.



5.
 - Click on the third sheet "Telework Case".
 - These are the different Telework Cases Users have submitted.
 - It contains references to the first two tables.

A screenshot of a spreadsheet showing a table of telework cases. The table has the following columns: Priority, Claimed by, Arrangement, Justification, Days per week, and Short description. The data rows are as follows:

Priority	Claimed by	Arrangement	Justification	Days per week	Short description
1 - Critical	Billie Cowley	Situational Telework	Dependent Care		1 Situational Telework Request
1 - Critical	Cherie Fuhri	Remote Telework	Medical		3 Remote Telework Request
2 - High	Christian Marnet	Remote Telework	Medical		4 Remote Telework Request
2 - High	David Loo	Remote Telework	Dependent Care		2 Remote Telework Request
2 - High	Jacinto Gawron	Remote Telework	Medical		5 Remote Telework Request
2 - High	Jess Assad	Remote Telework	Medical		1 Remote Telework Request
2 - High	Jewel Agresta	Remote Telework	Medical		3 Remote Telework Request

Below the table, the sheet tabs are visible: 'Arrangement', 'Justification', and 'Telework Case'. The 'Telework Case' tab is highlighted with a green box.

6. Close the spreadsheet.

Exercise Recap

It is always a good idea to understand the data that you will be converting to an

application before beginning development work.

1.2 Create the Application

Overview

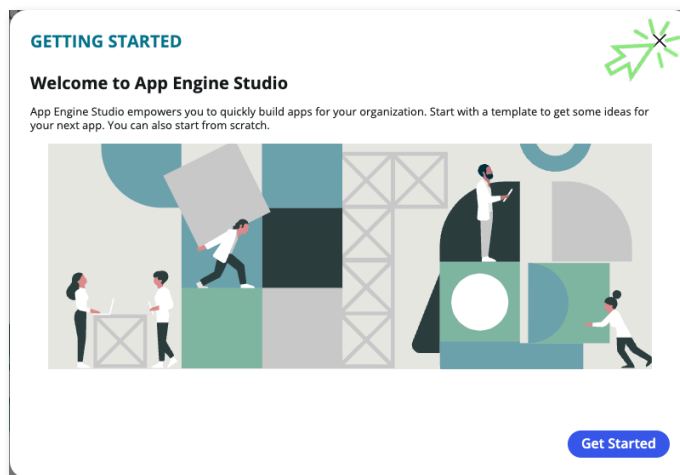
In this exercise, you'll create a scoped application named "Telework Case Management" in ServiceNow.

A scoped application, or "app" for short, acts as a container for all the assets that constitute an application, including tables, forms, flows, and security features.

Only the Owner of the application and invited Collaborators can make changes in the app.

Instructions

1. **Getting Started Dialog:** If the "Getting Started" dialog appears, close it by clicking the **Get Started** button.



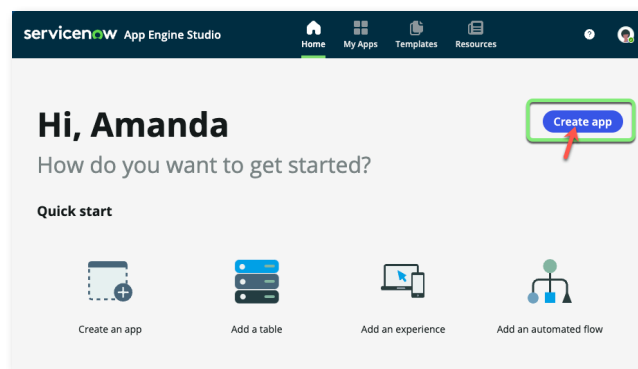
2. **App Engine Studio Homepage:** Once you close the dialog, you'll be on the homepage of App Engine Studio. Here, you can:

- Create new applications or extend previously developed ones.
- Explore various pre-built templates to address common business challenges.

Feel free to return here later to review the capabilities offered by these templates.

3. **Create the App:**

- Click the **Create App** button.

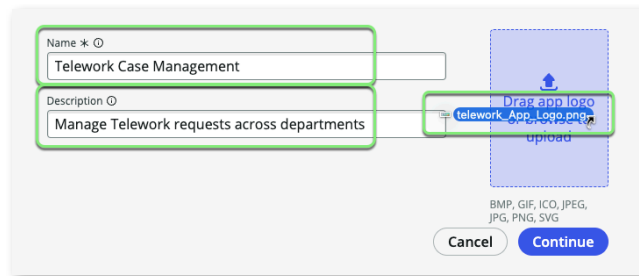


4. **Complete the Form:**

- Fill out the form with the following details:

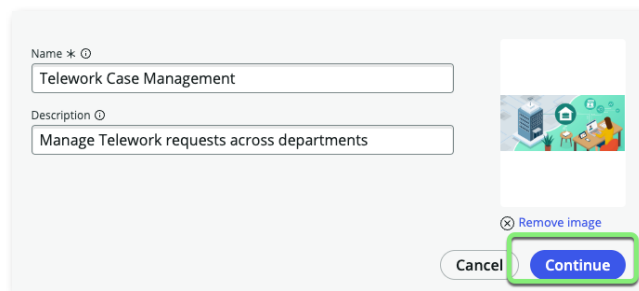
Field	Value
Name	Telework Case Management
Description	Manage Telework requests across departments

- Upload the App_Logo.png file you downloaded.



A screenshot of a web form for configuring an application. The form has two input fields: "Name" with the value "Telework Case Management" and "Description" with the value "Manage Telework requests across departments". To the right of the description field is a blue dashed box for uploading a logo. Inside this box, a file named "telework_App_Logo.png" is being dragged, with a blue arrow pointing to an "upload" button. Below the upload area, supported file formats are listed: BMP, GIF, ICO, JPEG, JPG, PNG, SVG. At the bottom right, there are "Cancel" and "Continue" buttons. The "Name" and "Description" fields, the file name, and the "Continue" button are highlighted with green boxes.

- Click **Continue**.



A screenshot of the same web form, but now the logo upload area contains a preview of the uploaded image. The image shows a colorful illustration of a modern office with people working at computers. Below the preview is a "Remove image" link. The "Continue" button at the bottom right is highlighted with a green box.







5. Roles:

- In the "Let's add roles" screen, click **Continue**.

Let's add roles to your new app.

Default roles have already been added based on popular roles for apps. You can add or remove roles, later.

[+ Add a role](#)

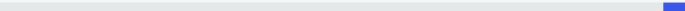
Role name * 	Description 	
<input type="text" value="admin"/>	<input type="text" value="Default admin role"/>	
Role name * 	Description 	
<input type="text" value="user"/>	<input type="text" value="Default user role"/>	

[Cancel](#) [Continue](#)

CREATE APP

Sit tight while we create this app

This may take a few minutes...



6. Go to App Dashboard:

- Click **Go to app dashboard**.

CREATE APP

Great! Let's add more to your app.

You can increase your app's functionality by adding data, experiences, automation, or security. Go to the app dashboard to add them before submitting this app to your administrator for review.



Data



Experience



Automation



Security

[Go to app dashboard](#)

Exercise Recap

Congratulations! You've successfully created a ServiceNow application named "Telework Case Management."

In the following exercises, we will build upon this foundation by adding data, experiences, logic, and security to make this application truly functional.

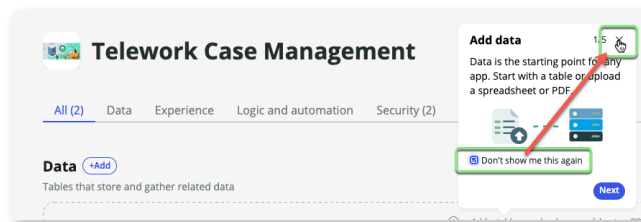
1.3 Import data

Overview

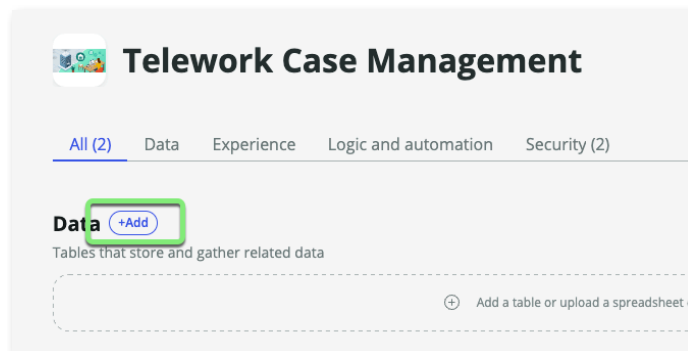
In this exercise, we will import data from the `Telework_Data.xlsx` spreadsheet directly into new tables.

Instructions

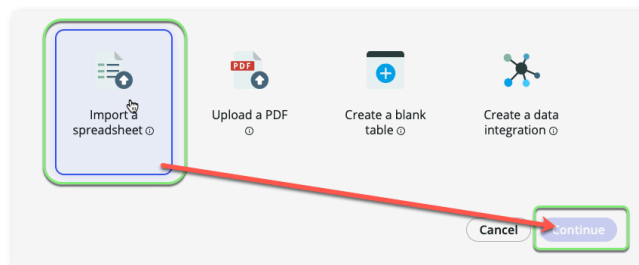
1. Close the guided tour.
 - Check "Don't show me this again"
 - Click the 'X' in the corner.



2. Next to Data, click `+Add`.



3.
 - Select "Import a spreadsheet".
 - Click **Continue**.

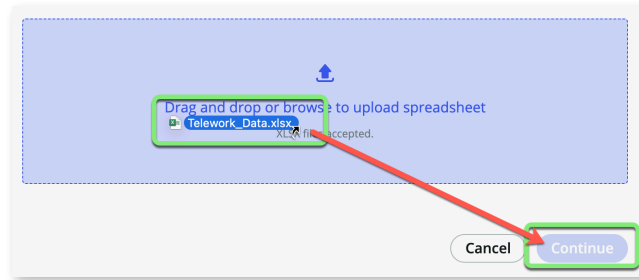


4.
 - Drag and drop the file `Telework_Data.xlsx` onto the box

i NOTE

If you have trouble with the drag and drop, just click '..browse to upload a spreadsheet' and select the file.

- Click **Continue**.

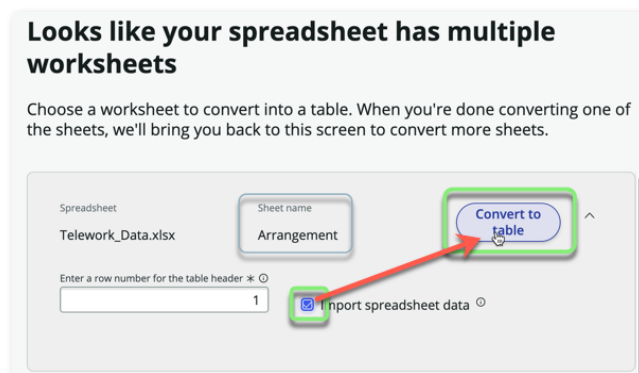


Looks like the spreadsheet has multiple worksheets.

5. Start with the **Arrangement** worksheet.

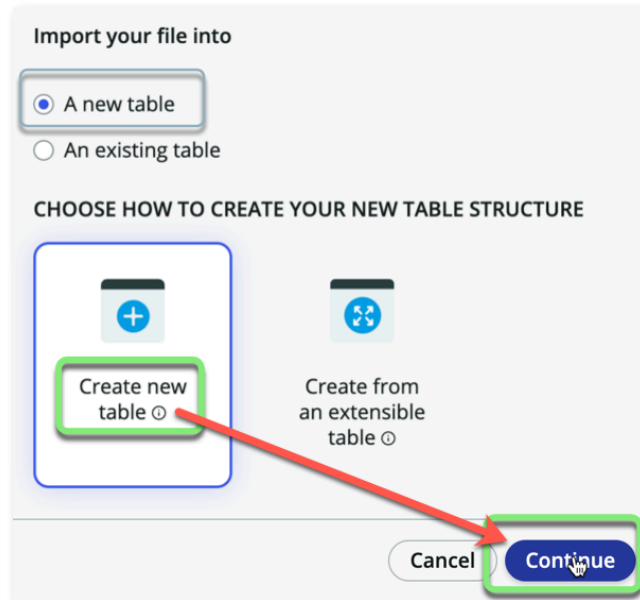
- Check 'Import spreadsheet data'.

- Click **Convert to table**.



6. Leave 'A new table' selected.

- Click Create new table.
- Click **Continue**.

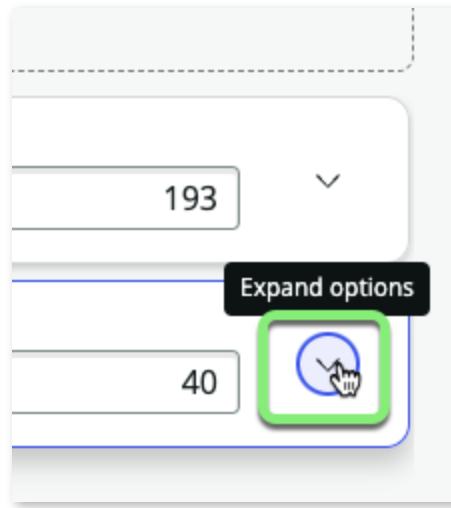


Converting the "Arrangement" sheet into a table and preparing the column headers for review

The column headers will display as rows for you to review. You will be able to edit the details of each column.

7. Set the Display field for the table.

- Click the chevron at the end of the Code row to expand options.



- Check the Display checkbox under Code.



- Click [Continue](#).

ⓘ INFO

- The Display field is the one that appears when referencing this record from another table. Each table can have only one field marked as the Display field.
- For example, if you reference this table in a dropdown, it will display the

Code and not the Description.

- Fields are also known as table columns.

8. Table Label:

- Set the "Table label" to **Arrangement**.
- Click **Continue**.

Table label *

Table name prefix * Table name *

Make extensible Auto number

- Notice that "Table name" has been auto-populated with 'arrangement'.
- Click **Continue** again.

Table label *

Table name prefix * Table name *

Make extensible Auto number

TIP

- Always give your table a singular name and not plural. ServiceNow will

automatically make it plural when viewing multiple records.

- For example, if you name the table 'Arrangements', then later you will see it in ServiceNow as 'Arrangementss' with two s's.

9. Set the Table Permissions.

- For the **admin** role, check "All".
- For the **user** role, check "Read".
- Click **Continue**.

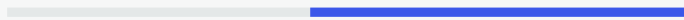
Role	All	Create	Read	Write	Delete
admin role	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
user role	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cancel Continue

ADD DATA

Sit tight while we add the table

This may take few seconds...



Success! The "Arrangement" table has been added to your app

Now, you can either convert more sheets into tables, edit the tables you just added or leave to continue building the rest of your app. If you do leave, you can always come back to convert more sheets by uploading your spreadsheet again.

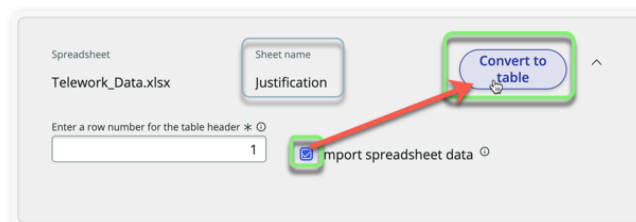
Next import the **Justification** worksheet.

10. Click the chevron next to 'Justification'.



11. • Check 'Import spreadsheet data'.

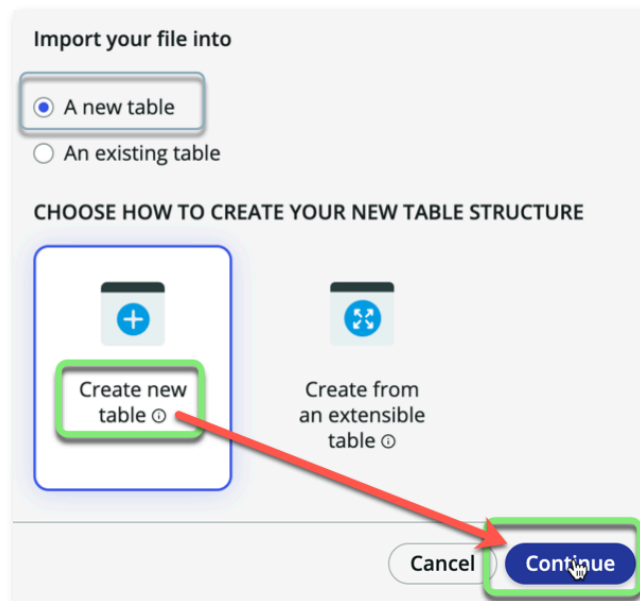
• Click **Convert to table**.



12. Leave 'A new table' selected.

• Click Create new table.

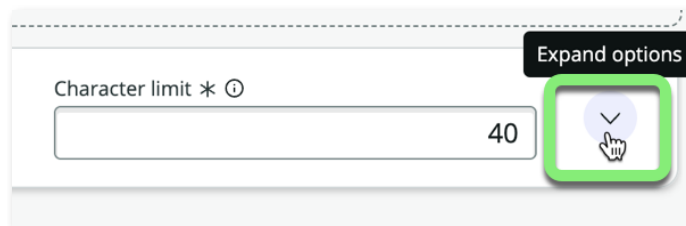
- Click **Continue**.



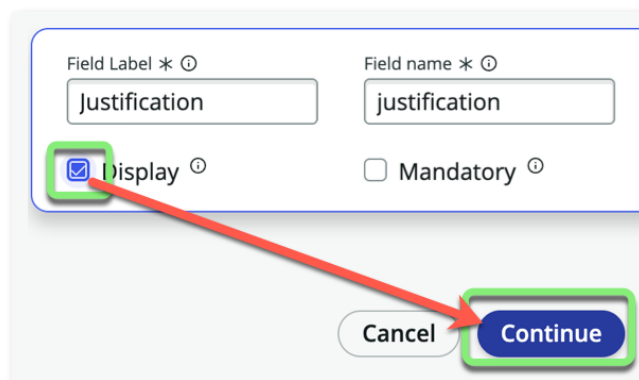
Converting the "Justification" sheet into a table and preparing the column headers for review

The column headers will display as rows for you to review. You will be able to edit the details of each column.

13. Click the chevron to expand options.



- 14.
- Check Display.
 - Click **Continue**.



15. Table Label:
- Set the "Table label" to **Justification**.
 - Click **Continue**.

Table label *

Table name prefix * Table name *

Make extensible [ⓘ]

Auto number [ⓘ]

- Notice that "Table name" has been auto-populated with 'justification'.
- Click again.

16. Set the Table Permissions.

- For the **admin** role, check "All".
- For the **user** role, check "Read".
- Click .

Role	All	Create	Read	Write	Delete
admin role	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
user role	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sit tight while we add the table

This may take few seconds...

Success! The "Justification" table has been added to your app

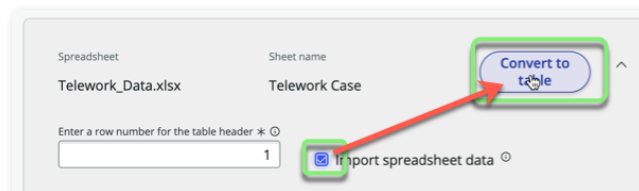
Next import the **Telework Case** worksheet.

17. Click the chevron next to 'Telework Case'.



18.
 - Check 'Import spreadsheet data'.

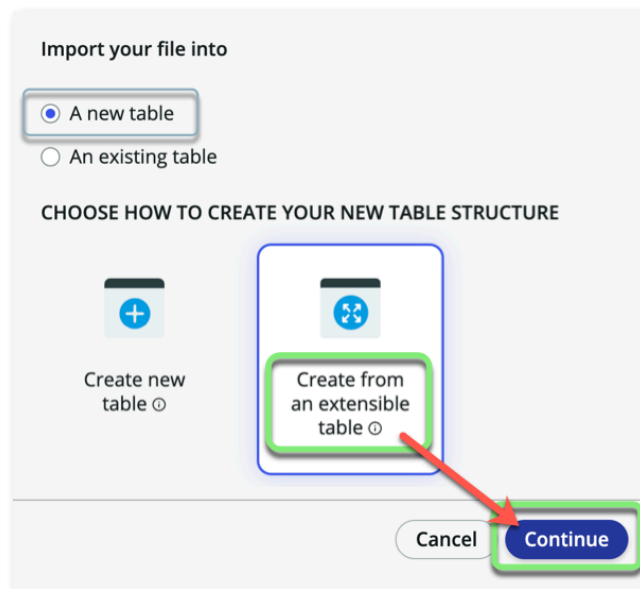
- Click **Convert to table**.



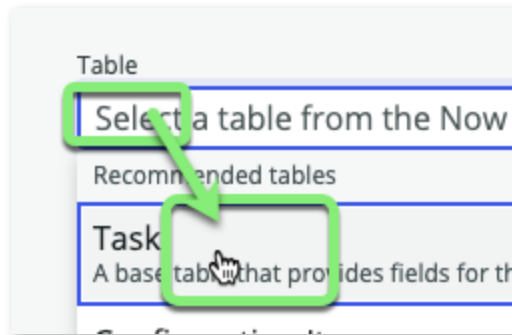
 DANGER

Pay close attention to the next step!

19. Leave 'A new table' selected.
- Click Create from an extensible table.
 - Click **Continue**.



20. Select the Table:
1. Click in the search box.
 2. Click on the Task table.
 3. Click **Continue**.

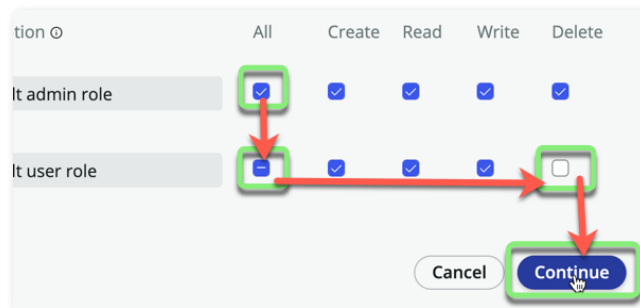


21. Table Configuration:

- Set the "Table label" to **Telework Case**.
- Check 'Auto number'.
- Click **Continue**.

22. Set Permissions:

- For the **admin** role, check **All**.
- For the **user** role, check **All** and uncheck **Delete**.
- Click **Continue**.



ADD DATA

Sit tight while we add the table

This may take few seconds...

Great! Now your table is ready for data

In the next step, we will match fields from your import with the fields on your newly extended table. You'll have an opportunity to adjust mapping, or create new fields from your import in it.

In the next steps, you will match fields from your import with the fields on your newly extended table. You'll have an opportunity to create new fields from your import in the new table.

Sit tight while we create data mapping instance for table Telework Case.

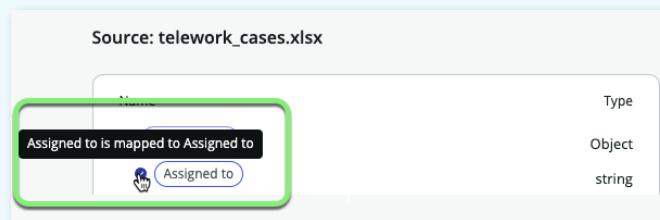
This may take a few minutes...

ADD DATA

Now, map the imported fields

! SOURCE: TELEWORK_CASES.XLSX

- On the left side of the page are the source fields from the spreadsheet.
- The system was able to **Auto map** some of the fields with matching names in the Target table.
- Auto mapped fields have a checkmark next to them.



! TARGET: TELEWORK CASE

- On the right side of the page are the target fields in the **Telework Case** table.
- When the system was able to **Auto map** a field, it added a Data pill from the Source table.



⚠ CAUTION

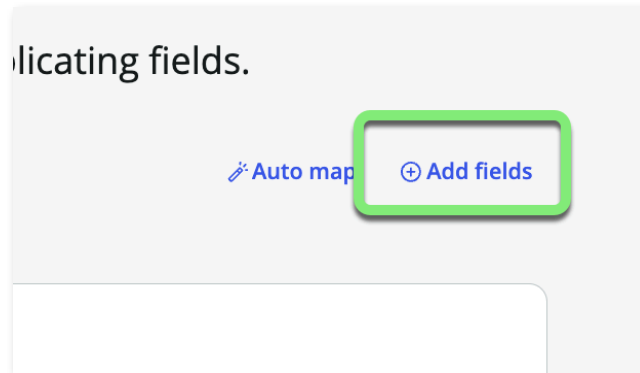
- On the left side of the screen, you can see that some of the spreadsheet columns do not exist in the target table.
- You will create these new fields in the next few steps.



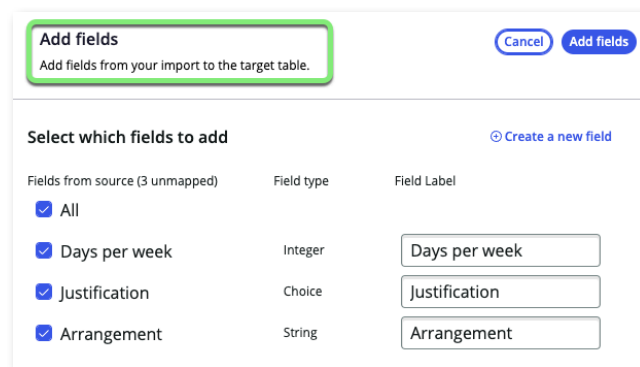
23. Add the the missing fields.

- Click the Add Fields link on the right.

uplicating fields.



You will be given the option to 'Add fields from your import to the target table'.

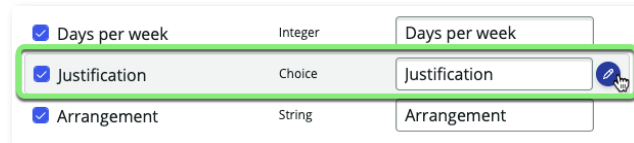


Days per week is ok as an integer. Do not do anything to it.

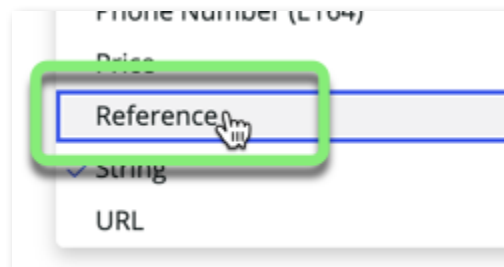


24. Modify Field Type: Change 'Justification' from **String** to **Reference**.

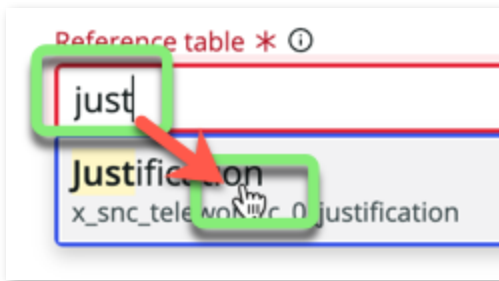
1. Hover over the row and edit the field **Justification** by clicking on the pencil icon.



2. Click "String" under Field type and change it to Reference.



3. In 'Reference table', type **just**.
4. Click the **Justification** table in the search results.



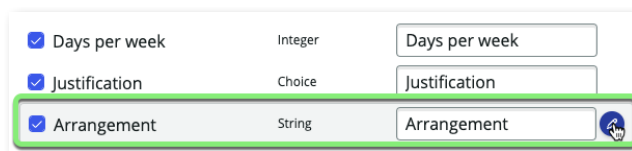
5. Click [Update field](#)

NOTE

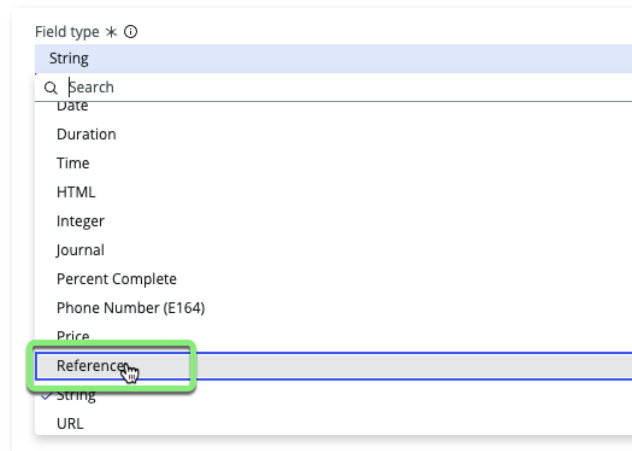
- A **Reference** field points to another table. You want the **Justification** field to point to the **Justification** table created earlier.

25. **Modify Field Type:** Change Arrangement from **String** to **Reference**.

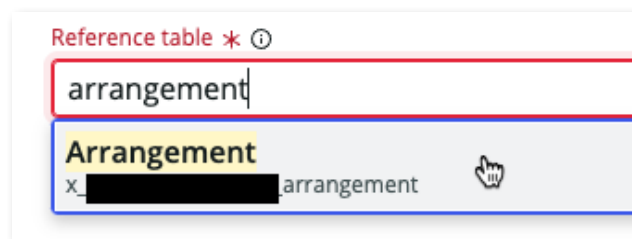
1. Hover over the row and edit the field **Arrangement** by clicking on the pencil icon.



2. Click "String" under Field type and change it to Reference.



3. Type **Arrangement** into the Reference table field and click on **Arrangement** in the drop-down.



4. Click **Update field**.

26. Finish adding new fields.

- Click **Add fields** to add the new fields to the Target table.

Add fields Cancel Add fields

Add fields from your import to the target table.

Select which fields to add Create a new field

Fields from source (3 unmapped)	Field type	Field Label
<input checked="" type="checkbox"/> All		
<input checked="" type="checkbox"/> Days per week	Integer	Days per week
<input checked="" type="checkbox"/> Justification	Reference	Justification
<input checked="" type="checkbox"/> Arrangement	Reference	Arrangement

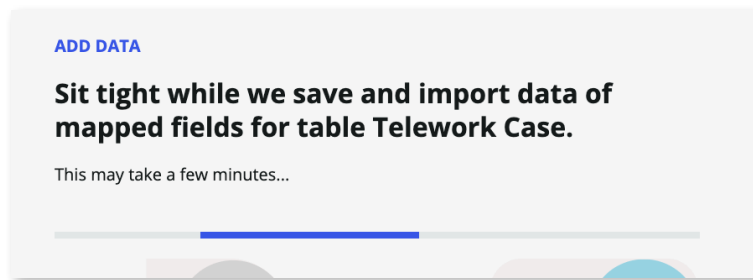
Each field on the left side of the page should now have a checkmark beside of it like below. If not, please review previous steps or ask an instructor for assistance.

Source: telework_cases.xlsx

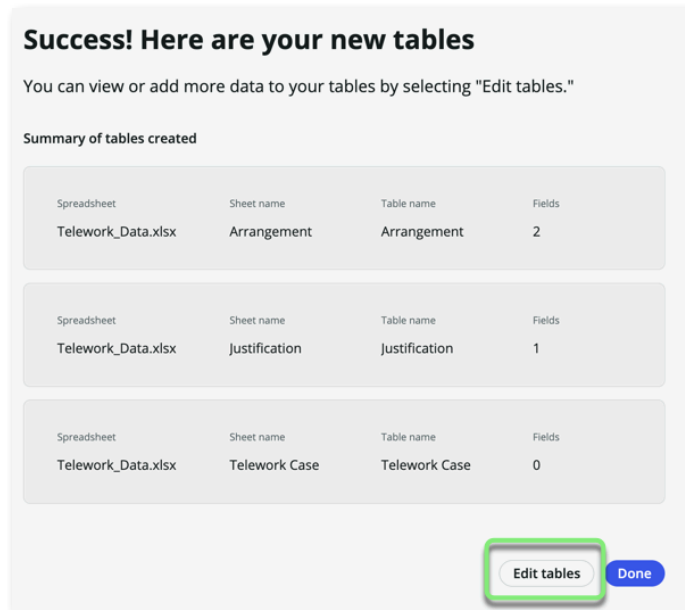
Name

- Excel Header
- Assigned to
- Priority
- Description
- Short description
- Days per week
- Justification
- State
- Arrangement
- Opened by
- Opened

27. Click **Continue** in the bottom right.



28. Click **Edit tables**.



Exercise Recap

Well done! You've have imported the spreadsheet used by Amanda and her team to track Telework Cases into three new tables.

The **Telework Case** table references the **Justification** and **Arrangement** tables. This will help ensure data input consistency.

Since **Justification** and **Arrangement** are standalone tables, you can easily add or remove entries in production. This means the choices can be adjusted without the need to deploy a new version of the application.

1.4 Data in Table Builder

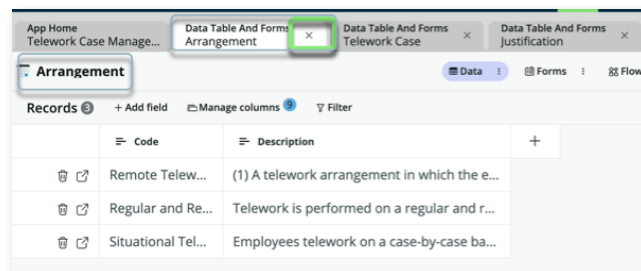
Overview

Table Builder is a powerful tool for designing and customizing tables, forms, and form elements within ServiceNow. In this exercise, you will learn how to edit the **Telework Case** table using the **Spreadsheet** view in the **Data** tab of Table Builder.

Additionally, you will explore the **Fields** view to modify the table properties and structure.

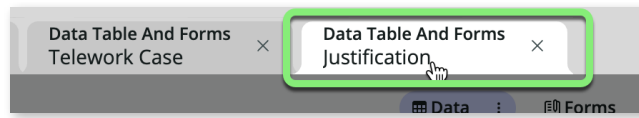
Instructions

- Click the **Arrangement** tab.
 - Close the **Welcome to Table builder** pop-up by clicking the 'X' in the corner.
 - You can see the **Arrangement** worksheet was successfully imported into the new **Arrangement** table.
 - Close the **Arrangement** tab.



	Code	Description	
	Remote Telew...	(1) A telework arrangement in which the e...	
	Regular and Re...	Telework is performed on a regular and r...	
	Situational Tel...	Employees telework on a case-by-case ba...	

2.
 - Click the **Justification** tab.

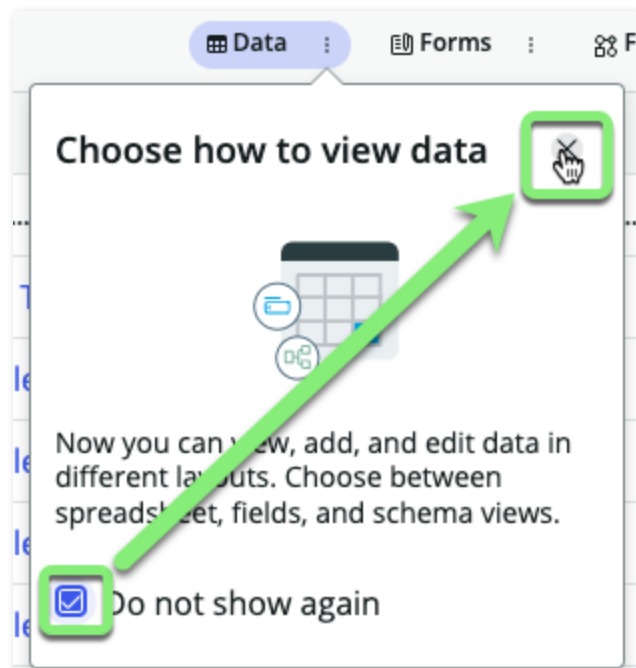


- Close the **Welcome to Table builder** pop-up by clicking the 'X' in the corner.
- You can see the **Justification** worksheet was successfully imported into the new **Justification** table.
- Close the **Justification** tab.

3. You should now be on the **Telework Case** tab. *(If not, click on it.)*

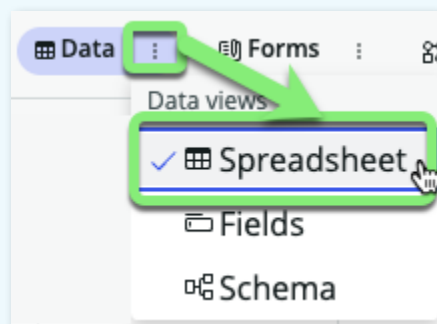
- Close the **Welcome to Table builder** pop-up by clicking the 'X' in the corner.

4. Check the 'Do not show again' option and then click the 'x' to dismiss the next pop-up.



! INFO

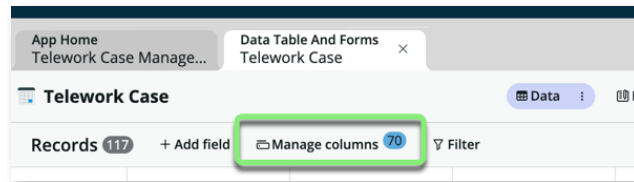
The default view in Table Builder is the "Spreadsheet" view.



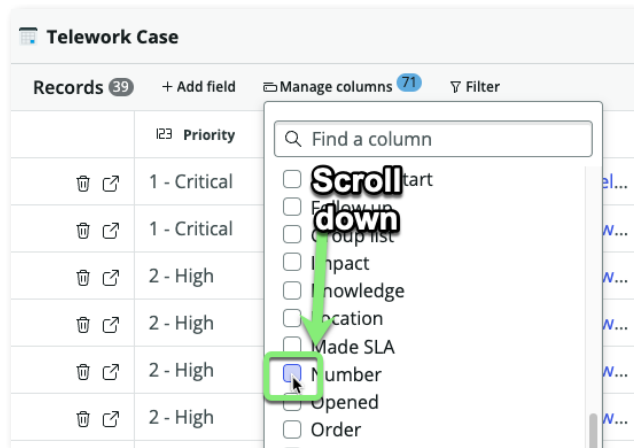
In this view, you can view and edit data.

5. Rearrange the columns displayed.

1. Click Manage columns.



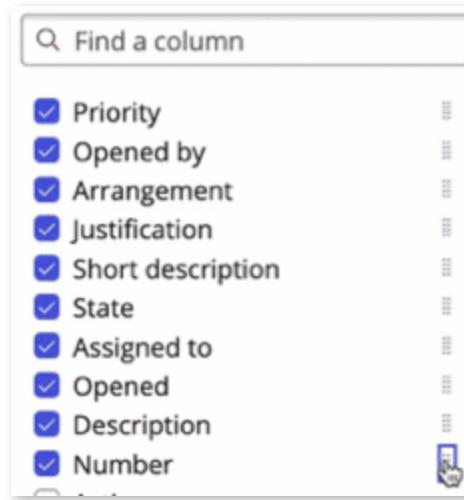
2. Scroll down and check the box next to 'Number'.



The button with eight dots is called the Handle icon.



3. Click and hold the Handle Icon next to 'Number', and drag to the top of the list.



4. Click **Apply**.

! INFO

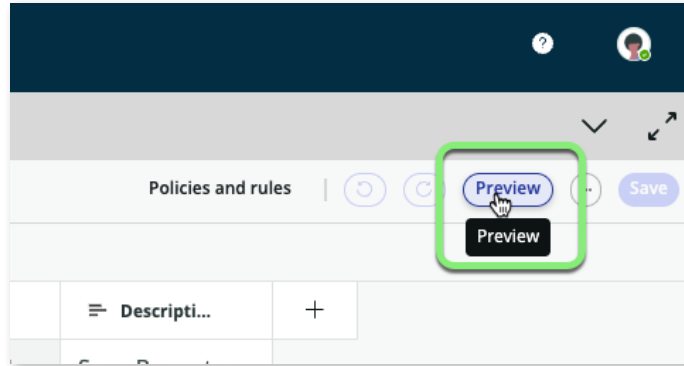
You can reorder columns through drag-and-drop with the Handle icon.

Num...	TL	Priority	Opened by	Arrange...	Justificat...	Short de...	
TEL0001001		1 - Critical	Billie Cowley			Situational Tel...	
TEL0001001		1 - Critical	Billie Cowley	Situational Tel...	Dependent Care	Situational Tel...	
TEL0001001		1 - Critical	Billie Cowley			Situational Tel...	
TEL0001002		1 - Critical	Cherie Fuhri			Remote Telew...	

If you rearrange the columns in spreadsheet view, the system will retain this personalized view of the column layout for you.

In the next few steps, you will set the default columns for everywhere else in the application.

6. Click 'Preview' in the top right.



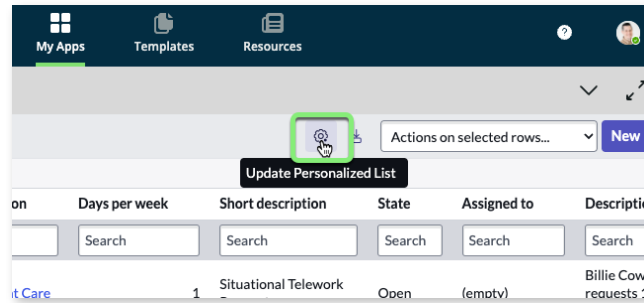
CAUTION

You are seeing a personalized layout of the columns that you set up with Spreadsheet view.

Number	Priority	Opened by	Arrangement	Justification	Days per week	Short description	State	Assigned to	Description
TELW0001001	1 - Critical	Billie Cowley	Situational Telework	Dependent Care	1	Situational Telework Request	Open	(empty)	Billie Cow requests : of Situa...
TELW0001002	1 - Critical	Cherie Fuhr	Remote Telework	Medical	3	Remote Telework Request	Open	(empty)	Cherie Fu requests : of Remot...
TELW0001003	2 - High	Christian Marneil	Remote Telework	Medical	4	Remote Telework Request	Closed Complete	Jewel Agresta	Christian Marneil re 4 days of
TELW0001004	2 - High	David Luo	Remote Telework	Dependent Care	2	Remote Telework Request	Work in Progress	Luke Wilson	David Luo requests : of Remot...
TELW0001005	2 - High	Jacinto Gaveron	Remote Telework	Medical	5	Remote Telework Request	Open	(empty)	Jacinto G requests : of Remot...
TELW0001006	2 - High	Jess Assaf	Remote Telework	Medical	1	Remote Telework Request	Open	(empty)	Jess Assaf requests : of Remot...
TELW0001007	2 - High	Jewel Agresta	Remote Telework	Medical	3	Remote Telework Request	Open	(empty)	Jewel Agr requests : of Remot...
TELW0001008	2 - High	Jimmie Barninger	Situational Telework	Medical	2	Situational Telework Request	Open	(empty)	Jimmie Barninger requests : of Situa...

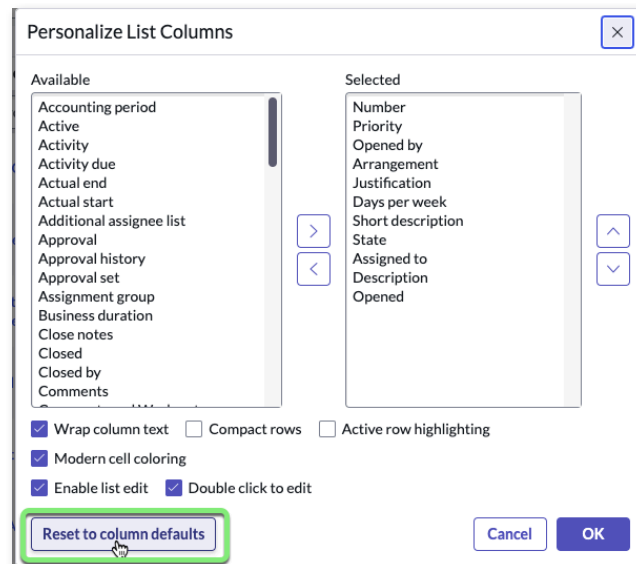
7. Reset your personalized list view to the Default view.

- Click the Gear cog icon.



Note that you are in the 'Personalize List Columns' pop-up.

- Click [Reset to column defaults](#)

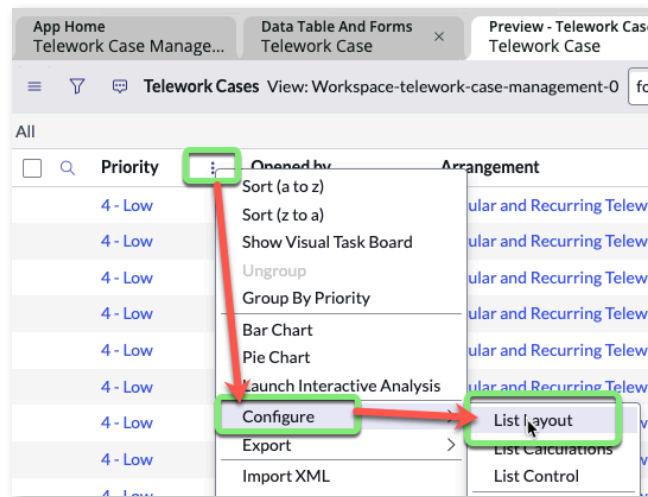


! INFO

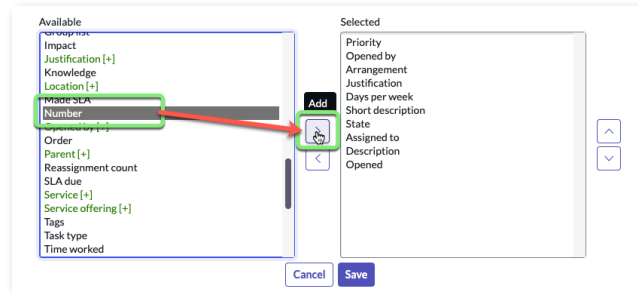
The purpose of setting and then resetting a Personalized list view was to teach you the difference between your *personal* list view and the Default view that everyone else would see.

Set the Default view for all Users in the system.

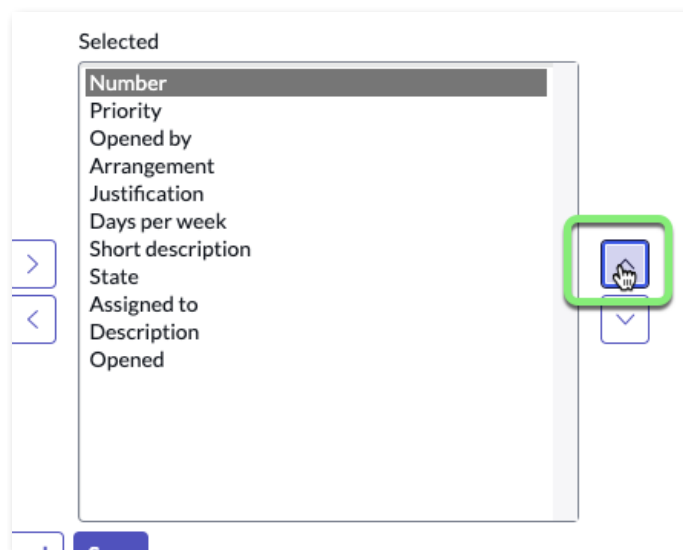
8.
 - Click the three dots to the right the word 'Priority' in the first column.
 - Click 'Configure'
 - Click 'List Layout'



9.
 - Search for 'Number' on the left side.
 - Click it.
 - Click the right chevron to move it to the right side.



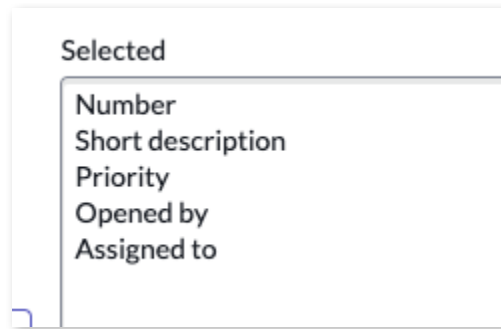
9. Click the up chevron to move 'Number' to the top of the list.



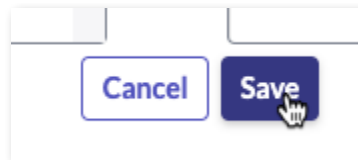
10. Arrange the right hand side to have these fields in the following order. (You may need to move some of the fields back to the left side.)
 - Number
 - Short description

- Priority
- Opened by
- Assigned to

RESULT



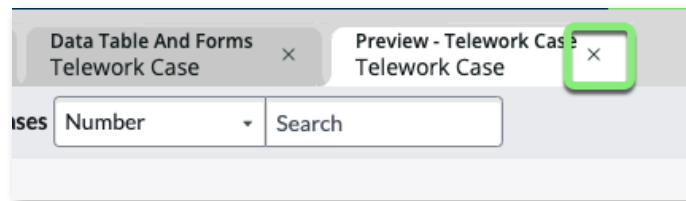
11. Click **Save**.



RESULT

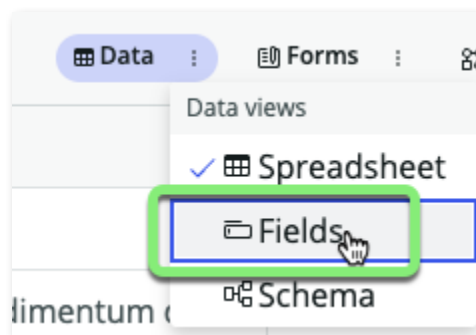
Number	Short description	Priority	Opened by	Assigned to
TELW0001001	Situational Telework Request	1 - Critical	Billie Cowley	(empty)
TELW0001002	Remote Telework Request	1 - Critical	Cherie Fuhr	(empty)
TELW0001003	Remote Telework Request	2 - High	Christian Marnell	Jewel Agresta
TELW0001004	Remote Telework Request	2 - High	David Loo	Luke Wilson
TELW0001005	Remote Telework Request	2 - High	Jacinto Gawron	(empty)

12. Close the 'Preview - Telework Case' tab.



13. Switch to the 'Fields' view of Table Builder.

- Click the three dots next to Data and select 'Fields.'

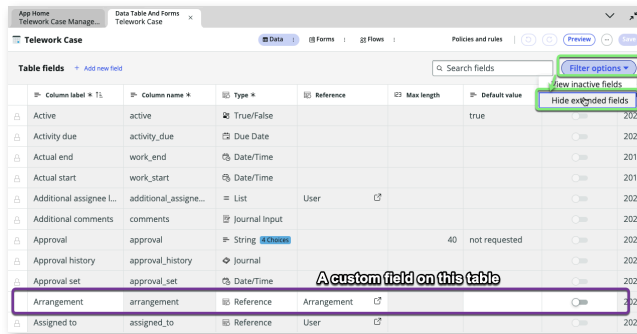


14. Hide the **Task** fields and only view custom fields related to 'Telework Case.'

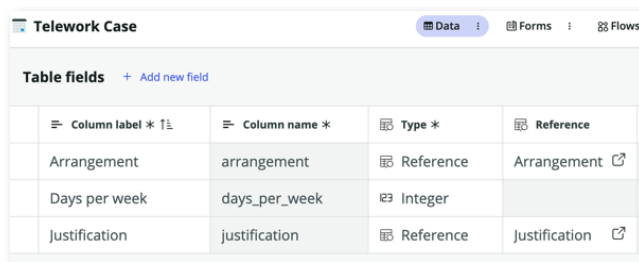
! INFO

The dark gray rows are fields that exist on the **Task** table that we are inheriting in our table **Telework Case** table.

- Click Filter options.
- Choose 'Hide extended fields.'



Now you can easily see only the custom Fields related to the **Telework Case** table.



Exercise Recap

In this exercise, you've learned how to use **Table Builder** to view and edit data in the **Spreadsheet view** and configure your Fields in the **Fields view**. The next exercise will involve using the **Form** feature to view and customize the form used to display individual records (rows) within the table.

For more information and advanced capabilities, you can refer to the [ServiceNow Product Documentation: Table Builder](#).

1.5 Configure Telework Case Form

Overview

The Forms tab in Table Builder is your canvas for visually creating, configuring, and customizing form views for your **fulfiller** users without the need to navigate between different tools.

In this exercise, we will focus on creating a new default form unique to the **Telework Case** table.

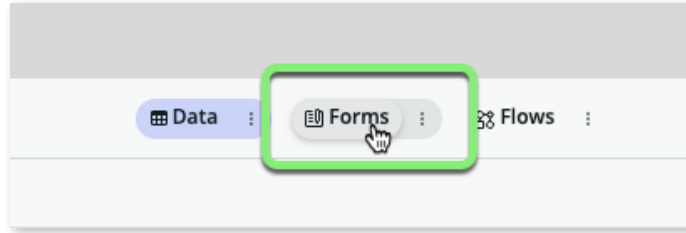
This form view is the 'back-end' view that will be visible in the Platform to the **fulfillers** working on the Telework Cases.

The **fulfillers** have asked that the following fields be added to the form:

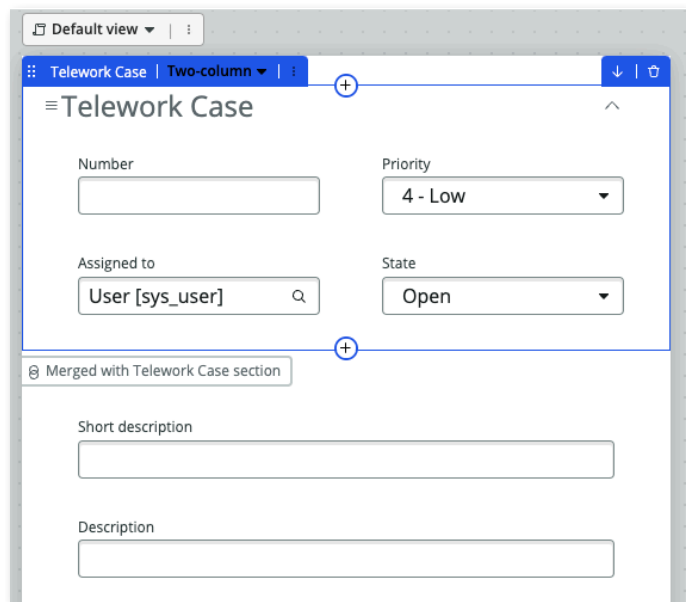
- Opened by
- Arrangement
- Days per week
- Justification

Instructions

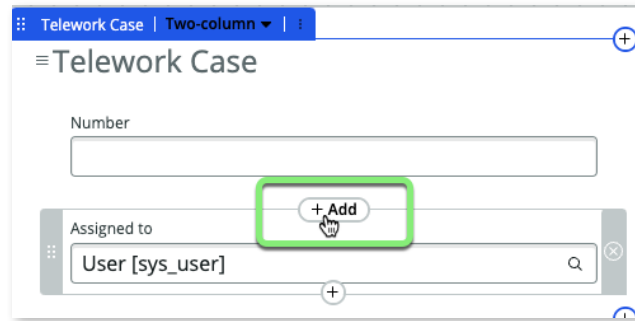
1. Click the Forms button in the center of the page.



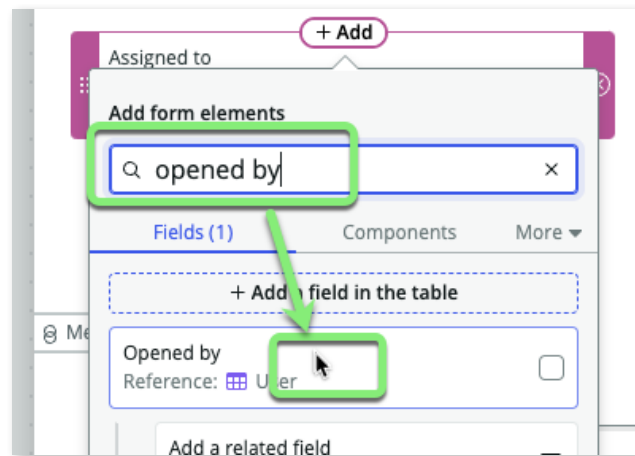
This is the default form view inherited from the `Task` table, which we'll customize for the `Telework Case` table.



2. Add the 'Opened by' field to the form.
 1. Hover your cursor above the field 'Assigned to' until the "+Add" button appears and click the button.



2. Type **opened by** in the search box and click on 'Opened by'.



Result: The Opened by field has been added to the form.

≡ Telework Case

Number

Opened by

Assigned to

One field added. Three to go...

- ~~Opened by~~
- Arrangement
- Days per week
- Justification

3. Add the 'Arrangement' field to the form.

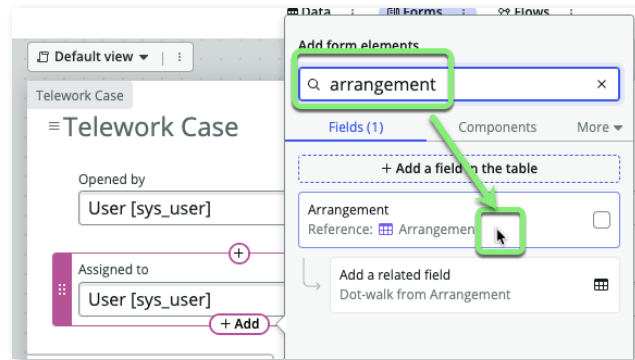
1. Hover your cursor below the field 'Assigned to' until the "+Add" button appears and click the button.

Opened by

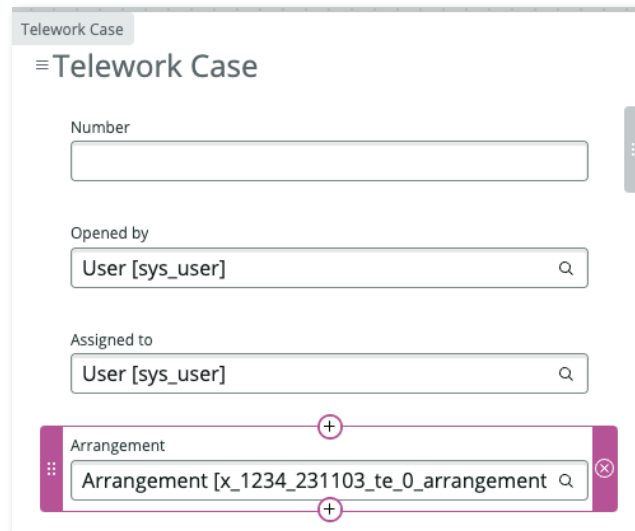
Assigned to

+Add

2. Type **arrangement** in the search box and click on 'Arrangement'.



Result: The Arrangement field has been added to the form.

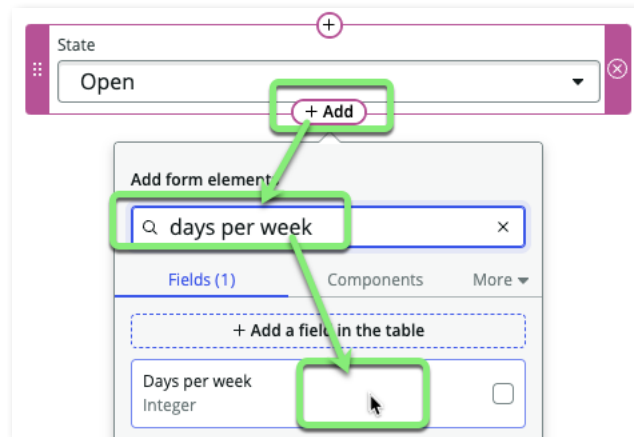


Two fields added. Two to go...

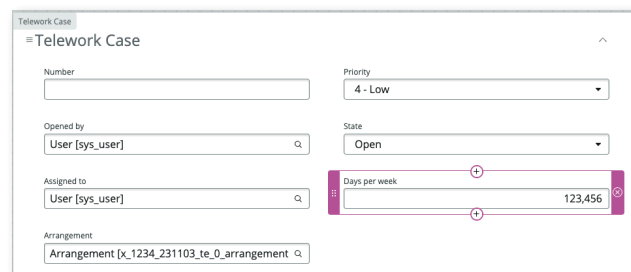
- Opened by
- Arrangement
- Days per week
- Justification

4. Add the 'Days per week' field to the form.

1. Hover your cursor below the field 'State' until the "+Add" button appears and click the button.
2. Type `days per week` in the search box.
3. Click on 'Days per week'.



Result: The Days per week field has been added to the form.



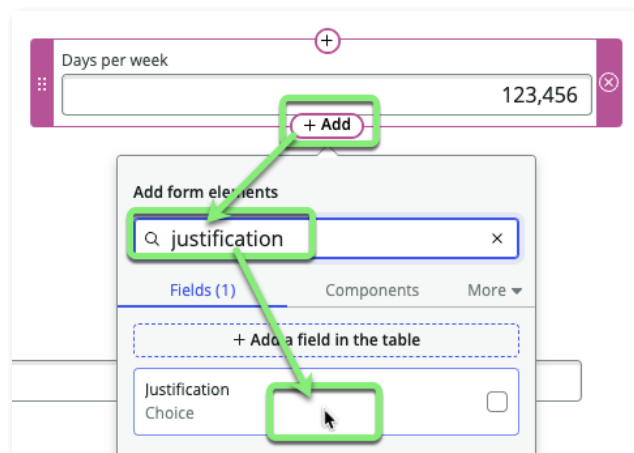
Three fields added. One to go...

- Opened by
- Arrangement
- Days per week

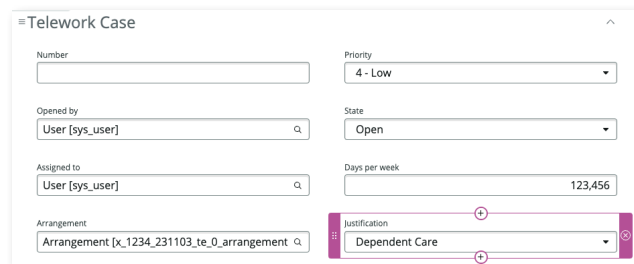
- Justification

5. Add the 'Justification' field to the form.

1. Hover your cursor below the field 'Arrangement' until the "+Add" button appears and click the button.
2. Type `justification` in the search box.
3. Click on 'Justification'.



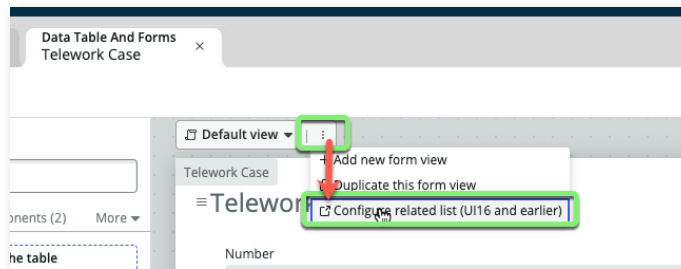
Result: The Justification field has been added to the form.



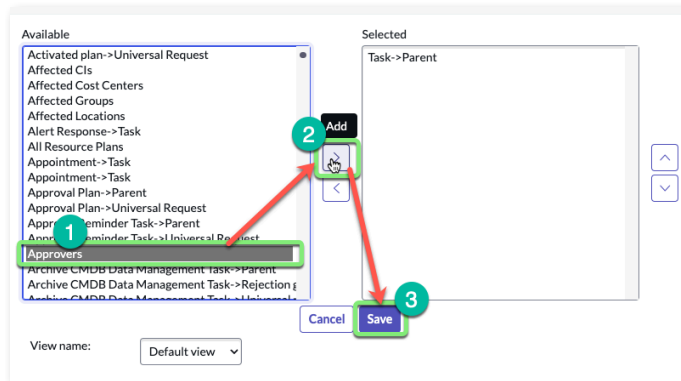
All four fields have been added to the form. The fulfiller users should be happy with the new form.

- Opened by
- Arrangement
- Days per week
- Justification

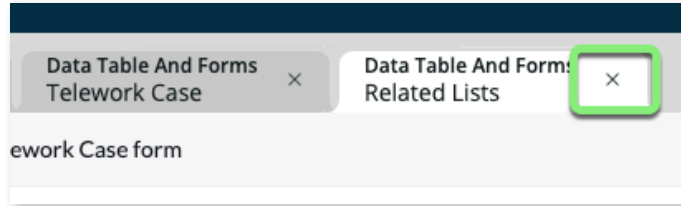
6. Click the three dots to the right of Default view, then click Configure related list (UI16 and earlier).



7. Move 'Approvers' from the left side to the right side. Then click **Save**.



8. Close the 'Related Lists' tab.

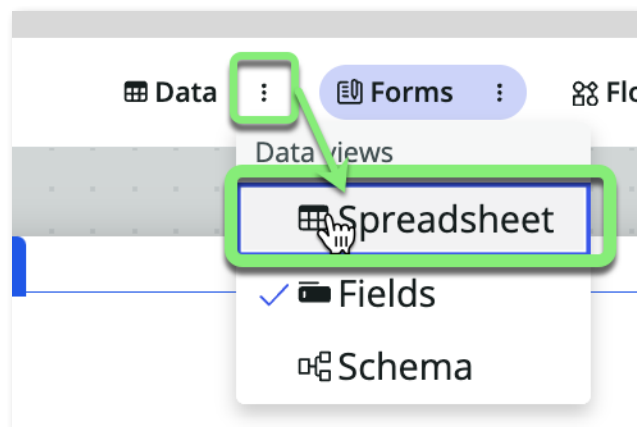


9. Save your work.


- Click **Save** in the top right.

9. Switch back to the 'Data -> Spreadsheet' view.

1. Click the three dots next to the Data pill.
2. Click Spreadsheet.

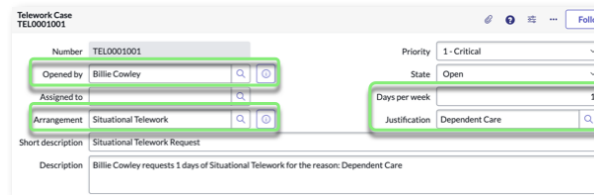


10. Click the escape-hatch icon next to a record to open it.

Telework Case		
Records 39 + Add field Manage columns 71 Filter		
	Num... ↑	Short description
	TEL0001001	Situational Telework Request

11. Confirm the new form matches the requirements from the fulfiller users.

- Check out the new form for the **Telework Case** table.
- It now should have the four fields requested by our fulfiller users on the form.
 - Opened by
 - Arrangement
 - Days per week
 - Justification



Telework Case
TEL0001001

Number: TEL0001001

Opened by: Billie Cowley

Assigned to:

Arrangement: Situational Telework

Priority: 1 - Critical

State: Open

Days per week: 1

Justification: Dependent Care

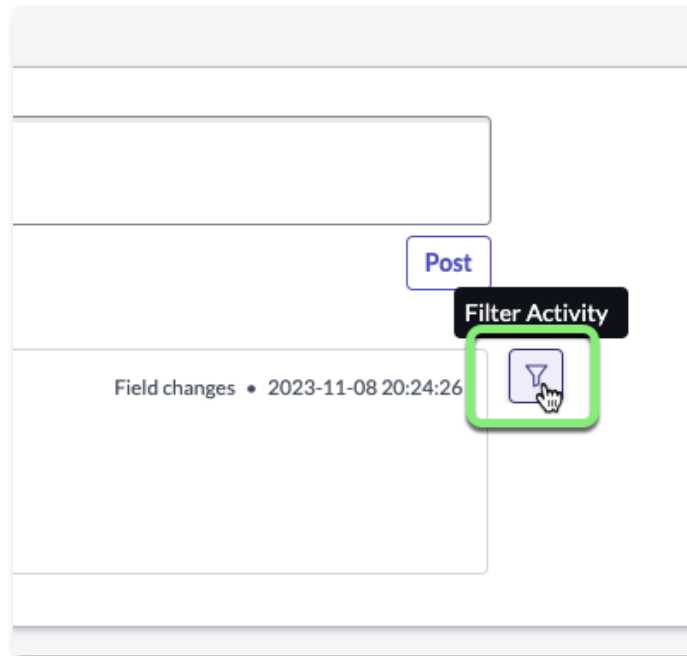
Short description: Situational Telework Request

Description: Billie Cowley requests 1 days of Situational Telework for the reason: Dependent Care

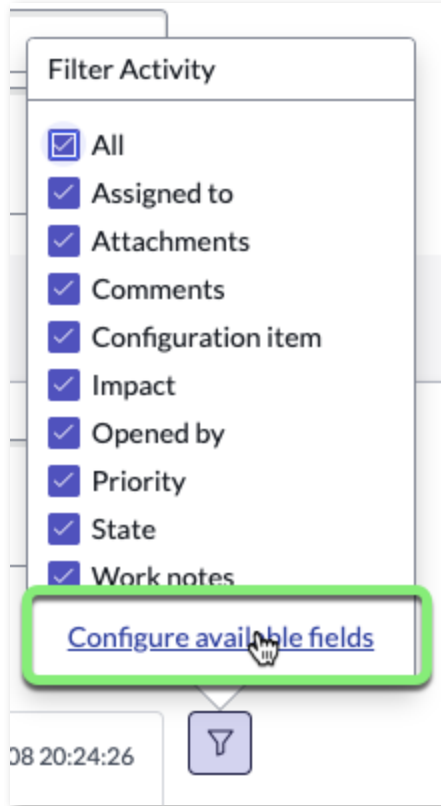
If you don't see the fields on the form, please review the previous steps or ask your instructor for assistance.

You can also adjust the fields that show in the activity history.

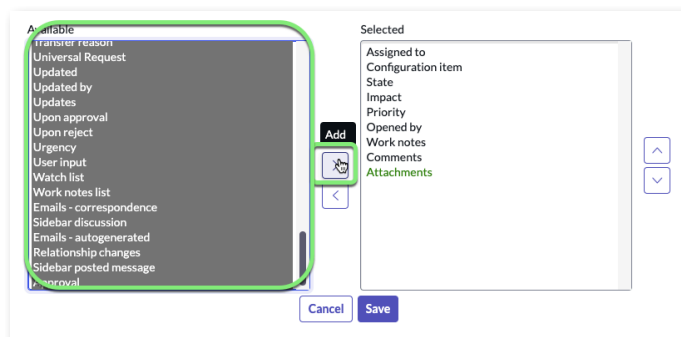
12. Click the funnel button to the right of the 'Activities' box.



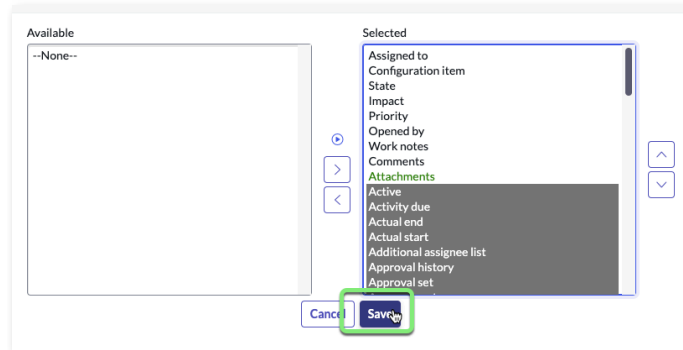
13. Click 'Configure available fields'.



14. Click 'Active', then press CTRL+A (CMD+A on Mac) to select all, then move all of the fields to the right side by clicking the right chevron.



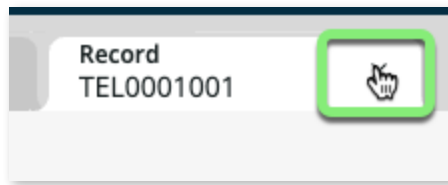
15. Click **Save**.



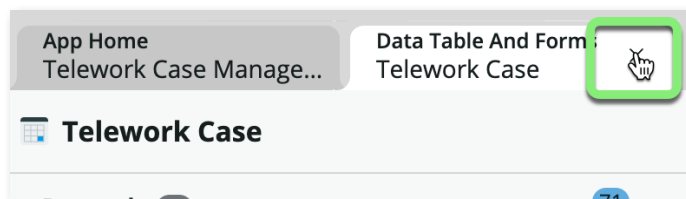
Now Amanda and her team will be able to see a running activity log of any fields that change on the Telework Case records. Typically, you would not add all of these fields, but this makes the lab easier.



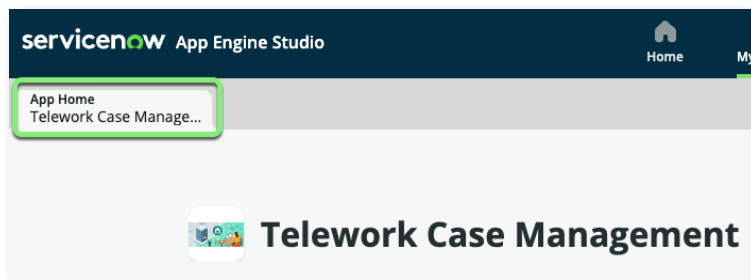
16. Close the Record tab.



17. Close the Data Table and Forms tab.



You should now be on the App Home page.



Exercise Recap

In this exercise, we learned how to modify the form view for our Telework Case table.

1. Build the Foundation: Review

In Section 1, "Build the Foundation" you grasped the platform's core concepts, learned how to create tables, import data, customize forms, and set the stage for further development. Now, you're equipped with the fundamental knowledge required for working effectively with ServiceNow.

Stay tuned for Section 2, where we'll dive deeper into the platform's capabilities and continue your journey toward becoming a ServiceNow expert.

2. User Experience: Overview

In the Use Case story we are following, Amanda's team wants to replace the paper form that users have to submit to Telework.

In this exercise, we will create a digital form for users to submit new Telework Case requests from an end user portal.



The form you will create is called a **Record Producer** in ServiceNow terminology.

When a requester user submits the Record Producer form, a new Telework Case should be created and routed to their manager for approval in ServiceNow.

2.1 Create the Request Form

Overview

The first set of requirements for the Record Producer form concern where the Telework requests get created. They should get created on our 'Telework Case' table.

We also need to present the Record Producer in an easy to use portal for the requester users.

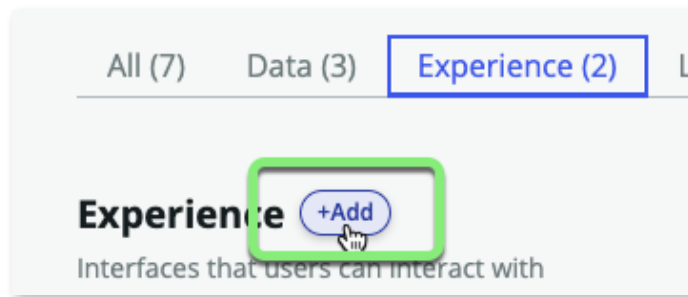
Follow the instructions below to learn to create a Record Producer that fulfills the requirements above.

Instructions

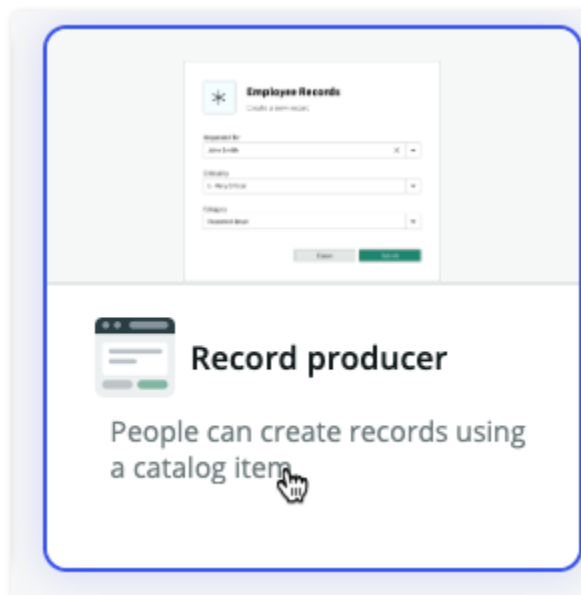
1. Click the Experience tab.



2. Click [+Add](#).



3. Click Record Producer.



! INFO

A Record Producer is a specific type of Catalog Item that allows end users to create records from a Service Catalog.

4. Click **Begin**.

5. Let's set up your record producer.

- Set the following values, then click **Continue**.

Name	Apply for Telework
Short description	Use this form to apply for Telework

Name *

Apply for Telework


Short description

Use this form to apply for Telework

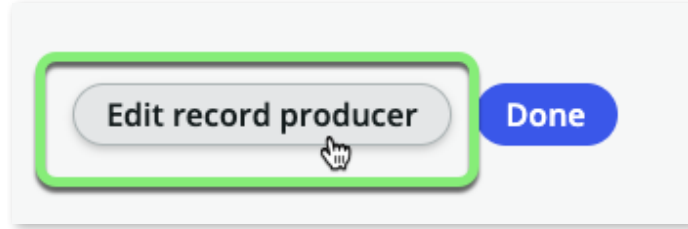
ADD EXPERIENCE

We're creating your record producer...

This may take a few seconds.

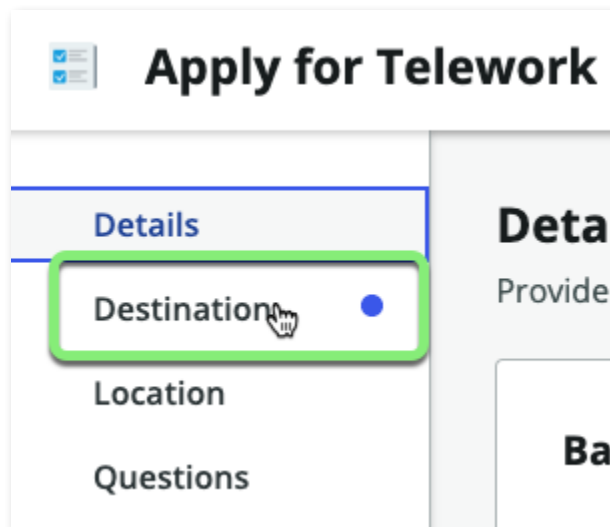


6. Click on the **Edit record producer** button.



7. The Record Producer destination will be the **Telework Case** table.

1. Click on Destination



2. Type Tel.
3. Select the Telework Case table.

Table

Record submission table *

Te
Showing 2 of 2
Telework Case x_snc_telework_123_telework_case
Telework Case Data Mapping x_snc_telework_123_ihub_import_589d7f20798

4. Click [Continue to Location](#).

ⓘ CATALOGS AND CATEGORIES

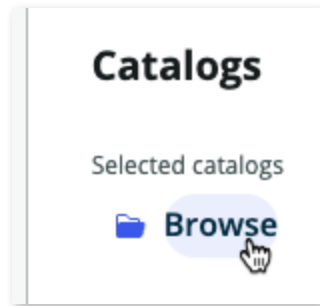
Just like in real life, a ServiceNow Catalog contains Categories of items and services that can be ordered by a requester.

Location

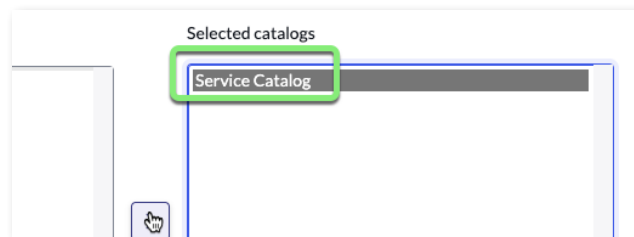
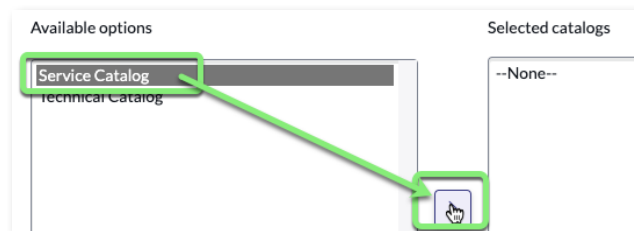
Choose a catalog and category where requesters can find your item

A Topic is a newer way in ServiceNow to organize Catalog Items and Record Producers for the Employee Center portal.

8. Add the Record Producer to a Catalog.
1. In the Catalogs box, click Browse.



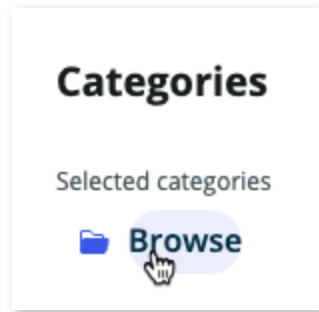
2. Move Service Catalog to the right hand box, 'Selected catalogs'.



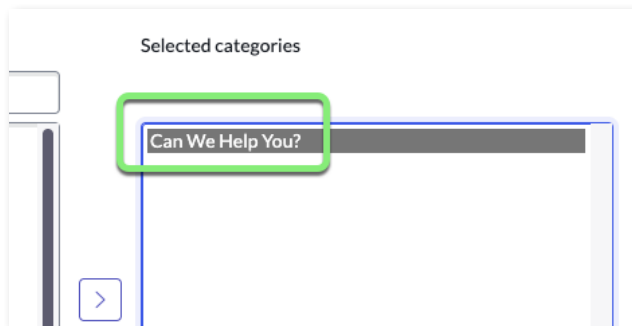
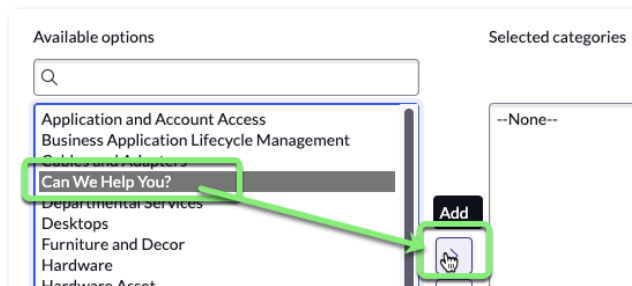
3. Click **Save selections**.

9. Add the Record Producer to a Category.

1. In the Categories box, click Browse.



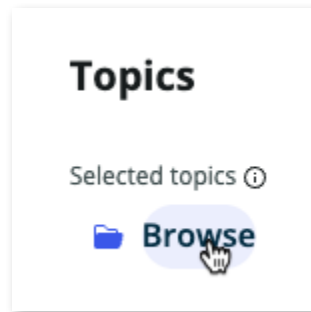
2. Move Can We Help You? to the right hand box, 'Selected categories'.



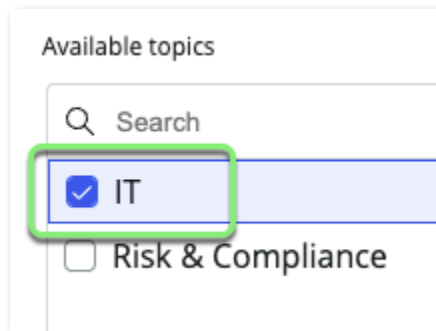
3. Click **Save selections**.

10. Add the Record Producer to a Topic.

1. In the Topics box, click Browse.



2. Check the box for IT.



3. Click **Save selection**.

11. Click **Continue to Questions**.

Exercise Recap

You have configured where the Record Producer will be visible for requester users to submit Telework requests.

2.2 Add fields

Overview

Earlier, you created the back-end form the fulfiller users will see for records on the `Telework Case` table. In this exercise, you will create the front-end form with questions for the user to answer when submitting the form.

The fulfiller users have requested that the Record Producer ask the requester the following questions from the PDF form we are digitizing:

- Who is the request for?
 - *Should auto-populate with the name of the current user, but can be edited to a different user.*
- When do you need this?
 - *Options should be:*
 - Today
 - Tomorrow
 - This week
 - Next Week
- What type of Telework are you applying for?
 - *Options should be:*
 - Regular and Recurring Telework
 - Remote Telework
 - Situational Telework
- Number of Days per Week?
 - *Input should only be an integer. No letters allowed.*
 - *This field should only appear if the answer to the previous question is 'Situational Telework'.*
- What is the reason for Teleworking?
 - *Options should be:*

- Dependent Care
- Medical
- Reasonable Accommodation

Instructions

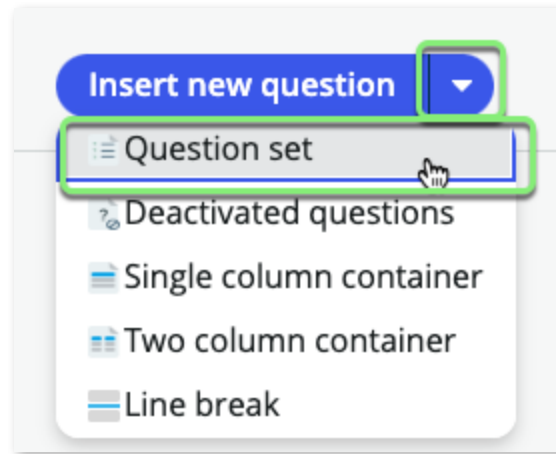
! INFO

A **Question set** is a ServiceNow term for a set of questions that can be re-used across multiple Record Producers and Catalog Items. Some questions in the set might have special logic to validate input or auto-populate answers.

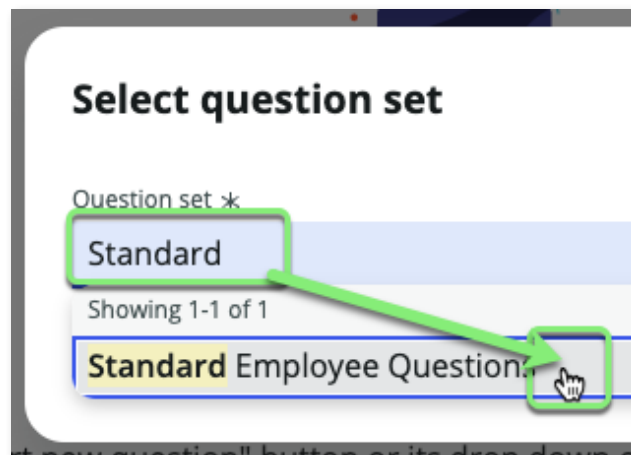
The first two questions you will add to your **Record Producer** already exist on the system as part of a **Question set** called 'Standard Employee Questions'.

- Who is the request for?
- When do you need this?

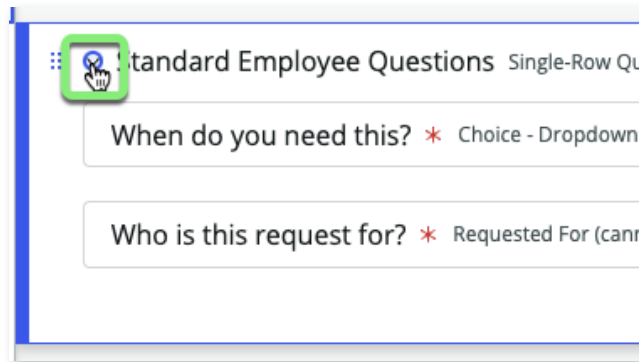
1. Add the 'Standard Employee Questions' Question set.
 1. Click the arrow next to **Insert new question**.
 2. Click 'Question set'.



3. Type **Standard**.
4. Click on 'Standard Employee Questions'.



5. Click the arrow to the left of 'Standard Employee Questions' to expand the Question set and see what questions it contains.



i NOTE

Advanced ServiceNow users may know Questions sets outside of App Engine Studio by a different name 'Variable sets'.

Questions remaining to add:

- Who is the request for?
- ~~When do you need this?~~
- What type of Telework are you applying for?
- Number of Days per Week?
- What is the reason for Teleworking?

2. Add the question 'What type of Telework are you applying for?'

1. Click **Insert new question**.

2. Configure the following values:

Field Name	Field Value
Question type:	Choice
Question subtype:	Record reference

A screenshot of a configuration menu. The menu has two sections. The first section is titled "Question type" and has a blue bar with the text "Choice" selected. The second section is titled "Question subtype ✖" and has a blue bar with the text "Record reference" selected.

3. Scroll down to the Details section.

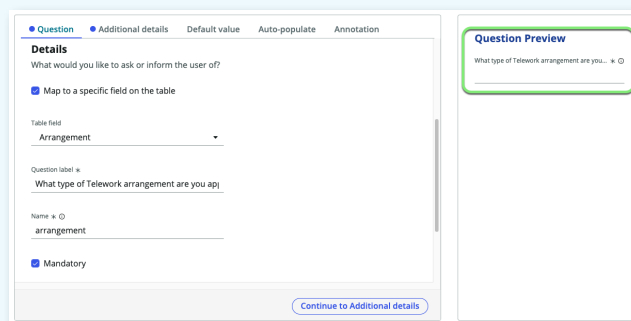
A screenshot of the "Details" section in a configuration form. The section is titled "Details" and contains the text "What would you like to ask or inform the user of?".

4. Configure the following values: (💡 double-click, copy & paste into the form).

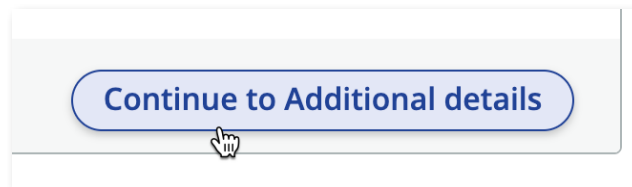
Field Name	Field Value
Map to a specific field	Checked
Table field	choose Arrangement
Question label	What type of Telework arrangement are you applying for?
Mandatory	Checked
Question Preview	Notice on the right panel, then Question Preview shows what the question will look like to the user.

! INFO

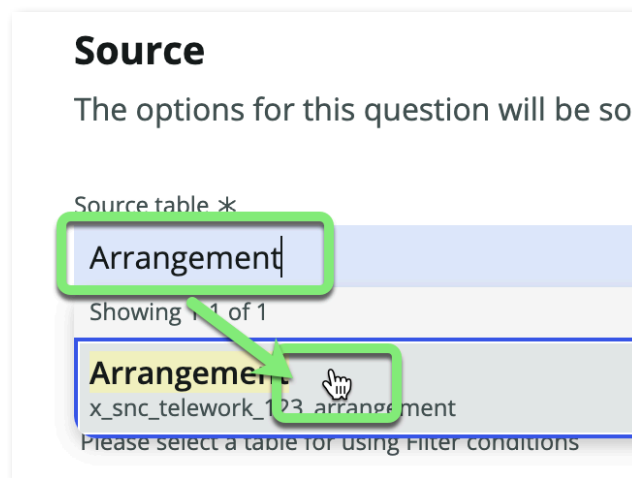
Notice the **Question Preview** that shows what the question will look like to the user.



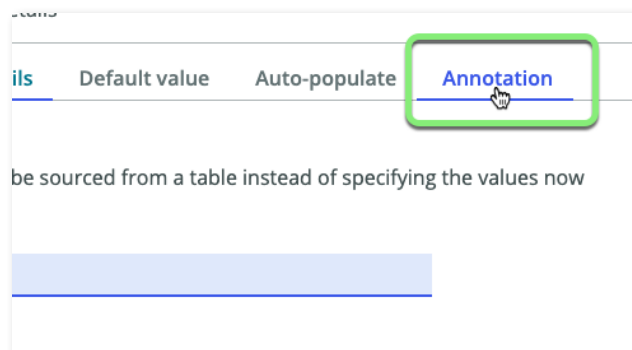
5. Click **Continue to Additional details**.



6. Type **Arrangement** in the Source table box and click 'Arrangement' in the drop-down.



7. Click on the Annotation tab.

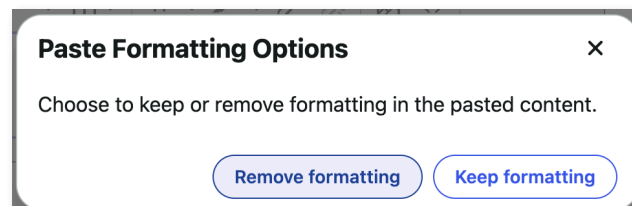


In the current process with the PDF, the team is spending a lot of time correcting and manually re-routing Telework requests due to people

confusing the different types of Telework arrangement.

Add an annotation to help the users understand what they are selecting.

8. Check the box Show instructions.
9. Open the file: `telework_form_annotation.docx`.
10. Copy all the text in the file (⌘ Cmd or CTRL+A, CTRL+C)
11. Paste it into the Instructions box (⌘ Cmd or CTRL+V). You can choose to either keep or remove formatting.



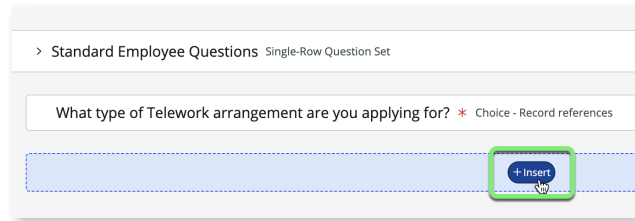
12. Click **Insert Question**.

Questions remaining to add:

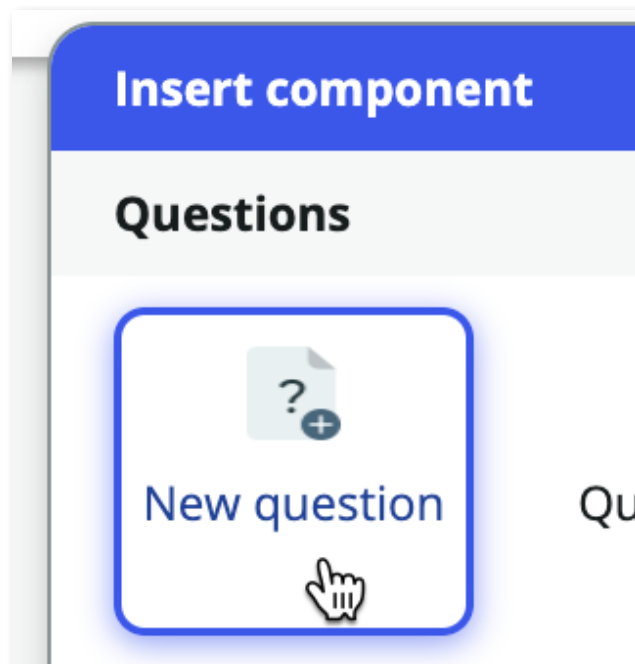
- Who is the request for?
- When do you need this?
- What type of Telework are you applying for?
- Number of Days per Week?
- What is the reason for Teleworking?

3. Add the question 'Number of Days per Week?' using a different way.

1. Click **+ Insert** below the last question you added.



2. Click the 'New question' tile.



3. Set the following values in the Type section:

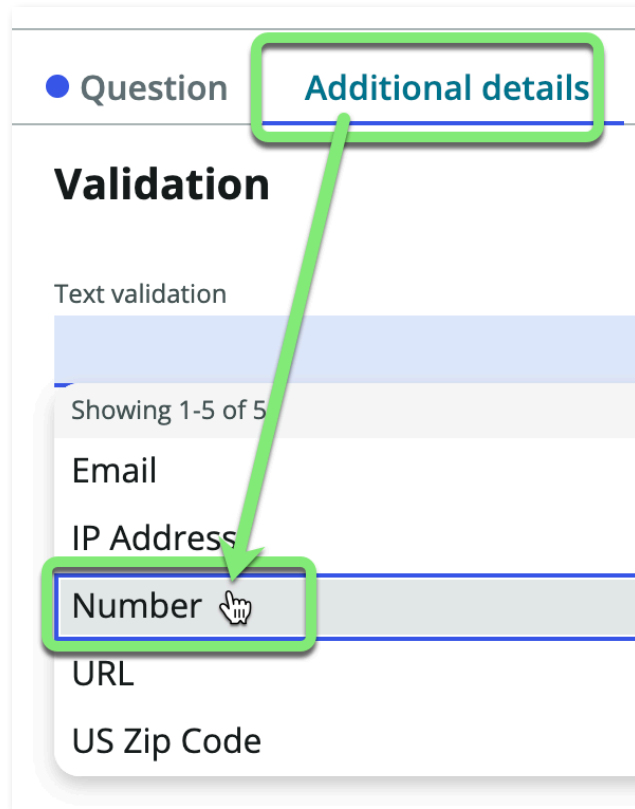
Field Name	Field Value
Question type	Text
Question subtype	Single line

The image shows a screenshot of a form with two sections. The first section is titled 'Question type' and has a blue highlighted selection box containing the word 'Text'. The second section is titled 'Question subtype *' and has a blue highlighted selection box containing the text 'Single-line'.

4. Scroll down to the Details section.
5. In the Details section, enter the following information: (💡 double-click, copy & paste into the form).

Field Name	Field Value
Map to a specific field	Checked
Table field	Days per week
Question label	Number of Days per Week?
Name	days_per_week

6. Click on Additional details.
7. Click on the Text validation drop-down and select **Number**.



8. Click **Insert Question**.

The Telework Case fulfillers want 'Number of days per week' to only appear if the user answers 'Situational Telework'...

*What type of Telework arrangement are you applying for? ?

i Situational Telework

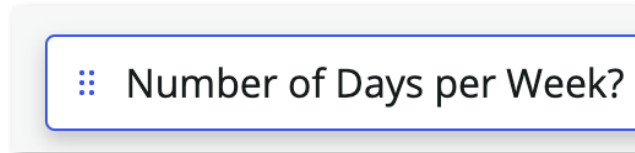
This can be done with a Behavior.

i NOTE

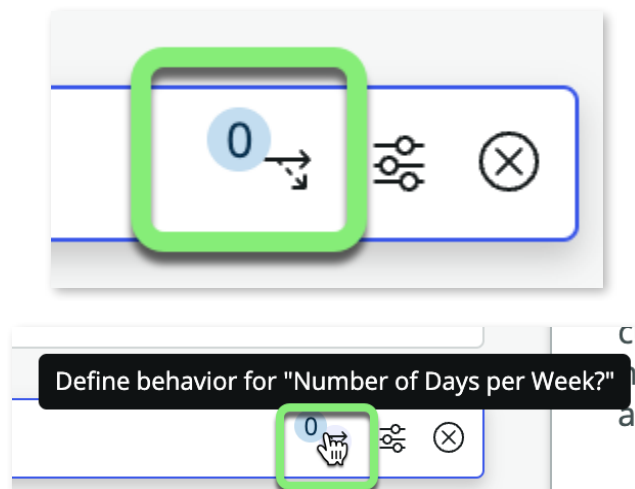
Advanced ServiceNow users may know Behaviors outside of App Engine Studio by a different name 'UI Policies'.

4. Define a behavior for "Number of Days per Week?".

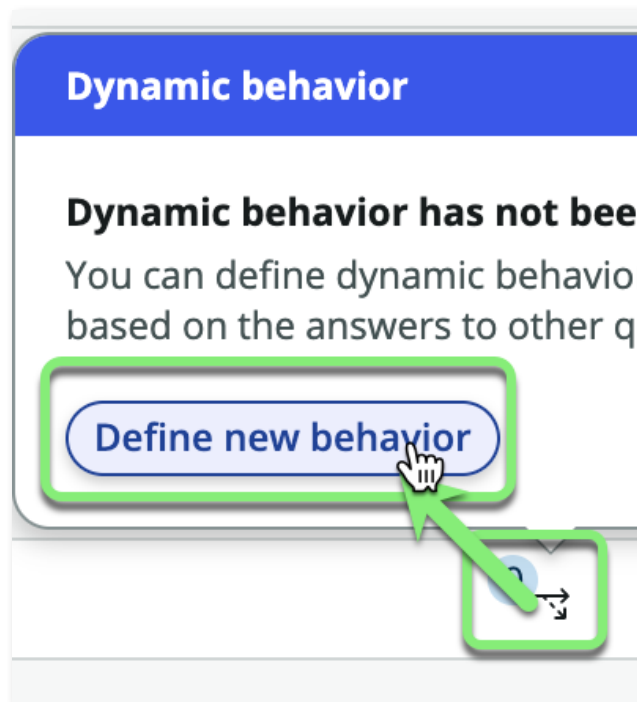
1. Hover over the question 'Number of Days per Week?'.



2. On the right side of the row, click this button.



3. Click [Define new behavior](#)



4. In the Actions tab, we'll specify the behavior we need:

Field Name	Field Value
Make the question mandatory	Yes
Make the question visible	Yes

Actions Conditions Settings

Outcome
Specify the behavior of this question when the condition is met

Make the question mandatory
 Yes

Make the question visible
 Yes

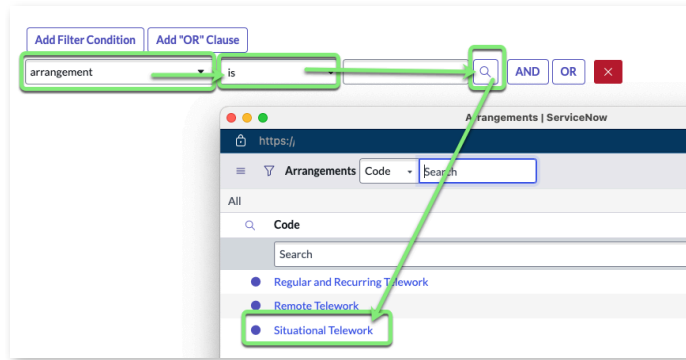
Make the question read-only
 No action

5. Click on the Conditions tab.

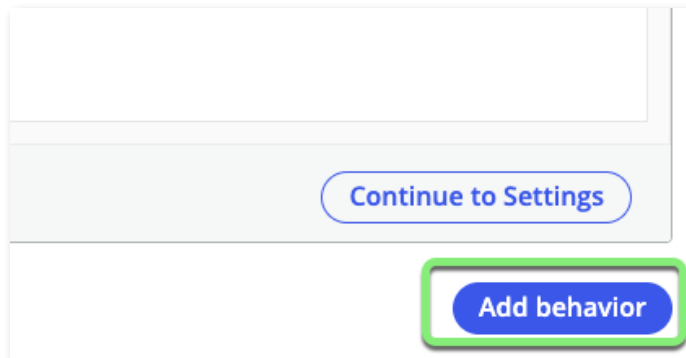
Actions **Conditions** Settings

6. Set the Dynamic Behavior Condition filter to

arrangement	is	Situational Telework



7. Click **Add behavior**.



! INFO

This will create a UI effect where the "Number of Days per Week" field will only appear when the answer to "What type of Telework arrangement are you apply for?" is "Situational Telework".

Questions remaining to add:

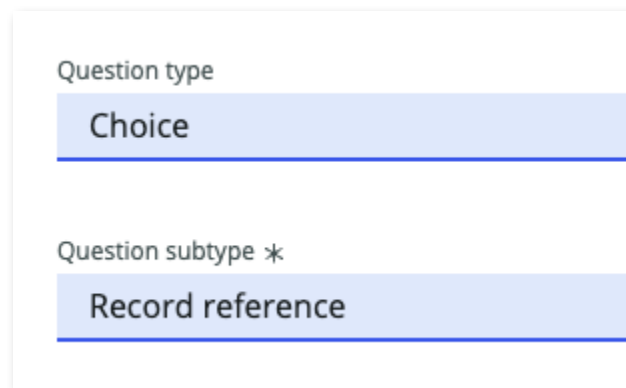
- Who is the request for?
- When do you need this?
- What type of Telework are you applying for?

- ~~Number of Days per Week?~~
- What is the reason for Teleworking?

5. Add the final question: What is the reason for Teleworking?

1. Click **Insert New Question**.
2. In the **Type** section set the following values:

Field Name	Field Value
Question type	Choice
Question subtype:	Record reference



Question type

Choice

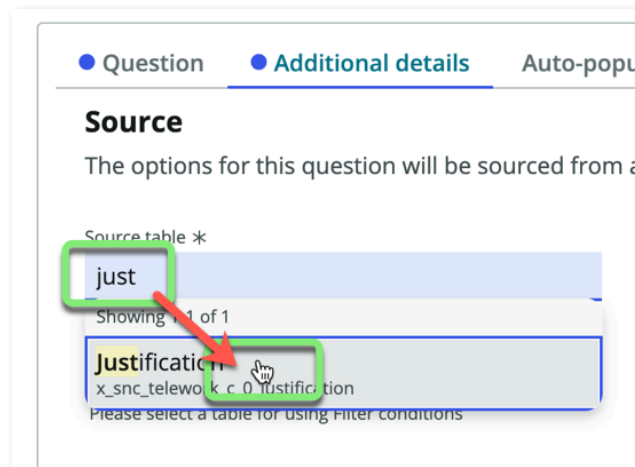
Question subtype *

Record reference

2. Scroll down to the **Details** section.
3. In the **Details** section, enter the following information: (💡 Copy & paste into the form).

Field Name	Field Value
Map to a specific field	Checked
Table field	Justification
Question label	What is the reason for Teleworking?
Name	justification
Mandatory	Checked

4. Click **Continue to Additional details**.
5. Type **just** the Source table box and click 'Justification' in the drop-down.



6. Click **Insert Question**.

Your screen should now look like this:

Apply for Telework

Details

Destin

Location

Questions

Settings

Access

Review and submit

Questions
Define the questions on your item form

Expand all

Insert new question

> Standard Employee Questions Single-Row Question Set

What type of Telework arrangement are you applyi... * Choice - Record refere...

Number of Days per Week? Text - Single-line

What is the reason for Teleworking? * Choice - Record references

6. Click **Save**.

Exercise Recap

The Record Producer form now has the required fields and behavior added to it. You were able to leverage a 'Question set' so that you did not have to recreate the Standard Employee Questions.

2.3 Preview in AES

Overview

Preview the form in App Engine Studio before publishing and confirm that the form fields behave as expected.

Instructions

1. Click [Preview](#).
2. The Preview page allows to visualize what our form will look like in different experiences.

(You can interact with the item but not submit it.)

Portal Preview

Apply for Telework
Use this form to apply for Telework.

* Indicates required

*What is this request for?

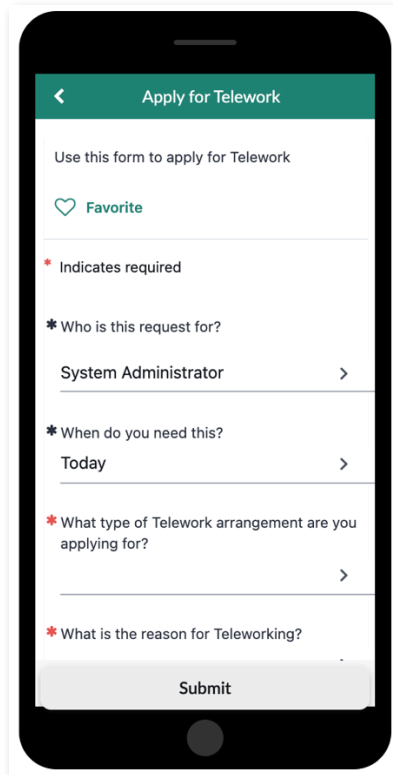
*When do you need this?

What type of Telework arrangement are you applying for? ⓘ

*What is the reason for Teleworking?

📎 Add attachments

Now Mobile Preview



The image shows a mobile application interface for applying for telework. The screen is titled "Apply for Telework" and includes a back arrow, a "Favorite" button, and several required fields marked with a red asterisk. The fields are: "Who is this request for?" (with "System Administrator" selected), "When do you need this?" (with "Today" selected), "What type of Telework arrangement are you applying for?", and "What is the reason for Teleworking?". A "Submit" button is located at the bottom of the form.

Apply for Telework

Use this form to apply for Telework

Favorite

* Indicates required

* Who is this request for?

System Administrator >

* When do you need this?

Today >

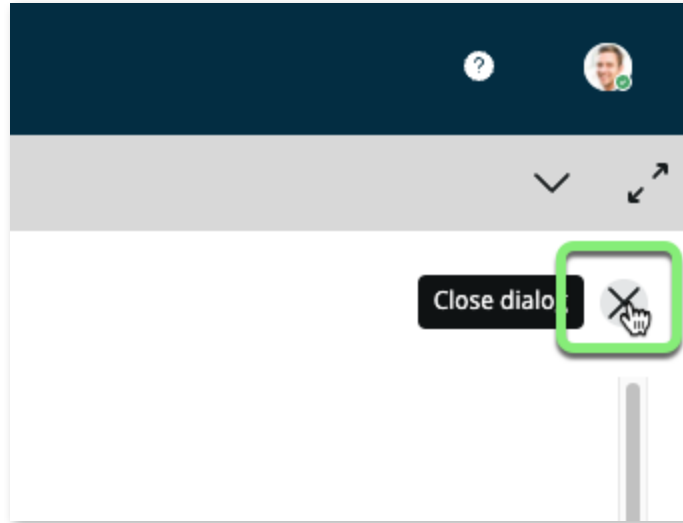
* What type of Telework arrangement are you applying for?

>

* What is the reason for Teleworking?

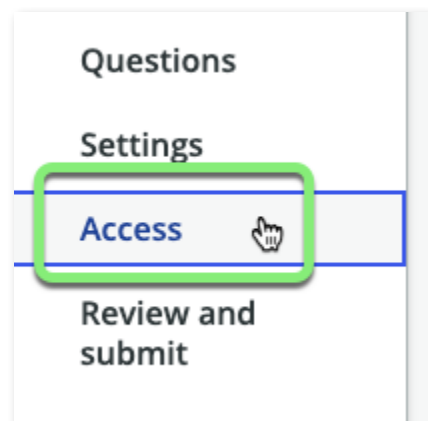
Submit

3. Close the Preview by clicking on the X on the top right.

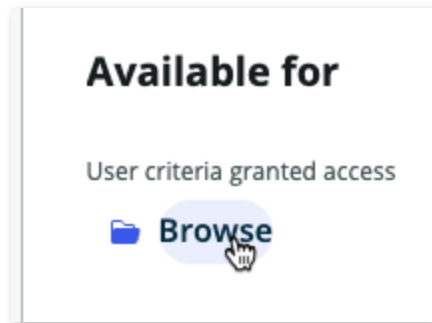


4. Configure who can access the Record Producer form to order it.

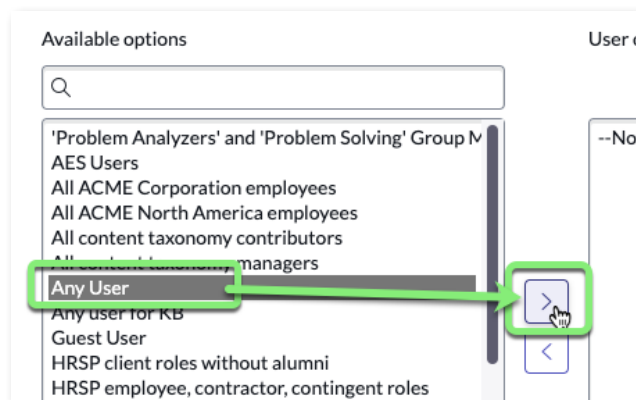
1. Click Access on the sidebar.



2. Under Available for, click Browse.



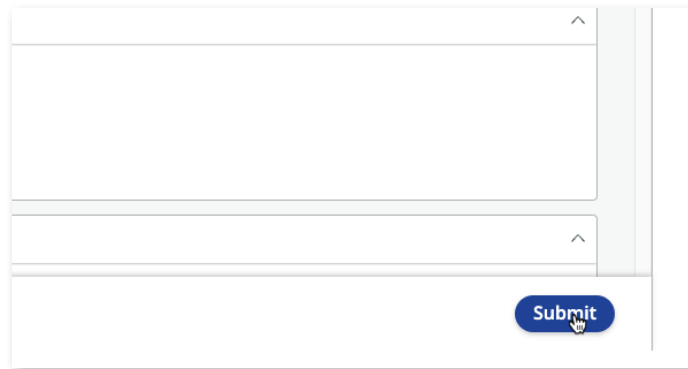
3. Move 'Any User' to the right box.



4. Click **Save Selections**.

5. Click **Continue to Review and submit**.

6. Click **Submit**.

A screenshot of a web form interface. The form consists of several input fields, with the top one being the largest. Below the input fields, there is a blue button labeled "Submit" with a mouse cursor icon over it. The form is set against a light gray background.

7. Click [Return to my application](#).

Exercise Recap

Congratulations!

The form is published on the application. Users will be able to use it to submit Telework Case requests when the app is promoted to the ServiceNow Production environment.

2.4 Preview in portal

Overview

Requester users access ServiceNow via portals. The main 'out-of-the-box' default portal offered by ServiceNow is called Employee Center.

More Info: [ServiceNow Product Docs Employee Center](#)

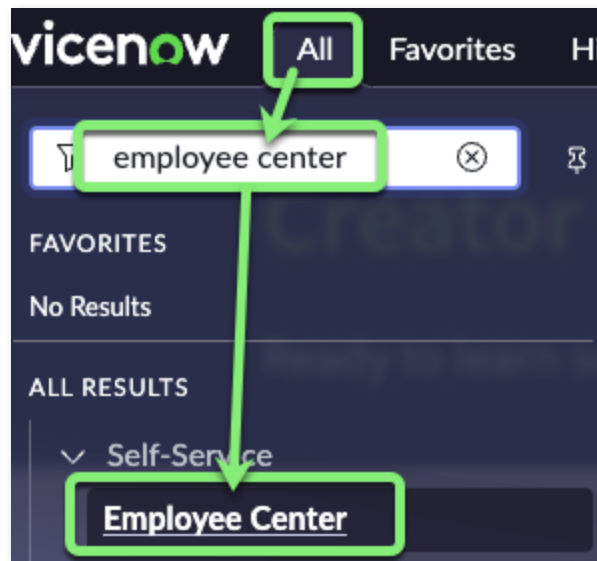
In this exercise, you will preview the 'Apply for Telework' Record Producer in the Employee Center portal.

Instructions

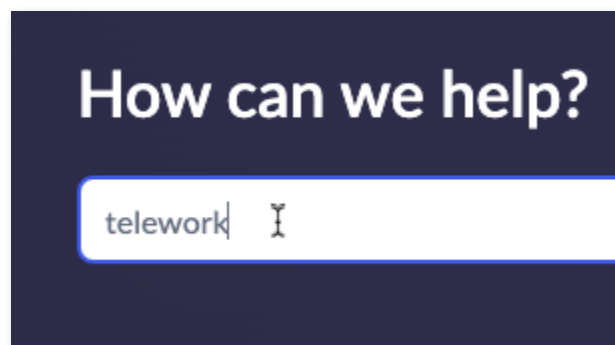
1. Go to the browser tab that says 'Home - Creator Workshops'.



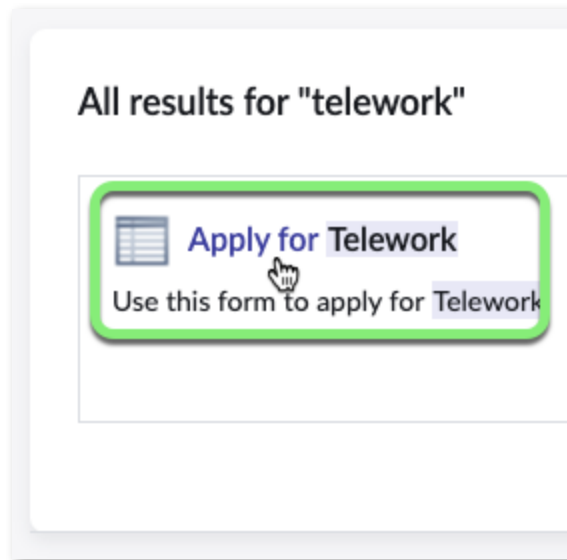
2. Open the Employee Center.
 1. Click All.
 2. Type .
 3. Click Employee Center.



3. Search for the 'Apply for Telework' Record Producer form.
 1. Type `telework` in the search box.
 2. Press ENTER on your keyboard.

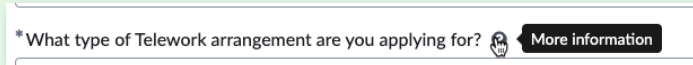


4. Click 'Apply for Telework' in the search results.

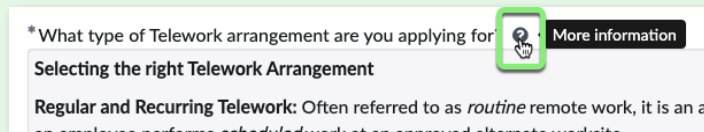


 TIP


Click the question-mark icon to see the annotation you pasted from the Word doc.



Click it again to close the annotation.



5. Fill out the form with the following values: ( double-click, copy & paste into the form).

Step	Field Name	Field Value
1	Who is this request for?	David Loo
2	When do you need this?	This week
3	What type of Telework arrangement are you applying for?	Situational Telework
4	Number of days per week?	3
5	What is the reason for Teleworking?	Dependent Care
6	Click  .	

Apply for Telework


Use this form to apply for Telework

*Who is this request for?

 David Loo

*When do you need this?

Today

*What type of Telework arrangement are you applying for? 

 Situational Telework

*Number of Days per Week?

3

*What is the reason for Teleworking?

Dependent Care

Submit 

Exercise Recap

In this exercise, you learned how to use Employee Center to submit a Telework Case request on behalf of a different user than yourself.

2. User Experience: Review

In the Use Case story we are following, Amanda's team wanted to replace the paper form that users have to submit to Telework.

In this exercise, you created a digital form called a Record Producer for users to submit new Telework Case requests.

The Record Producer contains the questions provided by Amanda and her team of fulfillers as well as UI Behaviors and input validation.

- Who is the request for?
- When do you need this?
- What type of Telework are you applying for?
- Number of Days per Week?
- What is the reason for Teleworking?

Finally, the Record Producer can easily be found in the Employee Center portal for users to request Telework.

3. Automate work with Flows:

Overview

In this exercise, we will move beyond simply digitizing data entry and we will focus on ways we can drive optimization through automated Flows.

3.1 Create the Flow

Overview

A Flow is an automated process consisting of a trigger and a sequence of reusable actions. The trigger specifies when to run the flow. The actions perform a sequence of operations on your data.

A Flow can include these components:

- **Trigger**
 - An activity that initiates the flow, such as a record created in a specified table or a scheduled job.
- **Conditions**
 - Statements that determine when or how an action runs. For example, run an action only if a field is over a certain value.
- **Actions**
 - Operations executed by the system, such as a field value updated, approval requested, or a value logged.

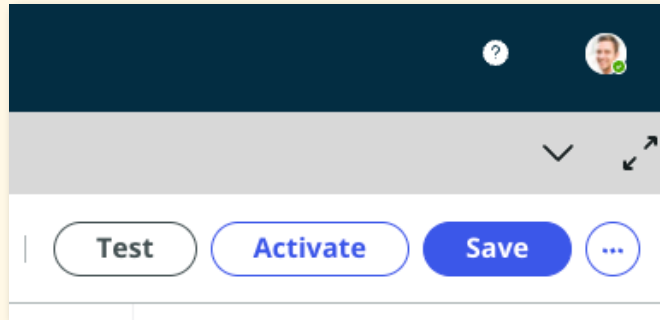
To understand basic flows, create an approval Flow for new Telework Cases. The Flow will:

- Run when a Telework Case record is created.
- Sends to the 'Opened by' person's manager for approval.
- If approved,
 - Creates a Ticket for IT to configure a remote VPN access token for the person.
 - Sends an email to the 'Opened by' user letting them know their request was approved.



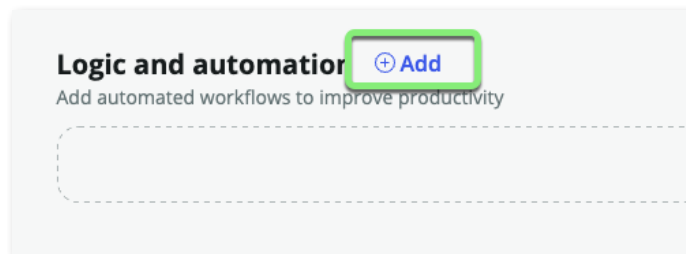
CAUTION

- Your Flow work only exists in your browser until you click the **Save** button.
- You are encouraged to click the **Save** button as frequently as you would like to ensure you don't lose any progress.



Instructions


1. From the App Home tab, in the "Logic and automation" section, click Add.




2. Click Flow.

What do you want to add?


Automate your organization's workflows, like automated email notifications or an event-triggered workflow.



Flow
A behind-the-scenes workflow triggered by an event

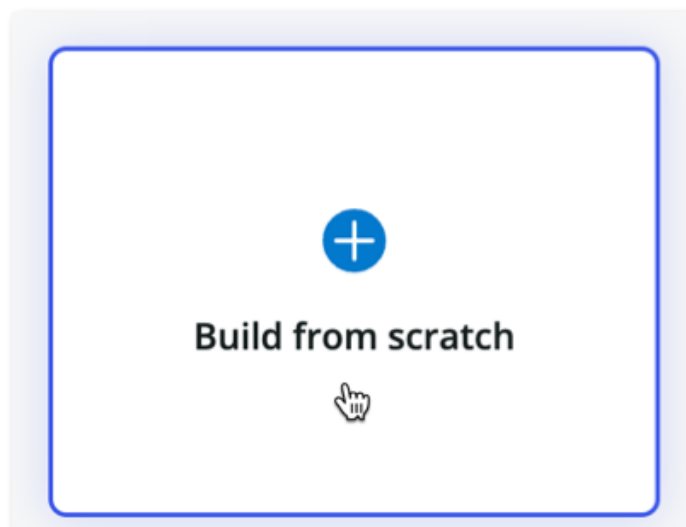


Decision
Create decision rules in a table format to simplify decision-making



Email
Build an automated email to notify people of a certain event

3. Click **Build from scratch** to create a new workflow.



4. Create the flow with the following information:

Field	Value
Name	Telework Case Approval
Description	Approve and fulfill new Telework Cases.

Name * ⓘ


Description ⓘ

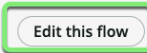

Click on the  button.

5. Click the Edit this flow button to begin the configuration process.

Success! Your flow is ready.

You can edit your new flow or choose "Done" to continue building the rest of your app

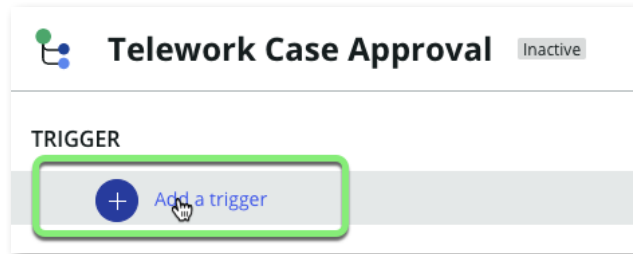
	Flow name	Description
	Telework Case Approval	Approve and fulfill new Telework Cases.

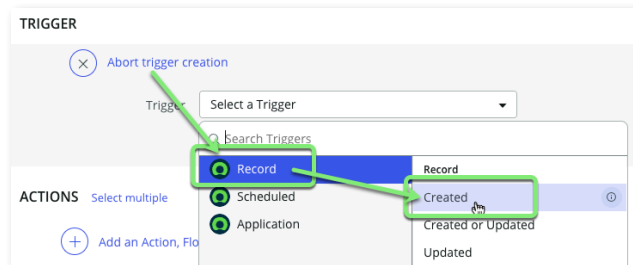
6. You may see a tour popup. Let's skip the tour for now, by clicking the Skip tour button.

7. Add a trigger to determine when and how the Flow will run.

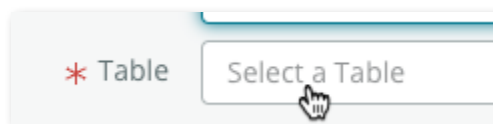
1. Click on Add a trigger in the upper left of the flow designer screen.



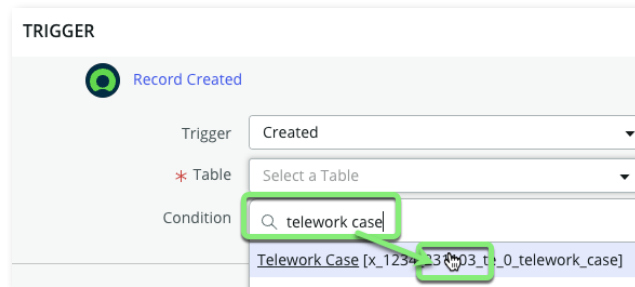
2. Select Created from the Record section.



3. Click the 'Table' drop-down.



4. Type `telework case` and click the Telework Case table.



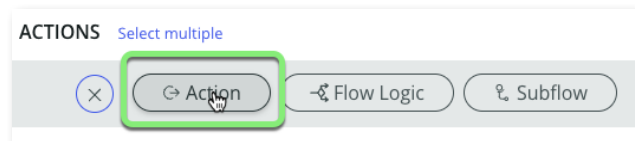
5. Click **Done** to close the trigger.

8. Request an approval from the 'Opened by' user's manager with the 'Ask for Approval' Action.

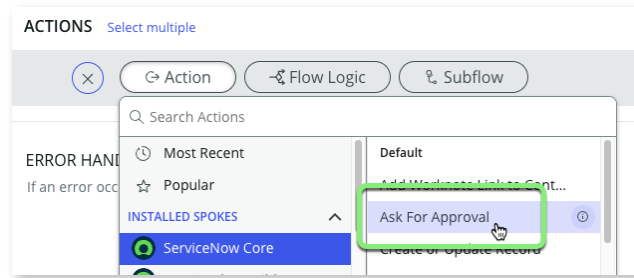
1. Click Add an Action, Flow Logic, or Subflow.



2. Click Action.

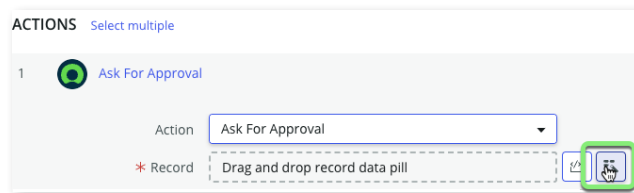


3. Click Ask For Approval.

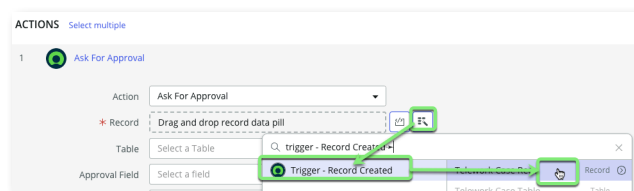


Add the record the manager is approving.

4. Click on the Data Pill Picker.



5. Select Trigger – Record Created.
6. Select Telework Case Record.



! INFO

- Did you noticed that the Approval Field and Journal Field automatically populated?

Action: Ask For Approval
 * Record: Trigger - ... Telework Case R...
 Table: Telework Case [x_1234_231103_te_0_telewo...
 Approval Field: Approval
 Journal Field: Approval history

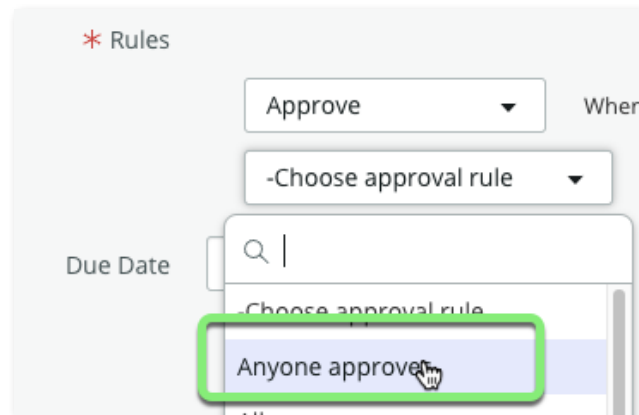
- This is because these fields already existed on the **Task** table that we extended **Telework Case** from.
- **REMEMBER:**
 - If you're tracking any kind of work (tickets, requests, etc.) it's *always* a good idea to extend from **Task** unless you have a good reason not to.

9. Configure the Rules for when this record is approved.

1. Click the '-Choose approval rule' drop-down.

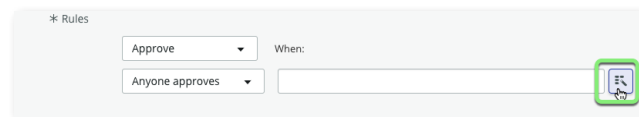
* Rules
 Approve When:
 -Choose approval rule

2. Choose Anyone approves.

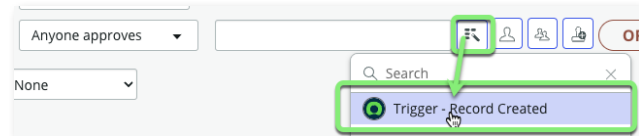


Next, you need to specify which person the approval will go to.

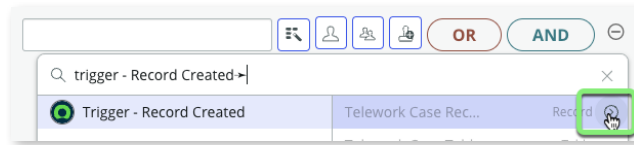
3. Click on the Data Pill Picker to look up data on the 'Telework Case' record that triggered this flow.



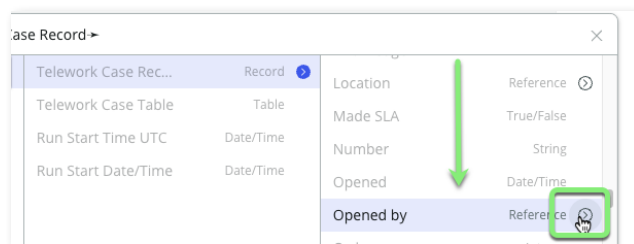
4. Click Trigger - Record Created.



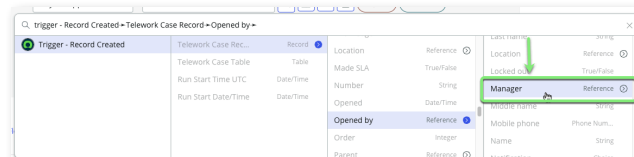
5. Click on the chevron to access the list of fields on the 'Telework Case' record.



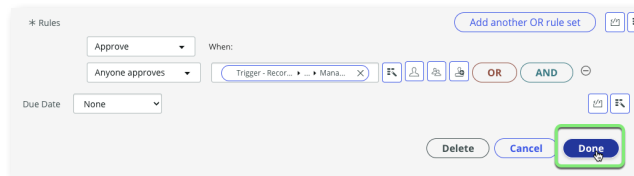
6. Scroll down to locate the **Opened by** field and click on the chevron next to it.



7. Scroll down to locate the **Manager** field and click on it.



8. Click **Done** to finish configuring the 'Ask for Approval' Action.

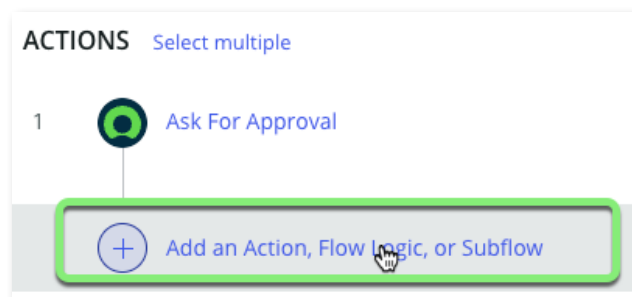


! INFO

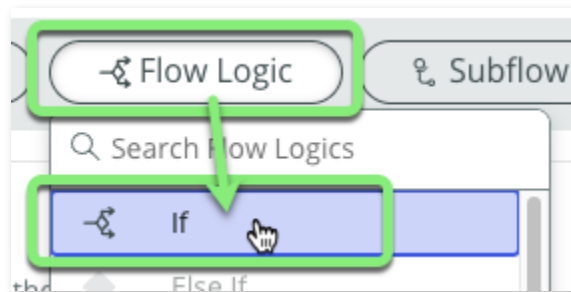
Going from Record to Record to Record to find a specific field in ServiceNow is called "Dot-Walking".

10. Add Flow Logic for *If the manager approves...*

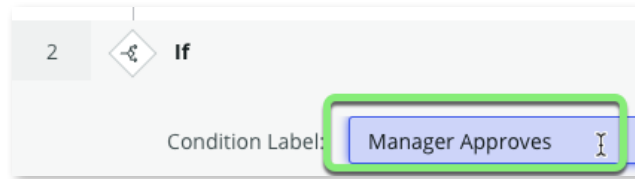
1. Under the 'Ask for Approval' Action, click on Add an Action. Flow Logic, or Subflow.



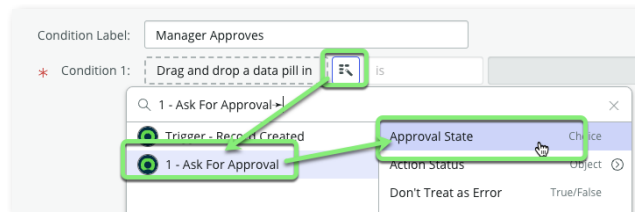
2. Click Flow Logic.
3. Click If.



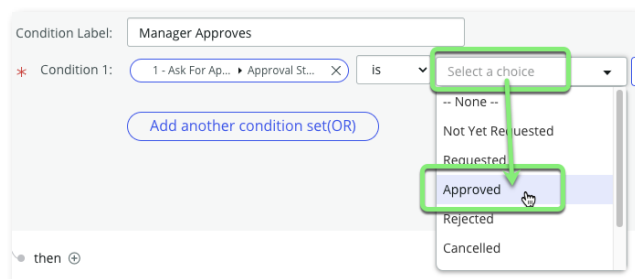
4. In the Condition Label field type "Manager approves".



5. Click on the Data Pill Picker next to 'Condition 1'.
6. Click 1 – Ask for Approval.
7. Click Approval State.



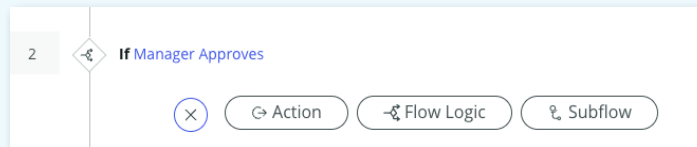
8. Click the 'Select a choice' drop-down.
9. Click 'Approved'.



10. Click **Done**.

! INFO

Adding the Condition Label of 'Manager Approves' was like adding a comment to our code.



This will make any troubleshooting easier later as you can see what the Flow Logic does without opening it up.

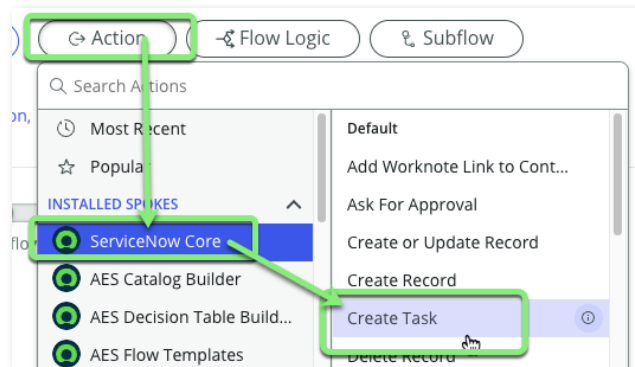
Next, if the manager approves, a task should be submitted to IT to configure VPN access for the person.

11. Add the Create a Ticket Action.

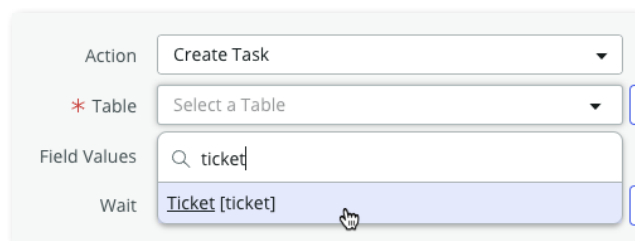
1. Under *If Manager approves* click ⊕ next to 'then'.



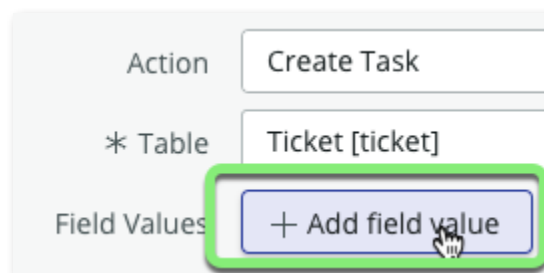
2. Select Action > ServiceNow Core > Create Task.



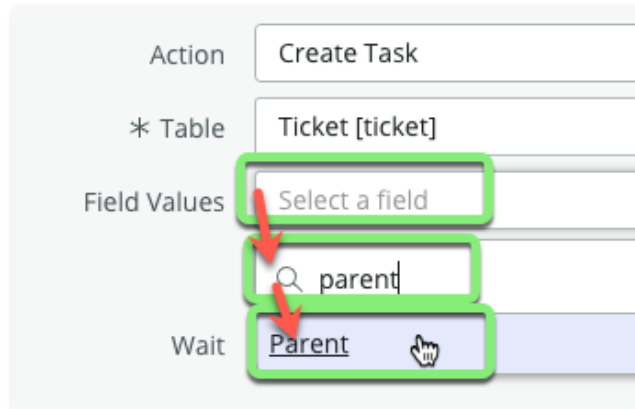
3. For Table, select "Ticket".



4. Click Add a field value.

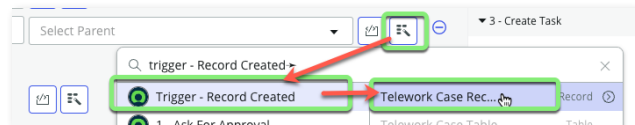


5. Click 'Select a field'.
6. Search for 'Parent' in the drop-down and click it.



Set the 'Parent' field on the new 'Ticket' record to be the 'Telework Case' record that triggered this Flow.

7. Click on the Data Pill Picker.
8. Select Trigger - Record created > Telework Case Record.



Result:

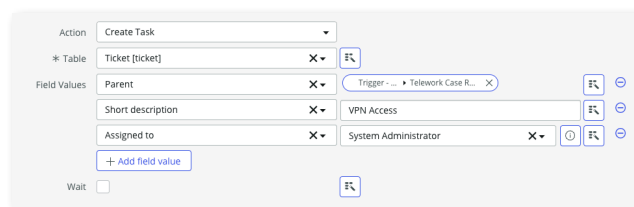


9. Click + Add field value and add two other fields:

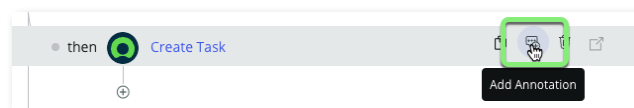


Field Name	Field Value
Short description	VPN Access
Assigned to	System administrator (<i>Normally you would not specify a user here, but this will make the lab easier.</i>)

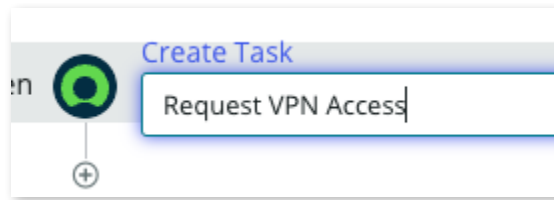
10. If the Field Values look like below, click **Done**.



11. Click the **Add Annotation** button to the right of the **Create Task** Action.

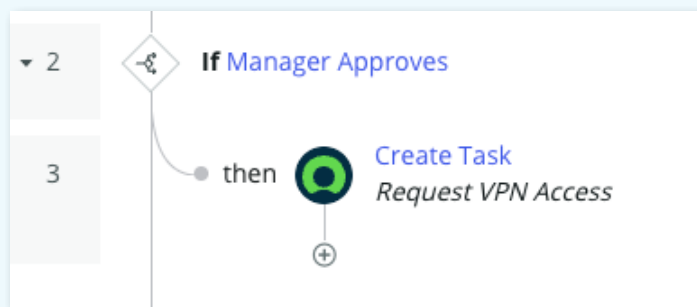


12. Type `Request VPN Access` and press ENTER.



! INFO

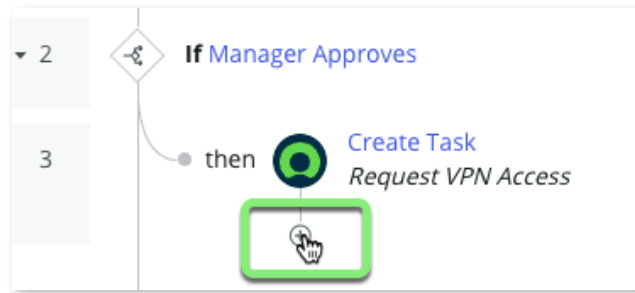
Adding Annotations makes the Flow easier to read.



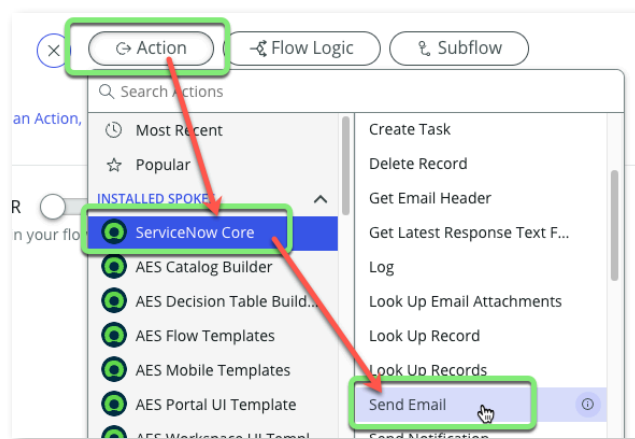
Send an email to the 'Opened by' user and let them know their Telework Case request has been approved.

12. Add and configure the 'Send Email' Action.

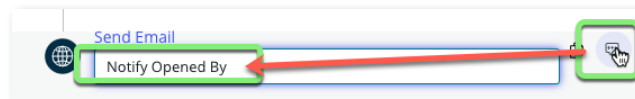
1. Click \oplus under Create Task.



2. Select Action > ServiceNow Core > Send Email.

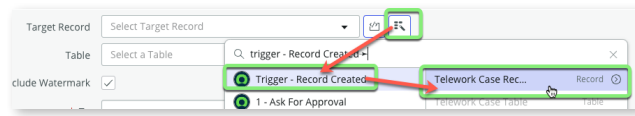


3. Click the Add Annotation button.
4. Type `Notify Opened By` in the field and press ENTER.

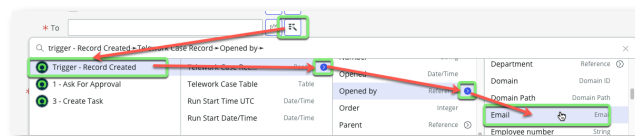


Emails need to be associated to a target record for tracking.

5. Click the Data Pill Picker next to Target Record.
6. Select Trigger - Record created > Telework Case Record.



7. Click the Data Pill Picker next to the To field.
8. Click Trigger - Record created.
9. Click the chevron next to 'Telework Case Record'.
10. Click the chevron next to 'Opened by'.
11. Click 'Email'.

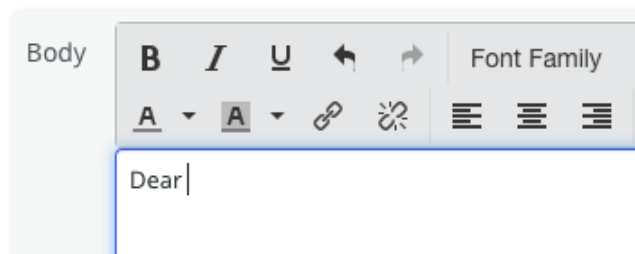


12. For the Subject, enter:

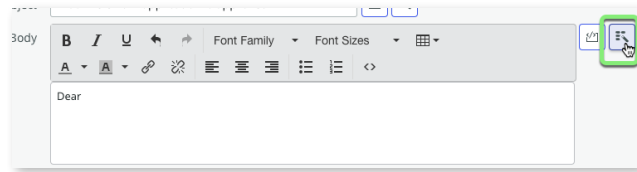
Your Telework application is approved

Set the Body of the email.

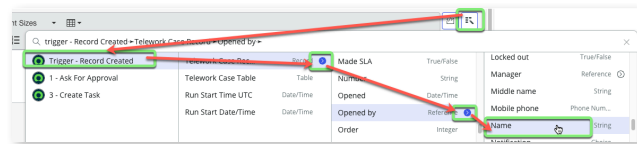
13. In the Body field, type **Dear** (Be sure to include the extra space at the end).



14. Click the Data Pill Picker to the right of the Body field.

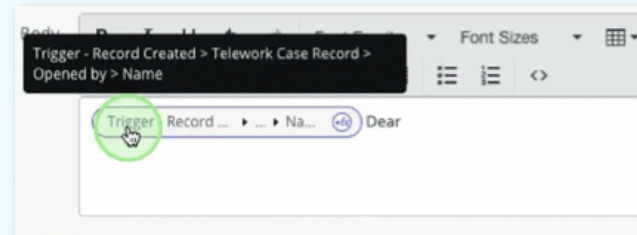


15. Dot-walk to and click the field Trigger - Record Created >> Telework Case Record >> Opened by >> Name.

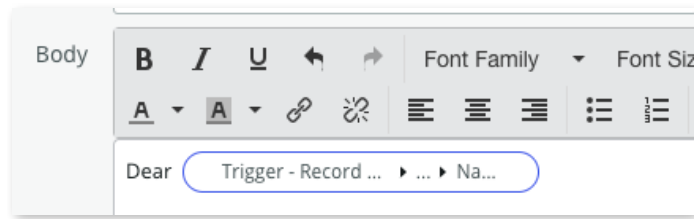


! INFO

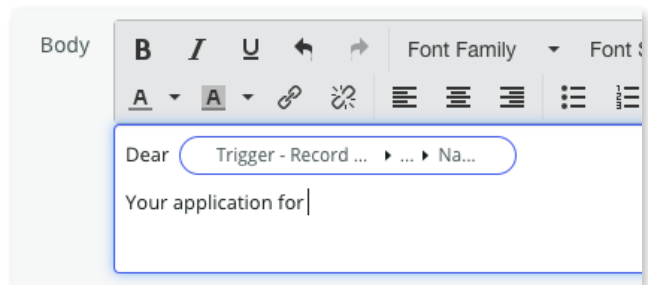
If you drop the Data Pill before the word 'Dear ' you can drag and drop it to the correct location.



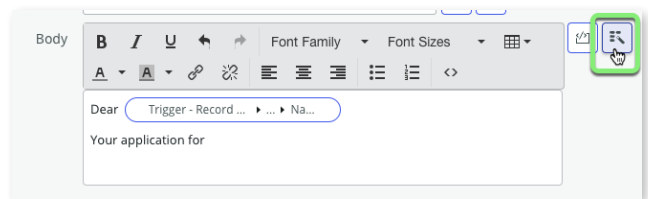
RESULT:



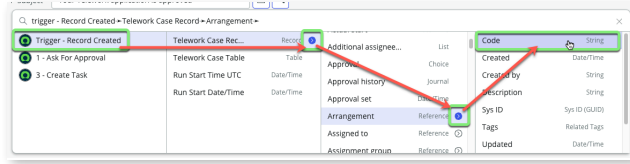
16. In the Body field, press Enter to move the cursor to the next line.
17. Type **Your application for** (Be sure to include the extra space at the end).



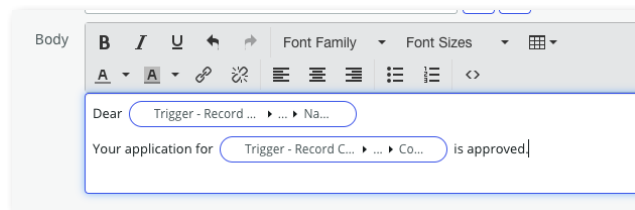
18. Click the Data Pill Picker to the right of the Body field.



19. Dot-walk to and click the field **Trigger - Record Created >> Telework Case Record >> Arrangement >> Code**.

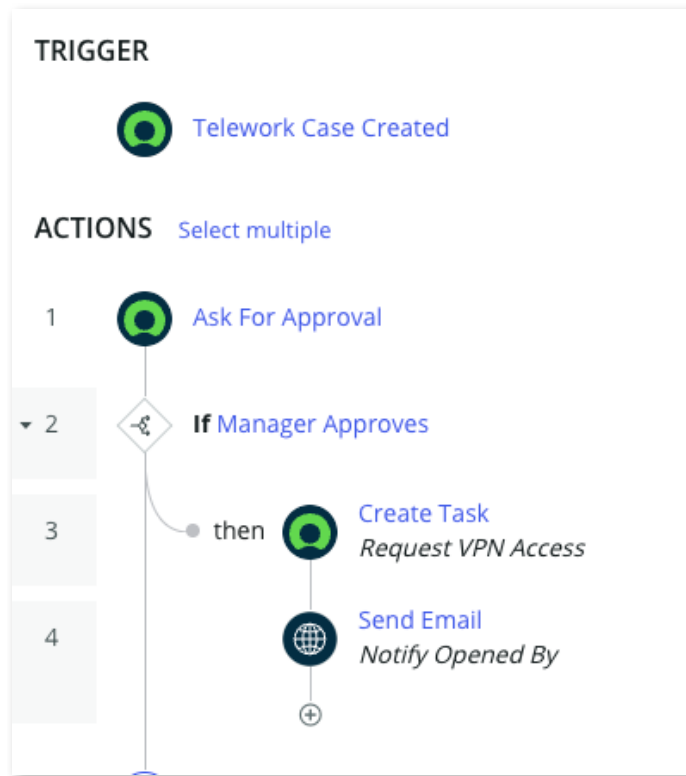


20. Type `<space>is approved.` after the data pill. (*Be sure to include an extra space before the words*).

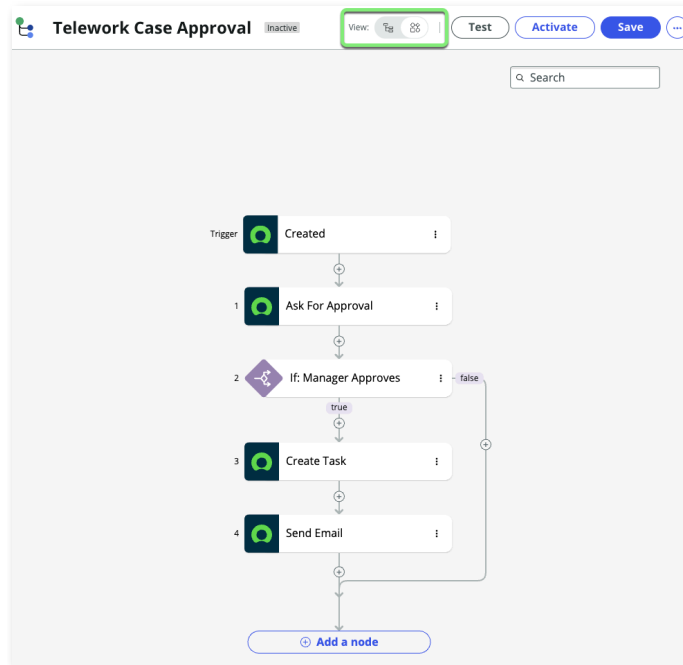


21. Click **Done**.

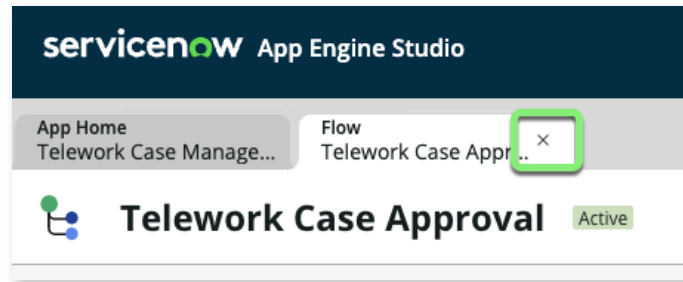
13. Your flow should look like this:



14. Click on the Toggle view to visualize the flow as a Diagram.



15. In the top right corner of the screen, Click **Save**.
16. Click **Activate** on the left of the Save button. This makes the Flow 'live' in the app.
17. In the Confirmation box click the **Activate** button.
18. Close the Flow tab in App Engine Studio.



Exercise Recap

You've built a Flow that takes care of managing tasks and communications across multiple departments.

Next, you will test the Flow to see it in action.

3.2 Test the Flow

Overview

In this section, we will test the flow we just created and make sure it functions as expected. We need to test with a user who has a manager. Fortunately ServiceNow allows admins to impersonate other authenticated users for testing purposes.

In our use case story, you will assume the role of 'David Loo'. He recently learned his child has a minor sickness and will need to stay home for a few days.

He is excited to use the new digital form on the Employee Center to submit his request instead of walking his paper form around the office.

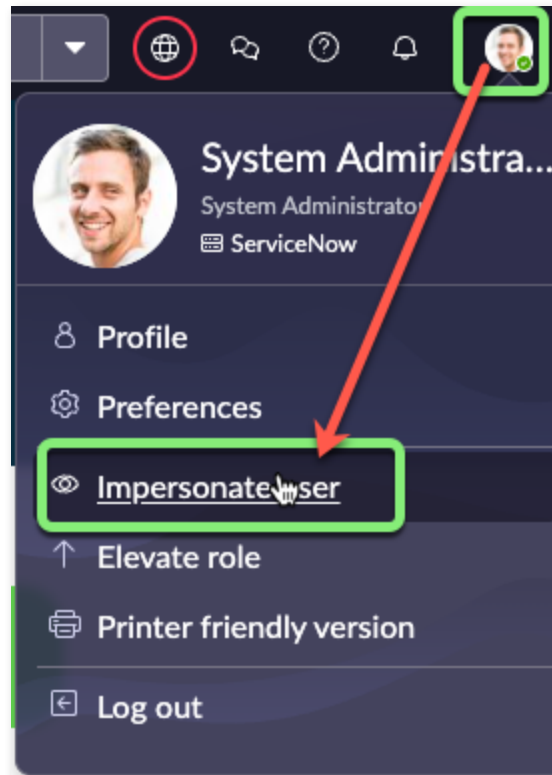
Instructions

1. Go to the browser tab that says 'Home - Creator Workshops'.

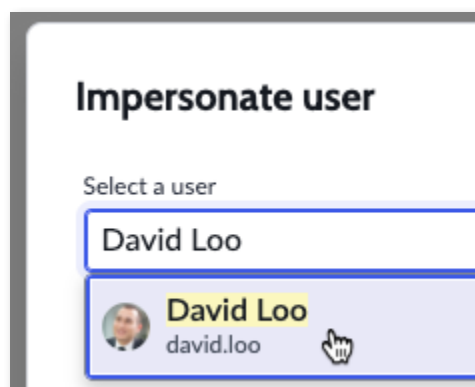


2. Click the avatar photo in the top right corner of the page.

3. Impersonate 'David Loo'.
 1. Select Impersonate User.



2. Search for **David Loo** and click his name in the search results.

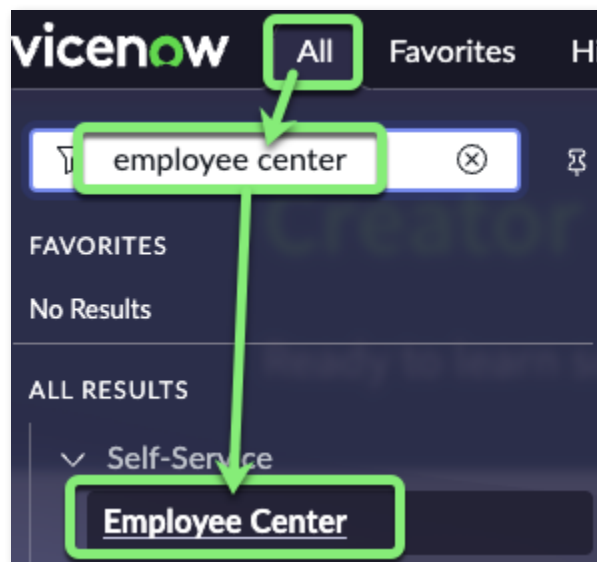


3. Click **Impersonate User**.

4. Close the New to Vancouver pop-up.

5. Open the Employee Center.

1. Click All.
2. Type `employee center`.
3. Click Employee Center.



6. Type `telework` in the Search box and hit ENTER.

How can we help?

telework

7. Click Apply for Telework in the search results.

All results for "telework"



Apply for Telework

Use this form to apply for Telework

8. Fill out the form with the following values: (💡 double-click, copy & paste into the form).

Field Name	Field Value
Who is this request for?	David Loo
When do you need this?	Today
What type of Telework arrangement are you applying for?	Situational Telework
Number of days per week?	3
What is the reason for Teleworking?	Dependent Care

Apply for Telework

Use this form to apply for Telework

*Who is this request for?

i David Loo

*When do you need this?

Today

*What type of Telework arrangement are you applying for? ?

i Situational Telework

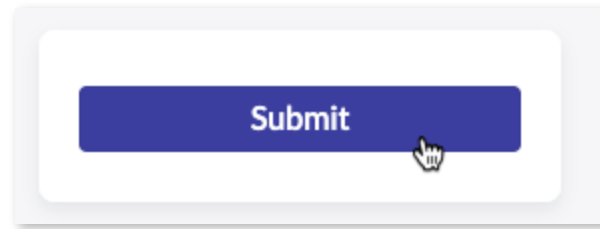
*Number of Days per Week?

3

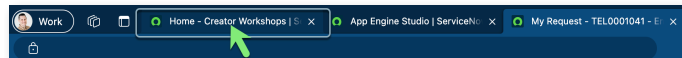
*What is the reason for Teleworking?

Dependent Care

Click .

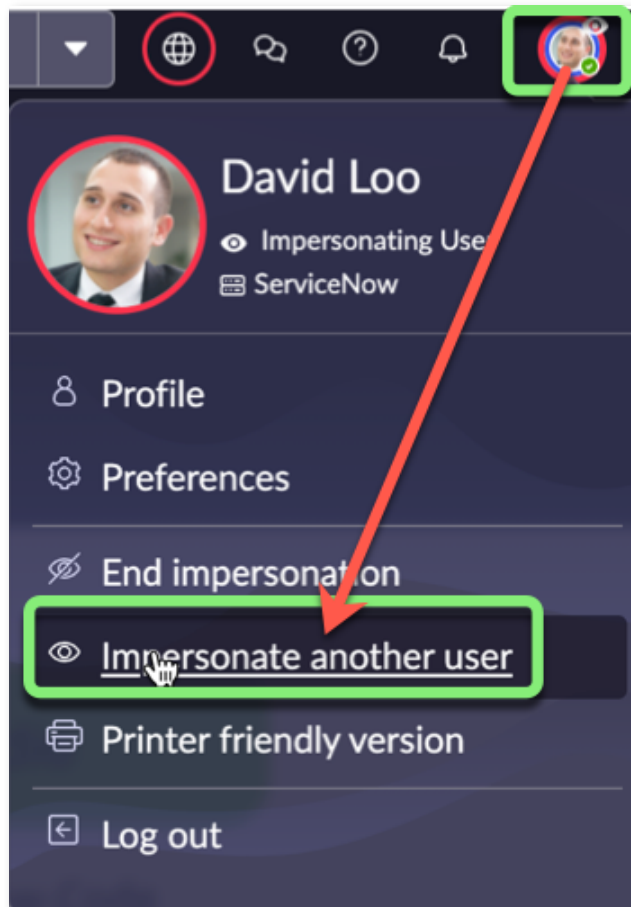


9. Go to the browser tab that says 'Home - Creator Workshops'.



Bud Richman is the manager of David Loo and will approve his Telework Case.

10. Impersonate 'Bud Richman'.
 1. Click Impersonate another user.



2. Search for **Bud Richman** and click his name in the search results.

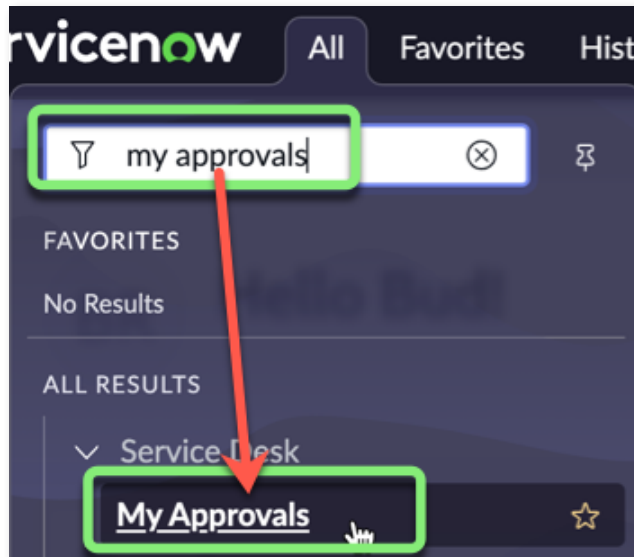


3. Click **Impersonate User**.

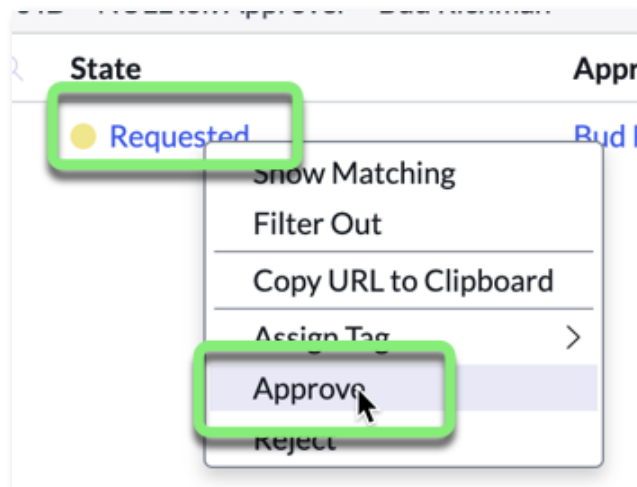
11. Close the **Welcome to Service Operations** pop-up.

12. As Bud, approve David's **Telework Case** request.

1. In the **All** menu, search for and select, type **My Approvals**.



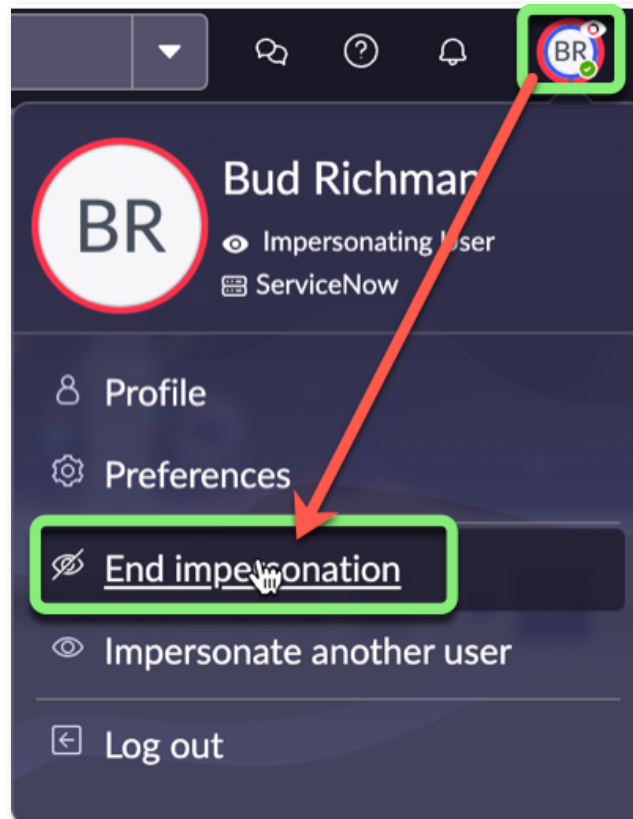
2. Right-click on Requested.
3. Select Approve.



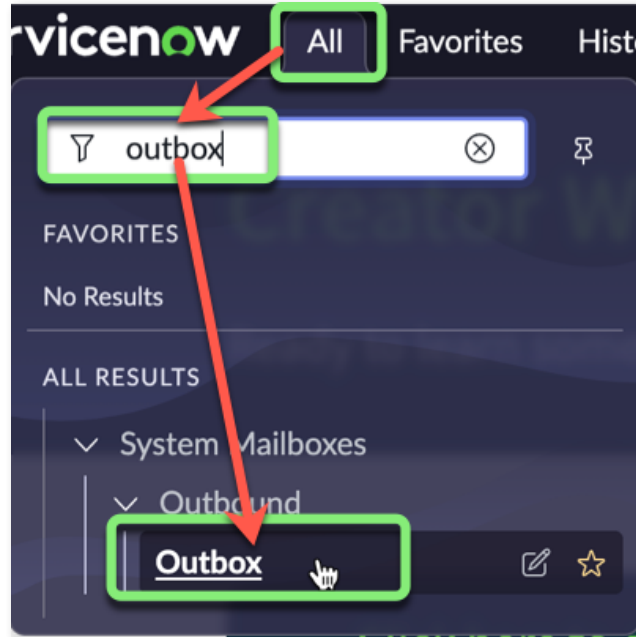
Recall that in the Flow, an email should be sent to the Opened by user after the manager approves.

13. See if the email was sent.

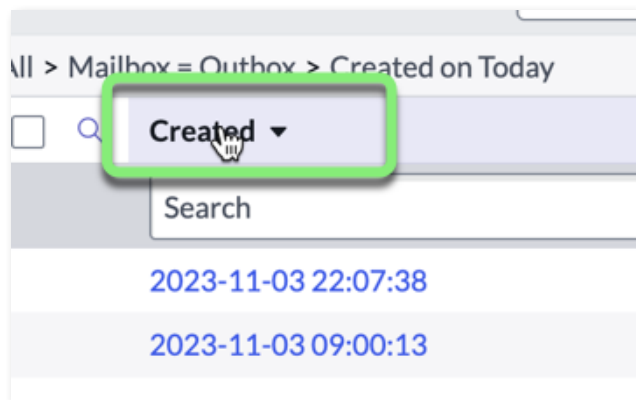
1. In the top right, click the profile photo to open the User menu.
2. Select End Impersonation.



3. In the All menu, search for and select Outbox.



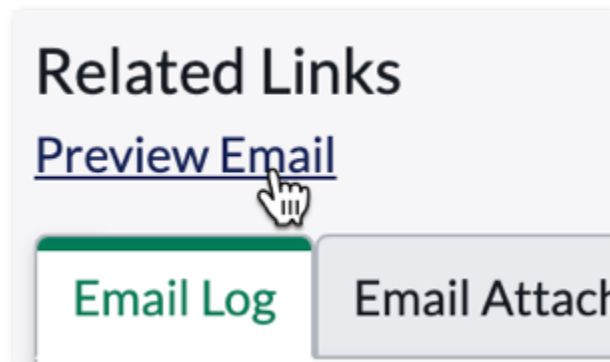
4. Click on the Created column name to show most recent at the top.



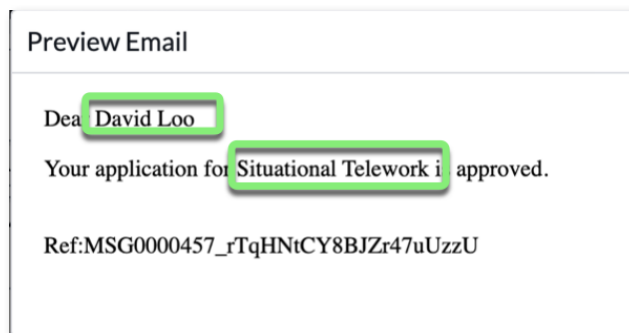
5. Click the Created column to open the email to david.loo@example.com.

All > Mailbox - Outbox > Created on Today		
Created	Recipients	Subject
2023-11-03 22:07:38	david.loo@example.com	Your Telework application is approved

6. Scroll down to the bottom of the page, and click on the Preview Email related link.



You can see the email includes the information from the Data Pills that you put in the body of the email.



Exercise Recap

In this exercise, you tested the Automated Flow by impersonating a user, submitted a record, and ensuring the automated steps took place.

3. Automate work with Flows:

Review

In this exercise, you learned how to use Flow Designer to set up an automated Flow to ensure approvals, tasks, and communications take place automatically in the correct order.

4. Manage work: Overview

In this exercise, we will learn how to create a **fulfiller** Workspace experience using the powerful **Workspace Builder** within App Engine Studio. This will allow Amanda's team of fulfillers to easily track and manage Telework Cases across the enterprise.

The Workspace Builder empowers users of all skill sets to build a custom workspace in a no-code environment. With this builder, you can quickly create a workspace and configure its layout, lists, and record pages.

If you need access to more advanced functionalities and configurations, you can open the workspace in UI Builder from within this builder.

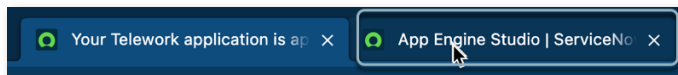
4.1 Create a Workspace

Overview

Next you will create a Workspace experience for the Fulfiller users of the application.

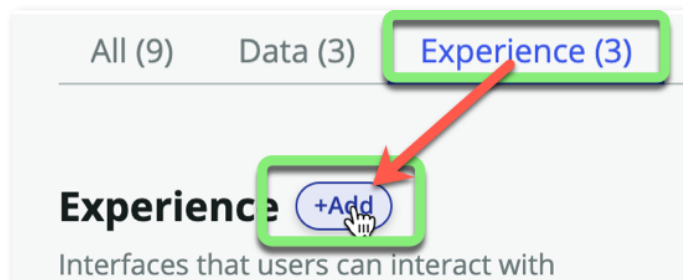
Instructions

1. Return to the App Engine Studio browser tab.

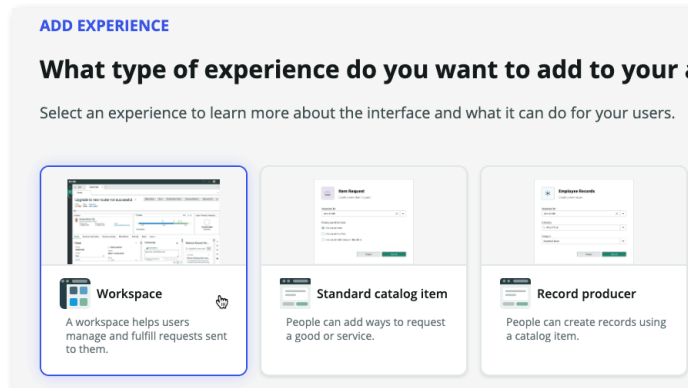


2. On the application homepage, click the Experience tab.

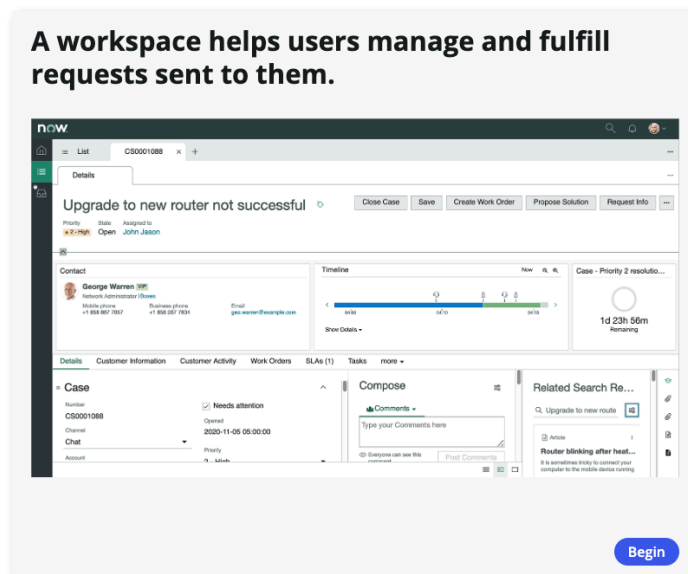
3. Click .



- Click the **Workspace** tile to create a workspace to help users manage and fulfill requests sent to them.



- Click on the **Begin** button to begin the Workspace Builder wizard.



- Leave the default values and click **Continue**.

Name *

Description

URL *

Roles *

You can add roles by searching for them

5. Set Primary table and Secondary tables like below and click on the button.

Field Name	Field Value
Primary table	Telework Case
Secondary tables	Arrangement, Justification

Primary table * ⓘ

Telework Case

Secondary tables ⓘ

Justification ×

Arrangement ×

Continue

CREATE EXPERIENCE

Sit tight while we create this experience

This may take a few seconds...

7. Your new Workspace experience is completed. Click on the **Edit** button.

Success! Your experience has been created

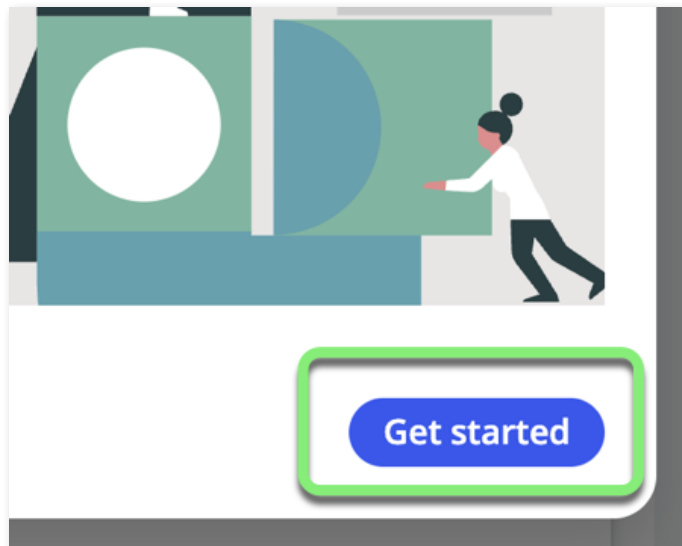


Name
Telework

Edit

Done

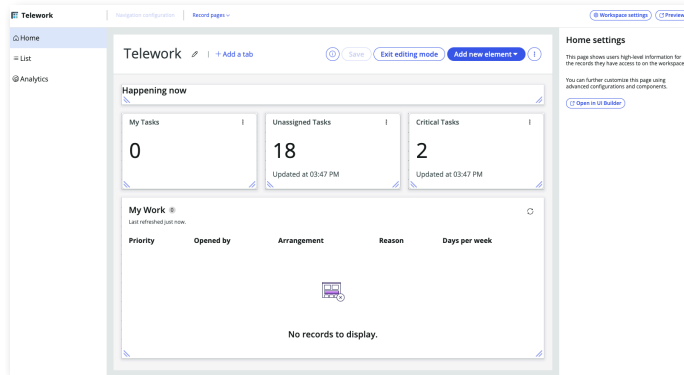
8. You are now directed to the Workspace Builder. Click on the [Get started](#) button.



9. Your Workspace Builder view should look like below.

i NOTE

The view below might look slightly different depending on your screen resolution.



i INFO

The Workspace Builder for App Engine allows you to manage dashboards, build lists, and customize record pages for workspaces created in App Engine Studio. App Engine licensed customers enjoy exclusive access to this premium feature.

Exercise Recap

In this exercise, you were able to quickly build a Workspace to manage work in your application.

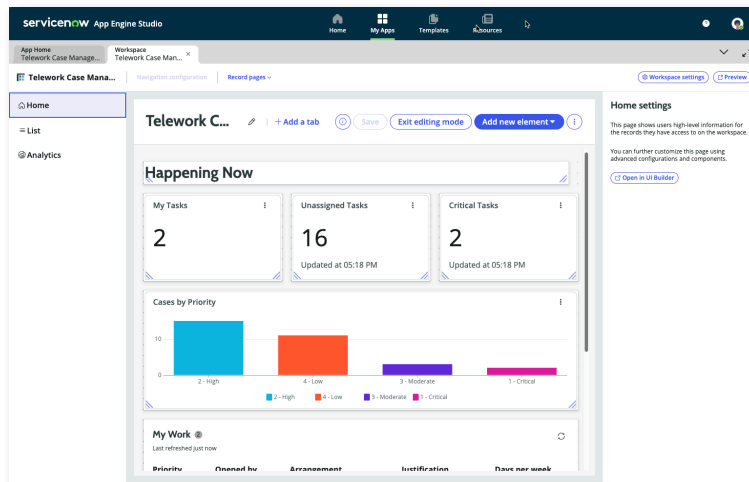
4.2 Configure the Workspace Lists

Overview

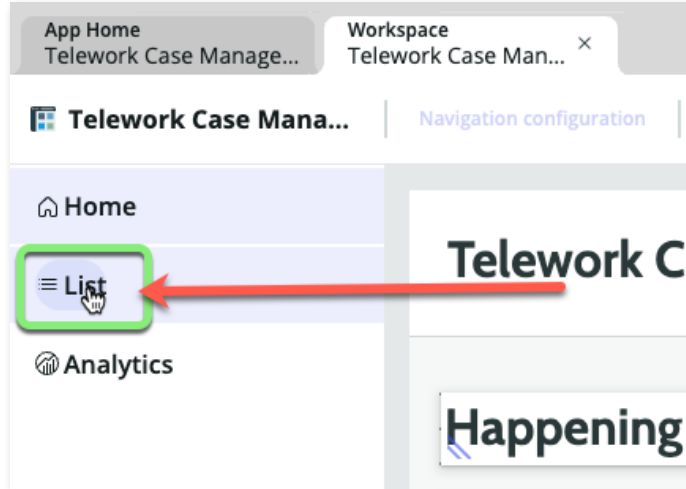
A lot has been pre-configured in the Workspace, but Amanda's team still has a few things they would like changed before going live with it.

Instructions

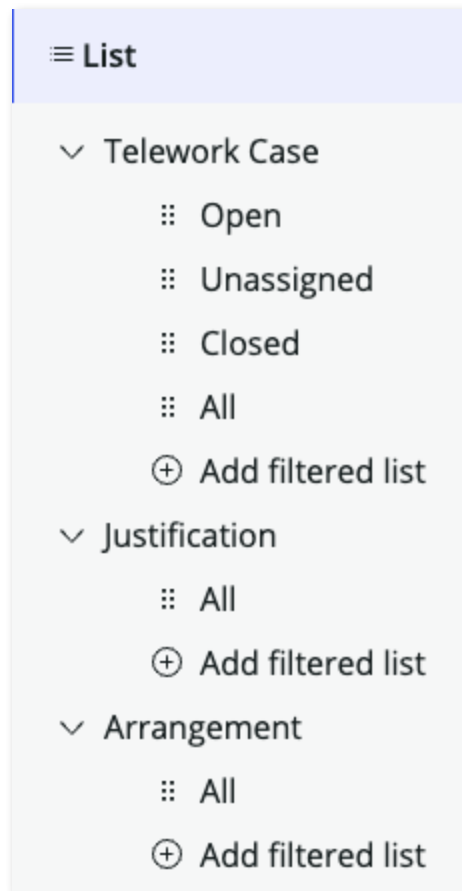
You should be on the Home section of the Workspace builder.



1. Hover over and click on the word List on the left sidebar.

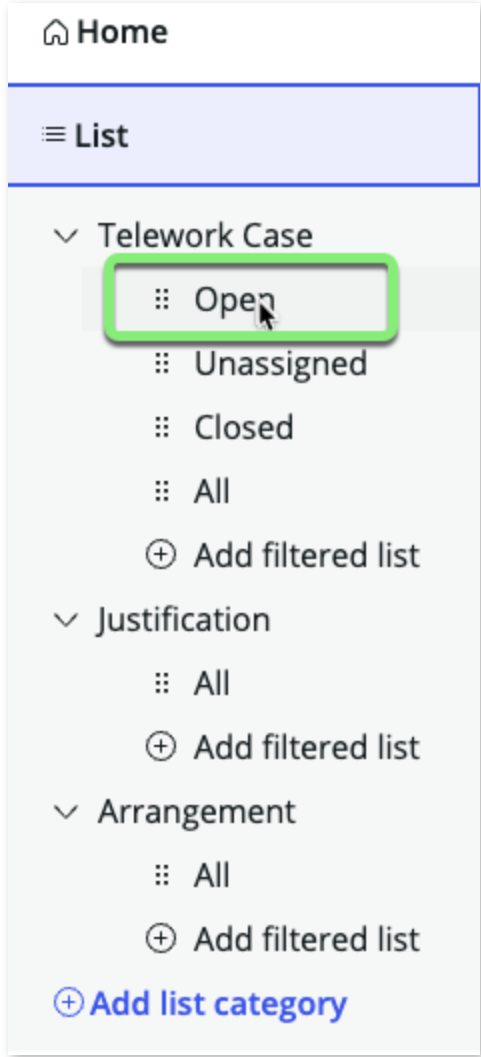


The Workspace Builder did a great job of laying out the List menu for the Telework Case workspace.



Review the columns for Telework Cases to see if they are in a good order for fulfillers to get work done.

3. In the 'Telework Case' List Category, click the word 'Open'.

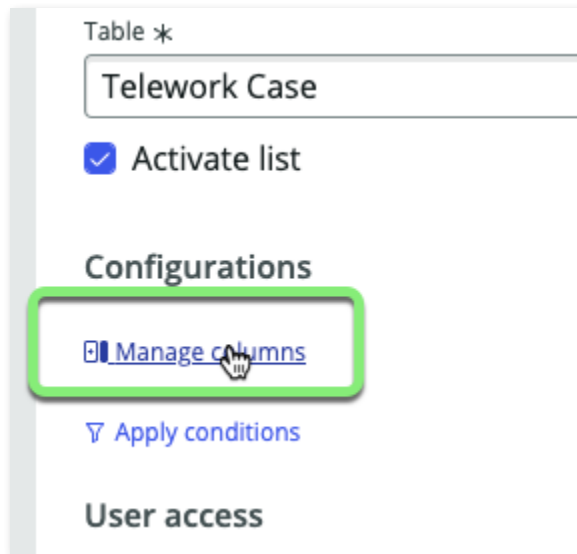


Amanda's team would like the columns in the 'Open' list to be arranged differently than what the system built below.

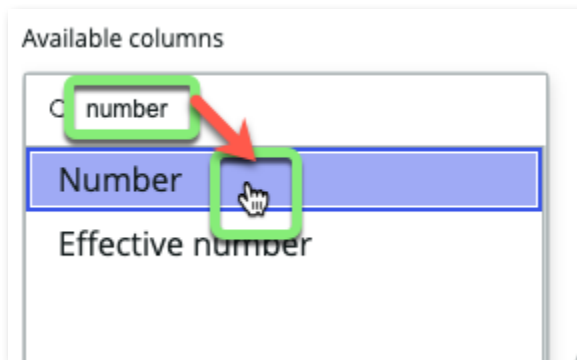
The image shows a table titled 'Open' with 31 items. The table has columns for Priority, Opened by, Arrangement, Justification, Days per week, and Short. The first two rows of data are visible.

Priority	Opened by	Arrangement	Justification	Days per week	Short
1 - Critical	Billie Cowley	Situational Telework	Dependent Care	1	Situati
1 - Critical	Cherie Fuhri	Remote Telework	Medical	3	Remot

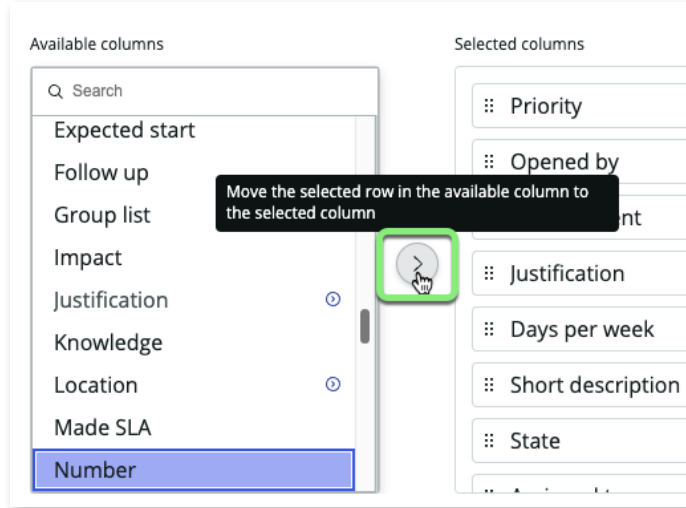
4. Click 'Manage columns' on the right sidebar.



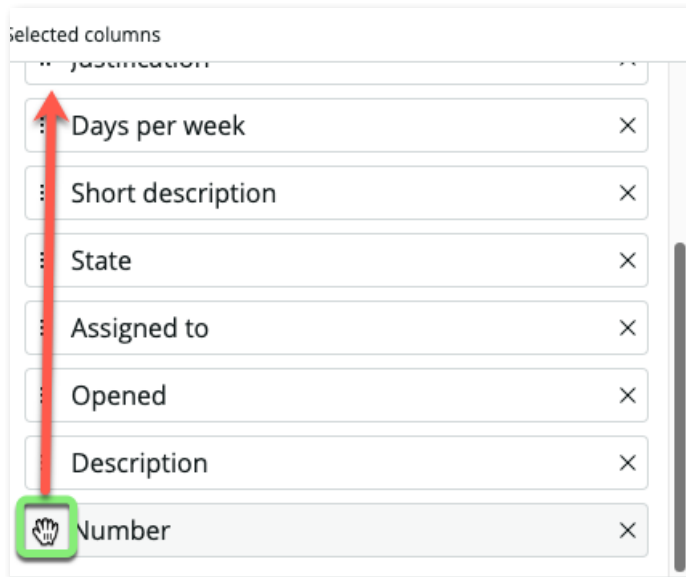
5. Search for **number** and click on 'Number' in the search results.

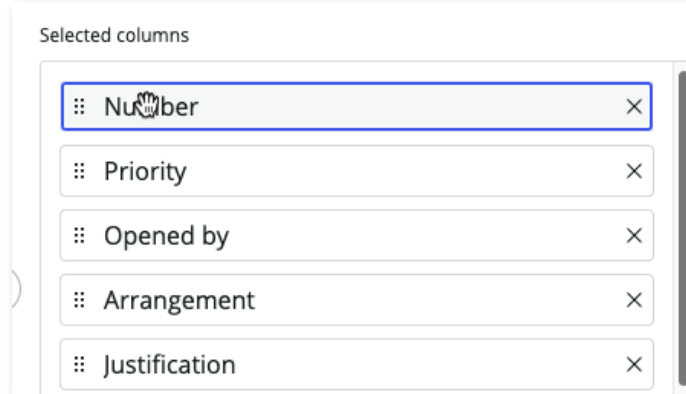


6. Click the chevron pointing right to move 'Number' to the 'Selected columns' list.



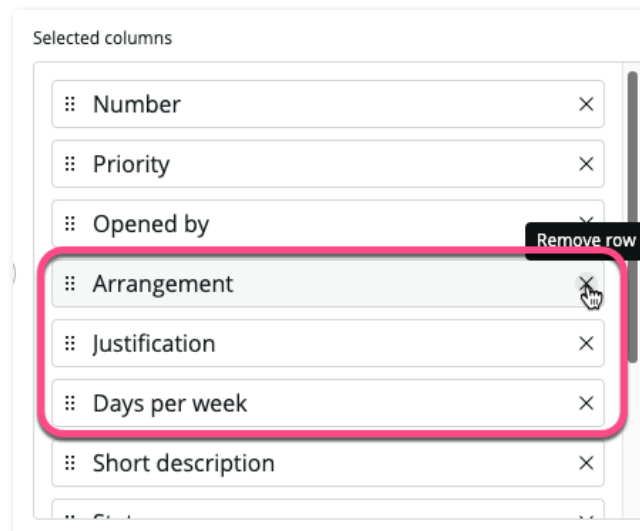
7. Click the handle icon next to 'Number' in the 'Selected columns' list and drag it to the top of the list.





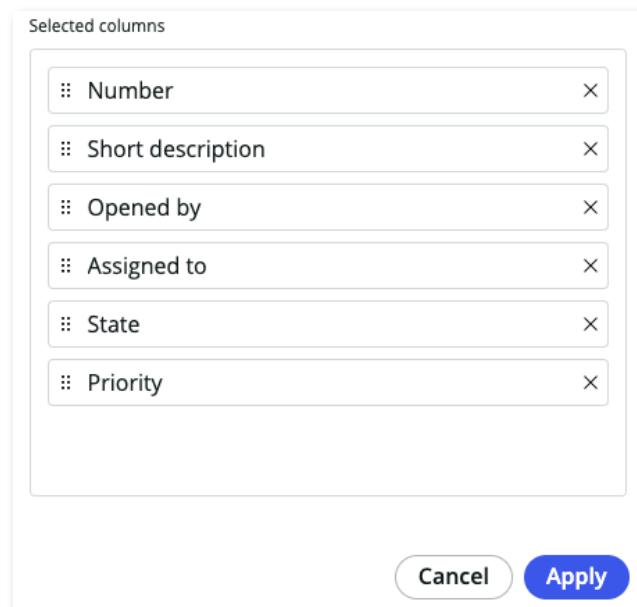
8. Remove the rows:

- Arrangement
- Justification
- Days per week



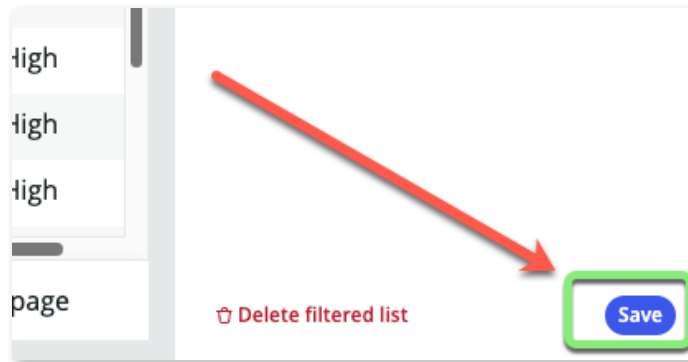
9. Make the necessary changes so the 'Selected columns' look like this.

- Number
- Short Description
- Opened by
- Assigned to
- State
- Priority

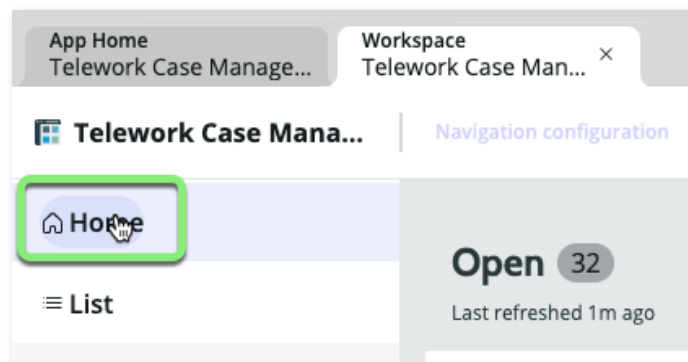


10. Click **Apply**.

11. Click **Save** in the bottom right corner.



12. Click on the 'Home' link in the left sidebar.



Exercise Recap

In this exercise, you learned how to configure the lists available in a configurable workspace.

4.3 Configure the Dashboard

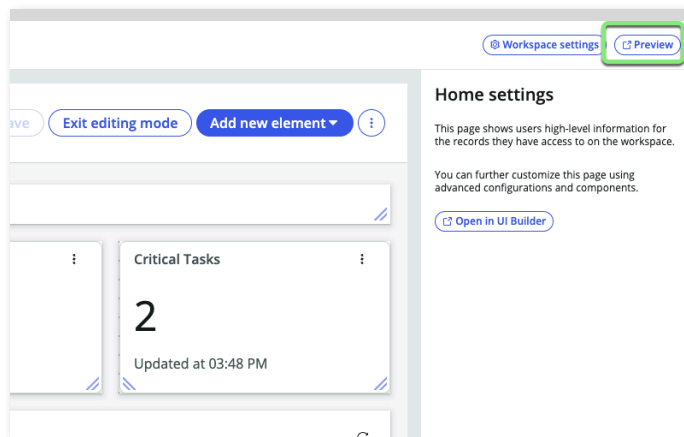
Overview

Amanda and her team would like to be able to quickly visualize cases by priority.

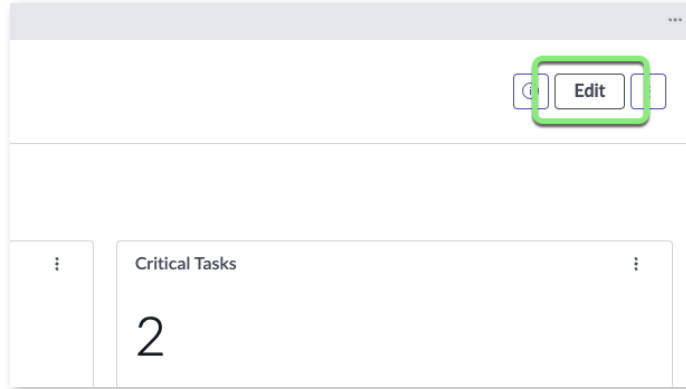
In this exercise, you will open the Workspace Experience and configure the main dashboard to help them do this.

Instructions

1. Click the **Preview** button in the upper right to open the workspace in a new browser tab.

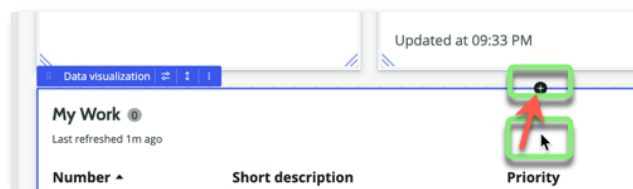


2. Go into Edit Mode by clicking the Edit button

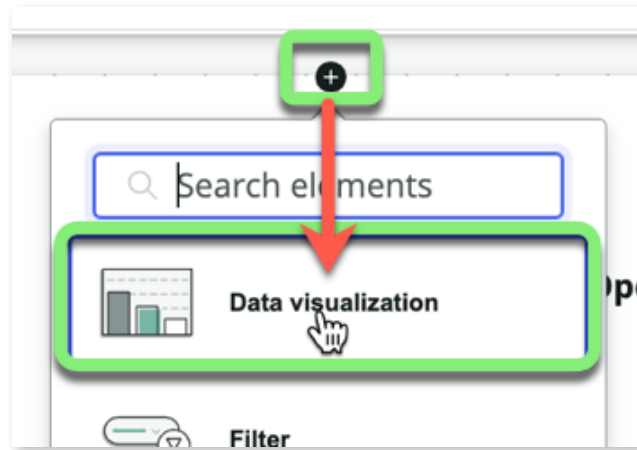


Add a new Data Visualization of a Vertical Bar chart showing Telework Cases by Priority.

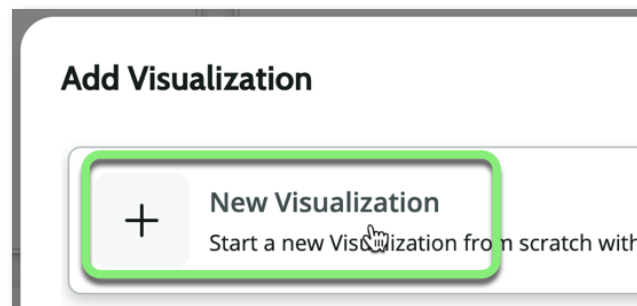
3. 1. Click the **My Work** data visualization.
2. Click the black plus icon at the top center of the **My Work** data visualization.



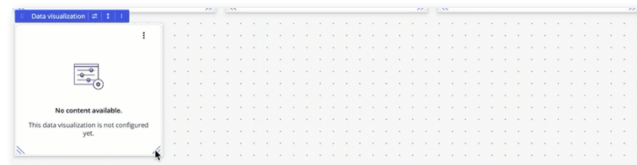
3. Click **Data Visualization**.



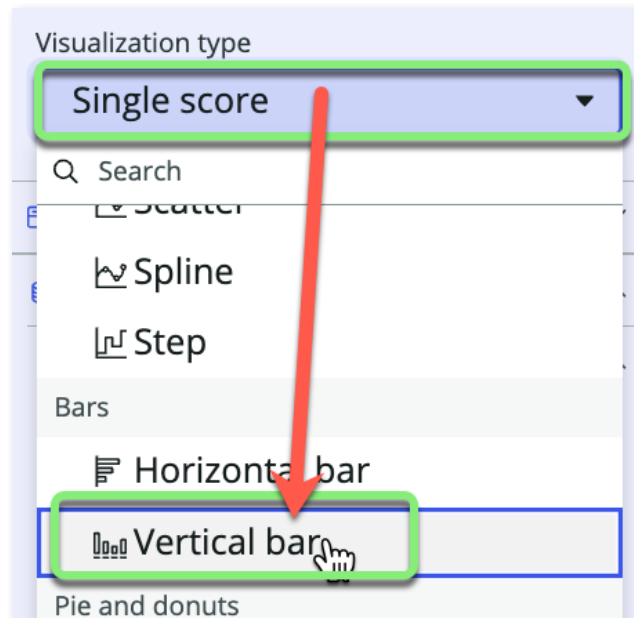
4. Click New Visualization.



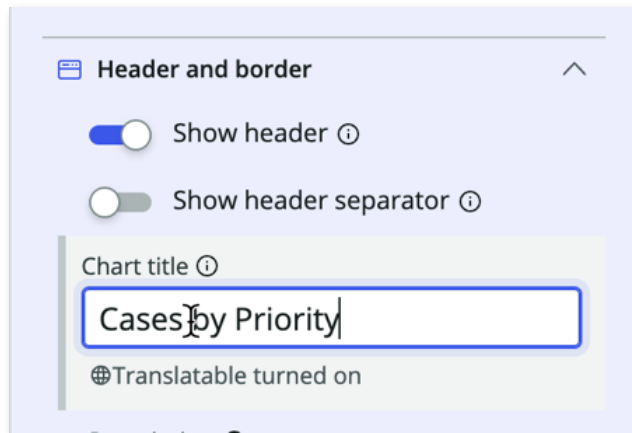
5. Click the bottom-right corner of the new Visualization and drag it across the page.



4. Configure the Visualization type.
 1. Click the Visualization type dropdown.
 2. Scroll down and click on Vertical bar.

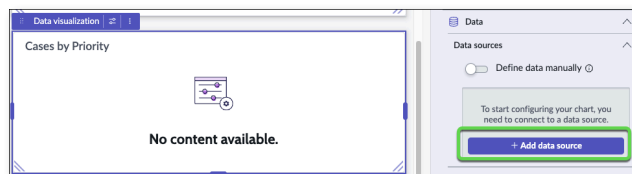


5. Set the Chart title.
 1. Click on Header and border to expand that section.
 2. Type `Cases by Priority` in the Chart Title field.

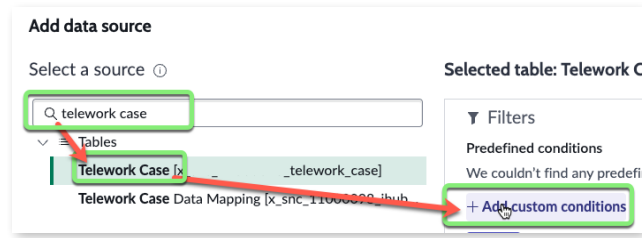


6. Add a data source.

1. In the Data >> Data sources section, click [+ Add data source](#).

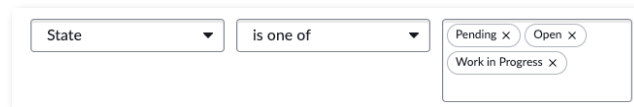


2. Type Telework Case in the "Select a source" field.
3. Click Telework Case in the search results.
4. Click + Add custom conditions.

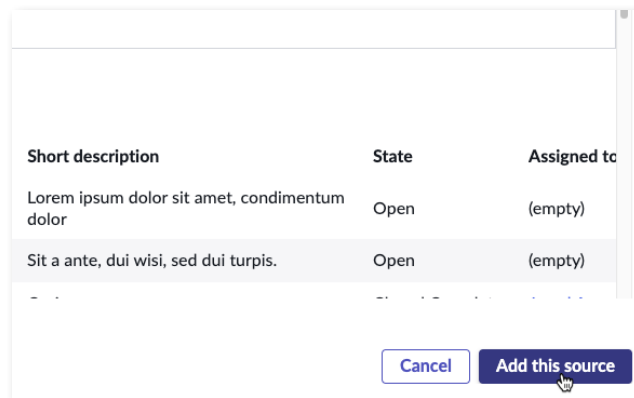


Amanda's team wants to see only the non-closed cases.

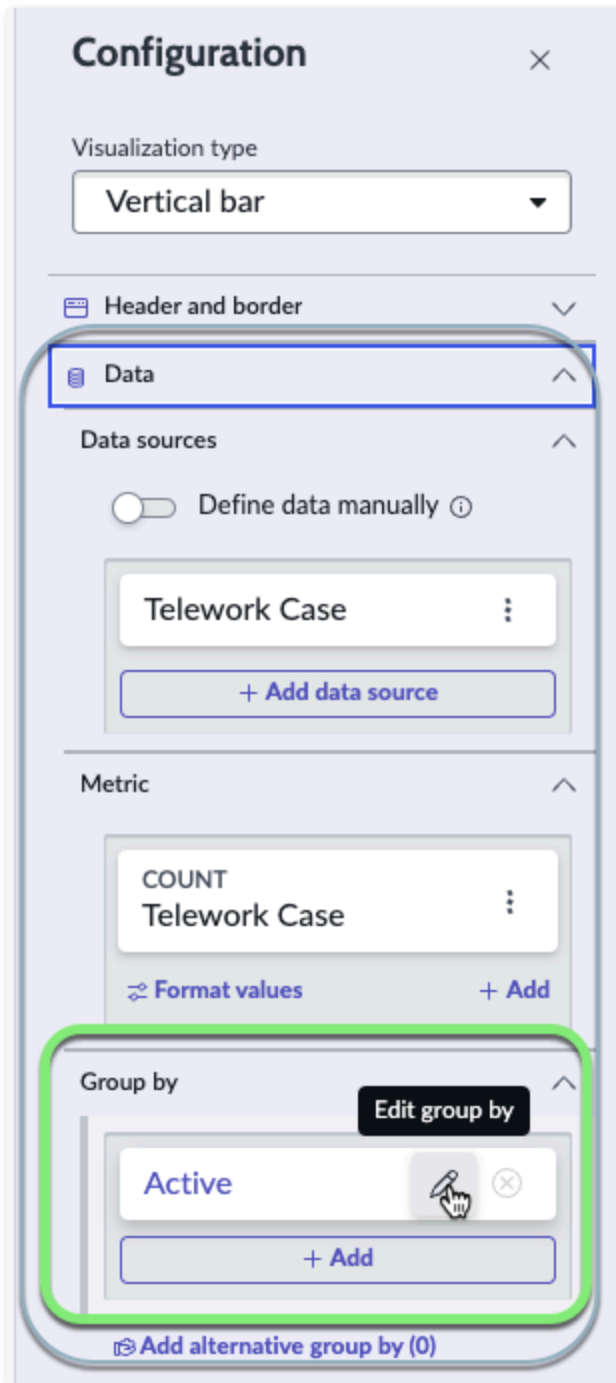
5. Set State is one of Pending, Open, Work in Progress.



6. Click **Add this source** in the bottom right.

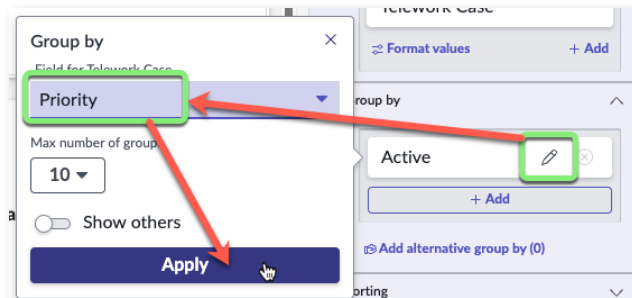


9. Set the data visualization grouping.
 1. In the Data >> Group by section,

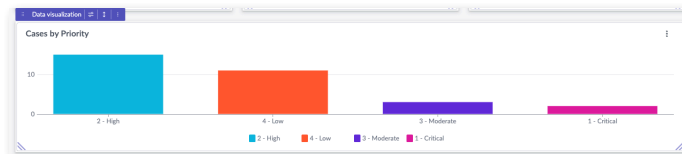


2. Click the pencil icon next to Active.

3. Set Priority for the Group by.
4. Click Apply.

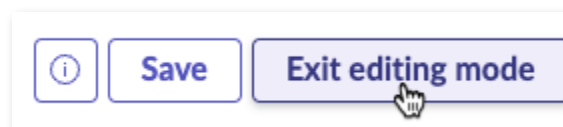


RESULT

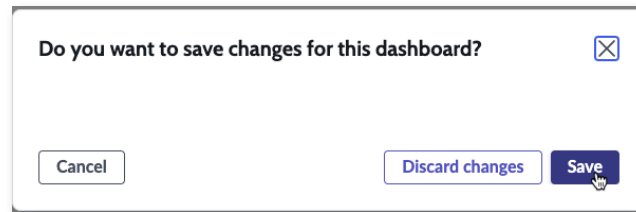


10. Save the changes to the dashboard.

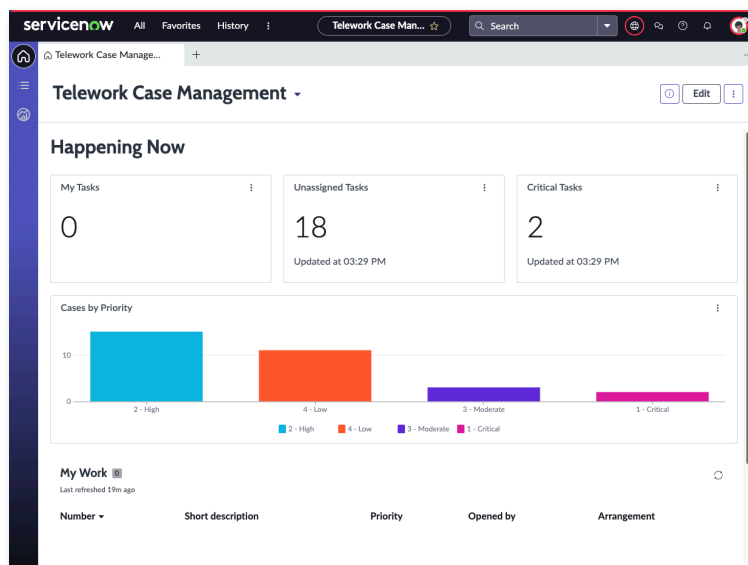
- On the top right, click **Exit Editing Mode**.



- Click **Save**.



Your workspace should look like the image below.



Exercise Recap

In this exercise, we learned how to create a custom workspace and used the the Workspace Builder to display key performance indicators and organize information in ways that benefit our users.

For more information see

[Product Documentation: Dashboards in configurable workspaces](#)

4.4 Use the Workspace

Overview

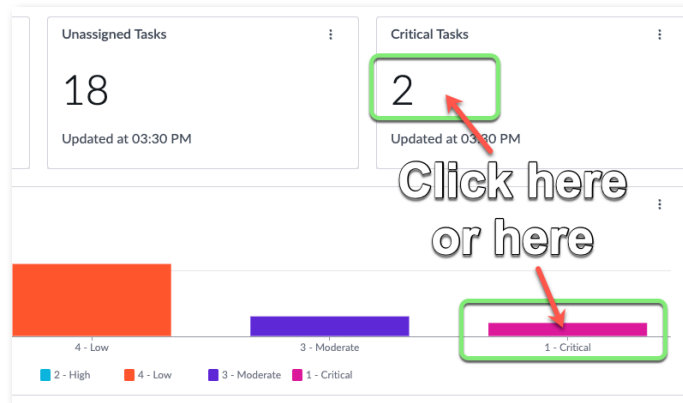
In this exercise, you will learn some navigation skills to get around the Workspace.

There are some Critical Tasks that need to be assigned.

Amanda also wants to explore how to bulk re-assign tasks.

Instructions

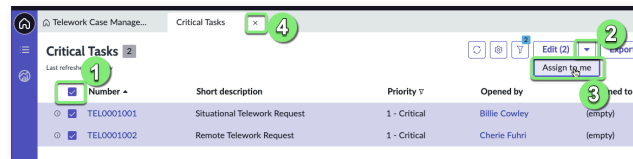
1. Click on the Critical Tasks score or the '1 - Critical' bar chart.



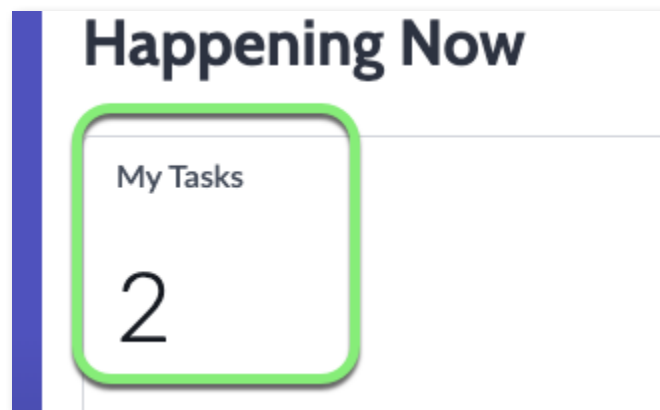
i NOTE

You can click either data visualization as they are both pointing to the same data: two Telework cases with a state of "1 - Critical" priority.

2. Assign the Critical Tasks to yourself.
1. Select all rows.
2. Click the drop-down arrow next to Edit.
3. Select Assign to me.
4. Close the tab.



The My Tasks Data Visualization should now be a 2.



3. In the My Work list, click on the Refresh icon to refresh the list.

Number	Short description	Priority	Opened by	Arrangement
TEL0001001	Situational Telework Request	1 - Critical	Billie Cowley	Situational Telework
TEL0001002	Remote Telework Request	1 - Critical	Cherie Fuhri	Remote Telework

Bulk Assignment

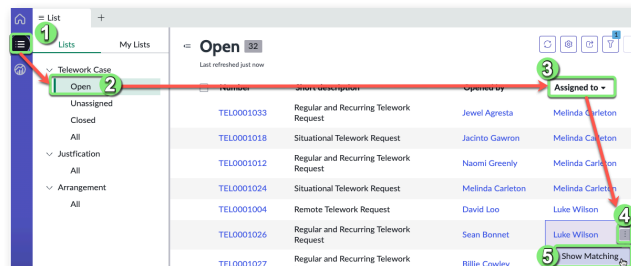
Now let's see how to handle an emergency ⚠️.

Our team member *Luke Wilson* is out sick today.

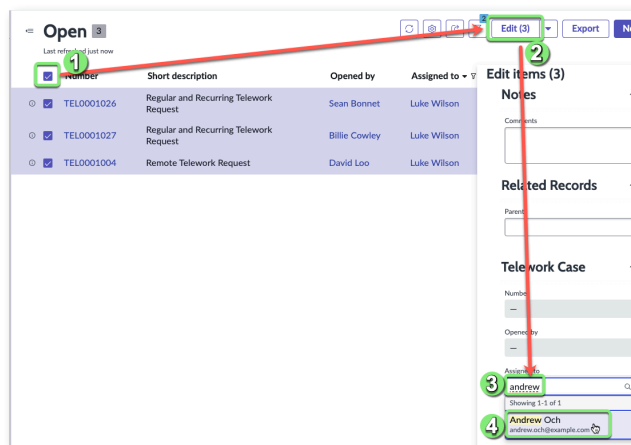
We need to reassign his work to another case worker. *(It is hard to do when the work is managed via emails and spreadsheets!)*

4. Let's find all the open cases assigned to Luke Wilson

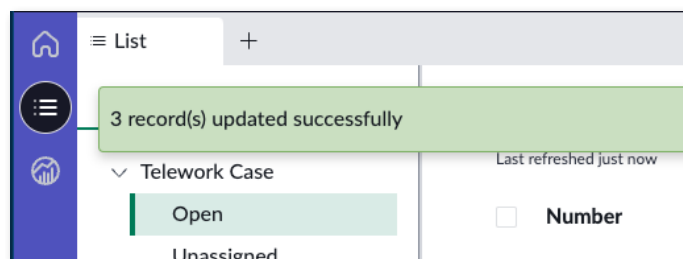
1. Click the List icon.
2. Click on Open in the Telework Case section.
3. Sort cases by Assigned to by clicking on the header.
4. Click the button next to "Luke Wilson".
5. click "Show Matching".



5. Let's assign Luke's cases to Andrew Och
 1. Select all rows
 2. Click Edit
 3. Find the Assigned to field and type and
 4. Select "Andrew Och"
 5. Click Update.



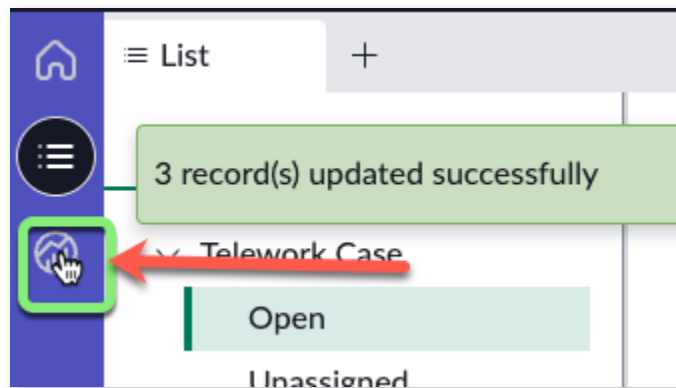
You should see this message:



Finding Answers with the Analytics Center

7. Now let's check the Analytics Center to quickly find the data we need.

8. Click the Analytics Center button.



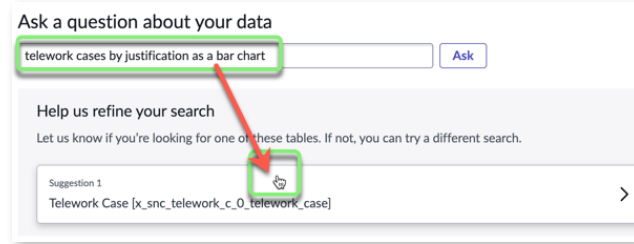
9. Let's ask some question about our data.

1. Type the following query:

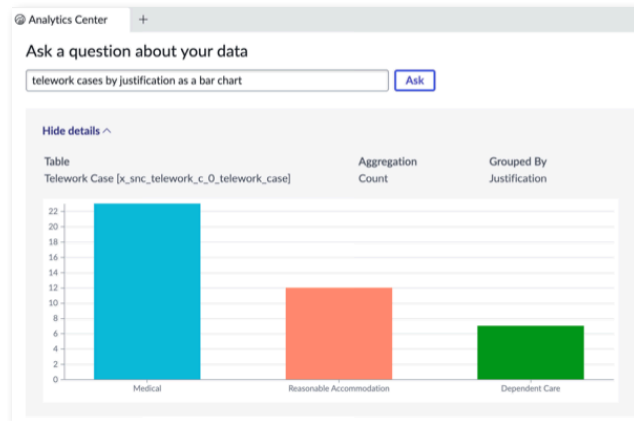
- `telework cases by justification as bar chart`

2. Click .

3. Click Telework Case.



4. And here is the answer:



! INFO

As you type in a query, Analytics Q&A suggests recent searches, indicators, tables, and columns that match what you have typed so far. Only the tables and columns to which you have access are shown.

Exercise Recap

In this exercise, we learned how to use the out-of-the-box capabilities to manage work and quickly find answers to questions about our data.

4. Manage work: Review

In this exercise, you learned how to create a Workspace for your app using App Engine Studio and configured it with Workspace Builder.

You also learned some navigation tricks like bulk assigning multiple tickets to a different user.

Lab Review

In this lab, we built, implemented, and tested an application using the fundamental parts of an application: Data, User Experience, and Automation.

The team managing the work will be more efficient and the users will get what they need faster.

Of course, the examples in these exercises are just the beginning when it comes to the power of leveraging App Engine.

The possibilities are limited only by your imagination as a Creator. If you can dream it, you can workflow it on the Now Platform.

Here are some resources to help you continue your journey on the ServiceNow platform

Supplemental Resources

In addition to this Lab Guide and the resources discussed in the live workshop, the following resources are always available to help with this, or any other ServiceNow activities.

- Get a free Personal Development instance and more free training on:
 - <https://developer.servicenow.com/>
- Online community forums
 - <https://community.servicenow.com/>
- Online training and certification (Many additional free trainings, some are for a fee)
 - <https://nowlearning.service-now.com/>
- Customer Success Center
 - <https://www.servicenow.com/success.html>

APPENDIX

Lab Features

Summary of features we went through in this lab.

1. Create an App

2. Create Data Model

1. Create a Table from a spreadsheet
2. Create a Table by extending the Task table
3. Add a field that references data from another table
4. Create a choice field
5. Change the layout of the form
6. Add and remove fields
7. Add related task

3. Create Case Worker Experience

1. Create Workspace
2. Bulk Task assignment
3. Use the Analytics Center to ask question about the data
4. Use of Impersonation for testing purposes
5. Configure Workspace with the Workspace Builder

4. Create the Requester Experience

1. Expose a form to users via the Service Portal
2. Set field visibility conditioned upon the value of another field

5. Automate the work

1. Create a Flow
 1. Create Tasks for several departments
 2. Send an email
2. Test the flow
 1. Use impersonation
 2. Check for approval
 3. Check for email sent

CHANGELOG

History

Version	Author	Changes
2023-October (Vancouver)	Dale.Stubblefield(ServiceNow)	<ul style="list-style-type: none">▸ Leverage the new Utah feature to create a table from an Excel sheet and extend an existing table.▸ Updated screenshots to match the Vancouver user experience▸ Additional screenshots for clarity▸ Reduced some of the wording to make it easier to understand to auto-translate in browser.
2023-August (Utah)	Marc.Mouries(ServiceNow)	<ul style="list-style-type: none">▸ Leverage the new Utah feature to create a table from an Excel sheet and extend an existing table.▸ Updated screenshots to match the Utah user experience▸ Additional screenshots for clarity
2023 (Utah)	Jay Freise(ServiceNow) ,	<ul style="list-style-type: none">▸ Leverage the new Utah feature to create a table

Version	Author	Changes
	Marc.Mouries(ServiceNow)	<p>from an Excel sheet and extend an existing table.</p> <ul style="list-style-type: none"> ▸ Updated screenshots to match the Utah user experience ▸ Additional screenshots for clarity
3.1	Eric Rietveld(ServiceNow) , Marc.Mouries(ServiceNow)	<ul style="list-style-type: none"> ▸ Conversion from word doc to website to improve readability on small screens ▸ Reduced the number of options for the reason choice field to 3. ▸ Added more explicit screenshots ▸ Added missing field reason to case form ▸ Simplified instructions to open the portal ▸ Moved sections import data and workspace configuration to later sections ▸ Updated workspace editing to use the new Workspace Builder instead of UI Builder
3.0	Dale.Stubblefield(ServiceNow)	<p>Started update for ServiceNow Tokyo Release - App Engine Studio v22.0.3</p>

Version	Author	Changes
2.1	Marc.Mouries(ServiceNow)	Significant changes in correctness and clarity
2.0	Dale.Stubblefield(ServiceNow)	Updated screenshots for the San Diego release
1.0	Marc.Mouries(ServiceNow)	First version for the Rome release

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