

Planview Daptiv Analytics

Chapter 15: ***Data Sets & Data Modules***





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About the Training Manual

The intention of this training manual is to walk you through building your own **Data Sets** and **Data Modules** using **Analytics** in **Planview Daptiv**. Each section within this manual explains the context around the features in **Analytics**, how to use each feature functionally, and provides exercises so you can apply what you learn by creating or modifying your own **Data Sets** and **Data Modules**.

Recommended for

- **Business Analysts** who will use the **Analytics** tool in **Planview Daptiv**
- **Report Writers** with experience in other reporting applications

Prerequisites

Participants should know how to use a web browser and have basic computer skills. ***It is imperative that participants be familiar with Planview Daptiv.*** This manual is not designed for anyone who already has *advanced* report writing skills or *expertise* in Cognos.

15. Data Sets and Data Modules

[Data Sets](#)

Data Sets contain data that is extracted from a package or a Data Module.

Data Sets improve performance, security, and visibility of self-service analytics.

Data Sets are stored in *Team content* or *My content*. If the data in the Data Set changes, the change is reflected in the Data Module.

What is the difference between a **Data Set** and a **Data Module**?

Answer: a Data Set is not used to *model* data; rather it is a *container* that holds data. Data flows from the Data Model to the Data Set on an established refresh schedule. *The data in Data Sets is not live*. Reporting/querying against the Data Set is therefore much faster than reporting/querying directly against the Data Model – especially when consuming data via Dashboards and Explorations.

- You can create a Data Set that contains selected tables and rows from the Daptiv Data Model(s).
- A Data Set contains data stored as a single table in a column format.
- Once you have saved a Data Set, you can schedule regular *refreshes* of the data by creating a *schedule* in the properties of the Data Set.
- Define a Data Set by choosing one or more items (columns) from a package and apply filters to reduce the data results.
- Data Sets can be used to gather a customized collection of items that you use frequently.
- Data Sets can be members of a Data Module.

Data Modules

Data Modules are *containers* that describe data and rules for combining and shaping data to prepare it for analysis and visualization in Daptiv Analytics (i.e., “modeling”).

While Data Sets contain data, Data Modules do not.

A user can quickly create a Data Module that includes data from one or more sources of different types.

The Data Module can be shared with other users, and used as a source to create reports, dashboards, stories, and explorations.

Data Modules:

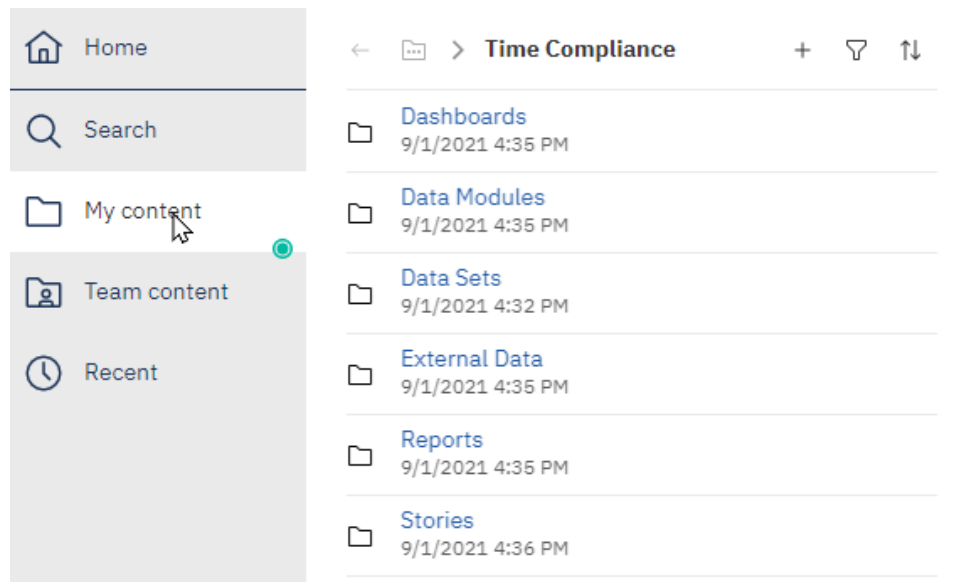
- encourage and empower users to perform self-service analytics.
- *Self-service* means: not relying on IT or other gatekeepers to analyze data from multiple sources, using the same familiar, powerful, integrated platform as all other Business Intelligence activities.
- extend your analysis beyond traditional enterprise, or centrally managed sources of information.
- can be published and shared so a consistent logical model is available to all users.

Data Modules can be based on:

- existing Data Modules.
- pre-configured database connections (like Daptiv).
- Data Set extracts, or snapshots, from existing packages.
- live connections to existing Daptiv Data Models.

Your Folder Structure

Here is a recommended folder structure for you to create in Analytics. This structure accommodates the various types of Analytics entities:



This standardized structure provides ease of navigation. Furthermore, when you want to export and relocate any Analytics items, you can “package” entire folders as a unit.

- **Note:** Although your custom **folders** and **sub-folders** are visible in both the **Analytics portal** and your **Daptiv Reports tab**, your **Data Sets** and **Data Modules** are only visible via the **Analytics portal**.

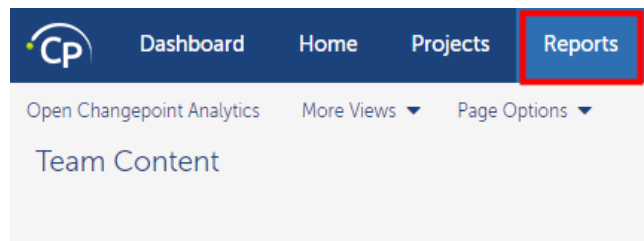
Exercise 1 (Folders): Create a Custom Folder Structure

Scenario:

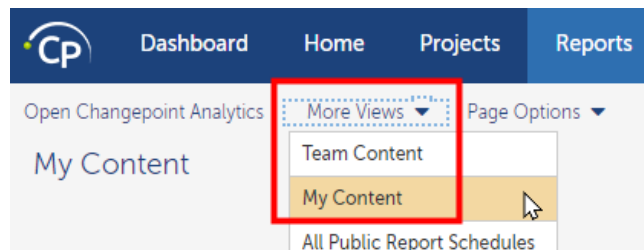
As a report writer on a team of report writers, it is important for you to organize your reporting content in a clear, accessible manner. This organizational structure will also facilitate the packaging of your report entities.

Task 1: Create new topical folder

1. Navigate to the **Reports** tab in Daptiv:

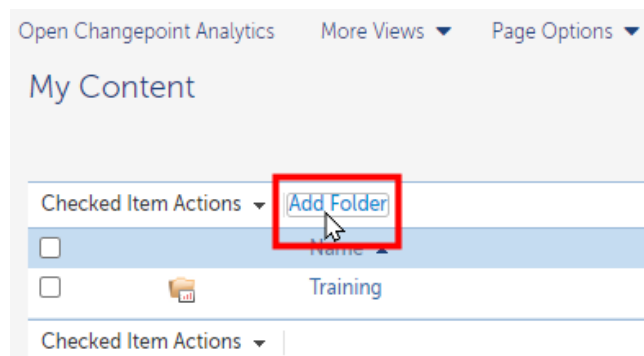


2. Navigate to **More Views > My Content**:



You may choose to create your new **Folder in any **Team Content** or **My Content** sub-folder of your choice.*

3. Click **Add Folder** to add a new **Folder**



- Provide a **Name** and **Description** for the new folder:

My Content

New Folder

Name

Description







This folder contains the Data Sets and Data Module for the Time Compliance reports and dashboards.

- Click **Save and Close**

Task 2: Create sub-folders to organize your reporting components

- Click on your new **Folder** (*Time Compliance*) to navigate within it
- Once again, click **Add Folder** to add a new **Folder**
- Name your new **Folder**: *Data Sets*
- Click **Save and Close**
- Repeat **Steps 2 through 4** to create the following additional new **Folders**:
 - Data Modules*
 - External Data*
 - Reports*
 - Dashboards*
 - Stories*
- Your finished folder structure should look like this in Daptiv:

My Content | Time Compliance

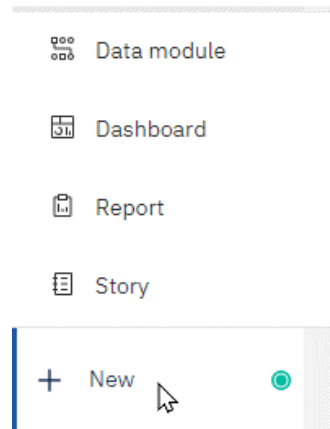
| Checked Item Actions ▾ | | Add Folder | |
|--------------------------|---|---------------|-------------------------------------|
| <input type="checkbox"/> | | Name ▲ | Actions |
| <input type="checkbox"/> |  | Dashboards | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |  | Data Modules | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |  | Data Sets | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |  | External Data | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |  | Reports | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |  | Stories | <input checked="" type="checkbox"/> |

- **Note, again:** Although your custom **folders** and **sub-folders** are visible in both the **Analytics portal** and your **Daptiv Reports tab**, your **Data Sets** and **Data Modules** are only visible via the **Analytics portal**.

Exercise 2 (Data Sets): Create *DATA SET : Time Compliance – User and Net Capacity*

Scenario: Create a limited Data Set of basic *User and Net Capacity* information

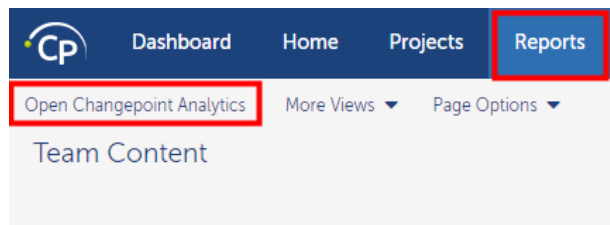
➤ **Note:** From within Analytics, clicking the **+** **New** icon does not show a **Data Set** option:



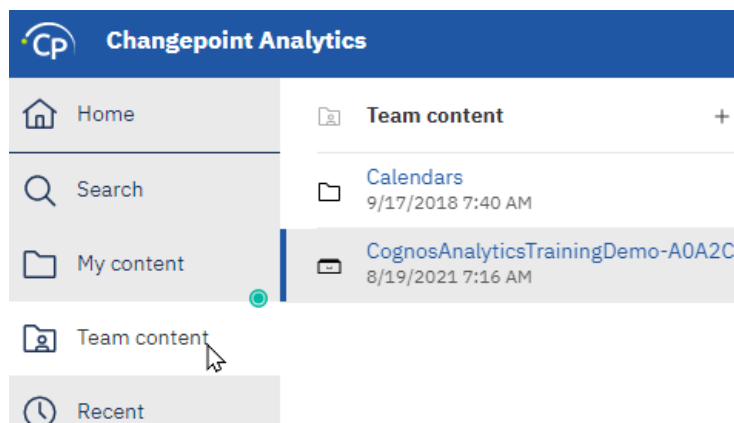
Data Sets can only be created from a **Data source**

Task 1: Create a Data Set

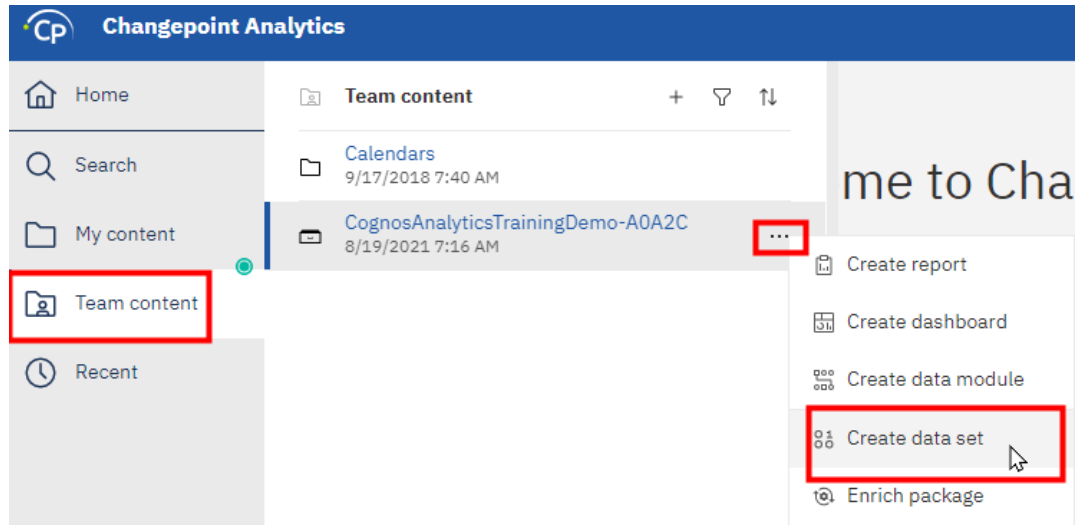
1. Open Analytics:



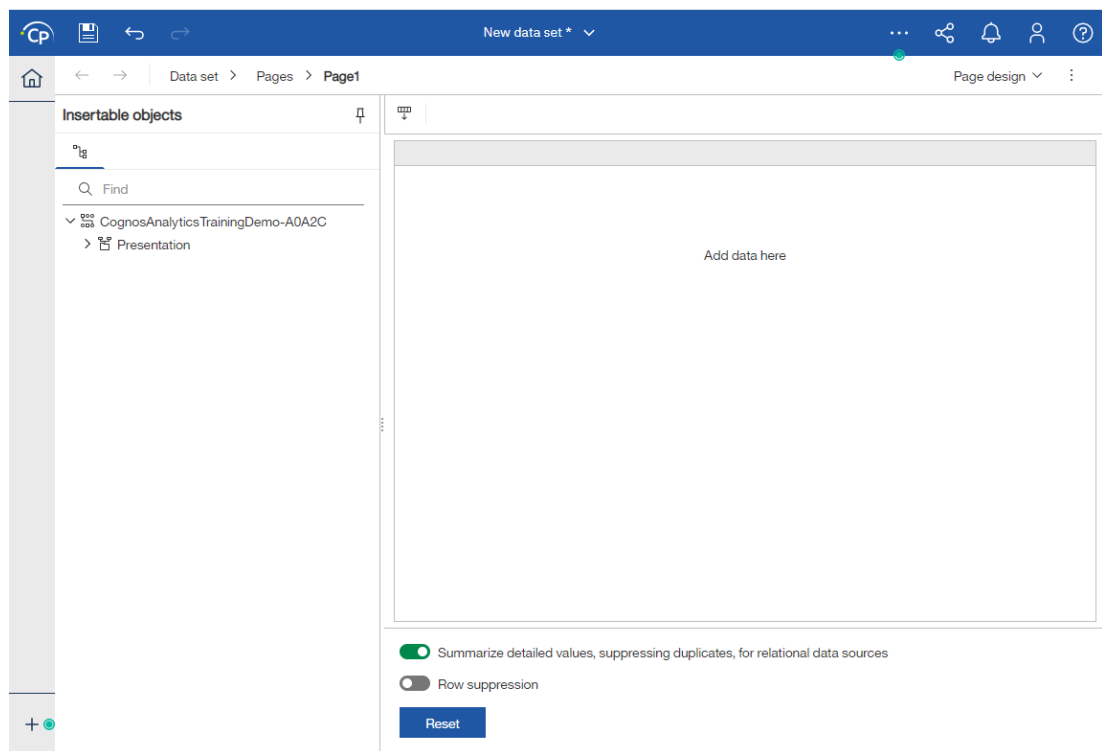
2. Click **Team content** in the left-side navigation column:



- Click the **More menu** next to your Daptiv data package name, then click **Create data set**:

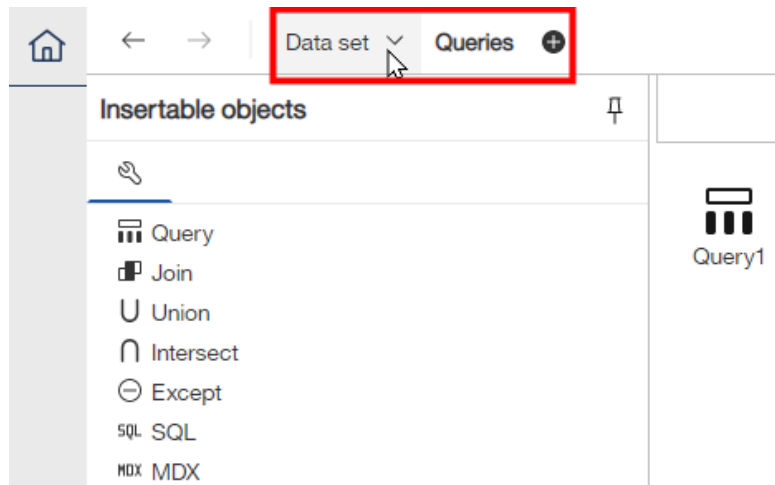


- Your Analytics window should look like this now:

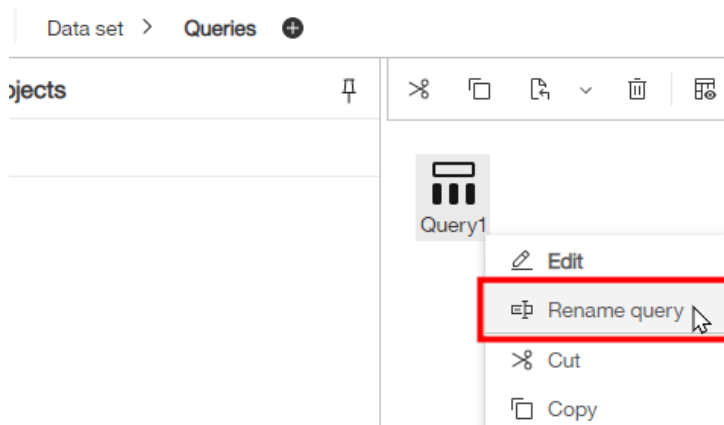


Task 2: Create 2 New Queries

1. Navigate to **Data set > Queries**:



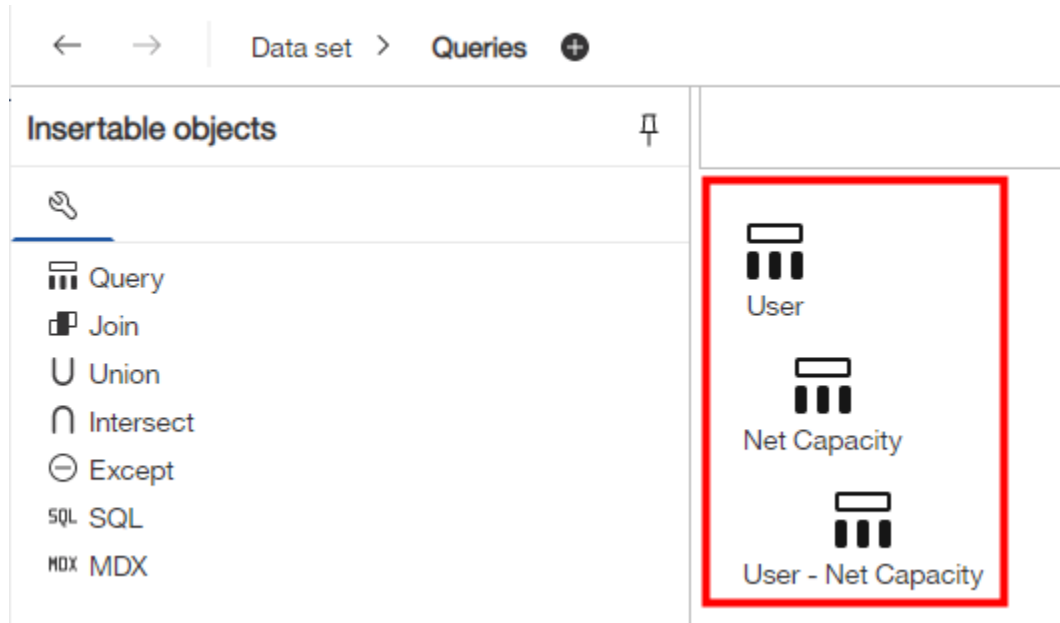
2. The default **Query1** will be your Data Set's main table of data. Right-click **Query1** and rename it to: *User – Net Capacity*



3. Create two additional Queries with the following names:

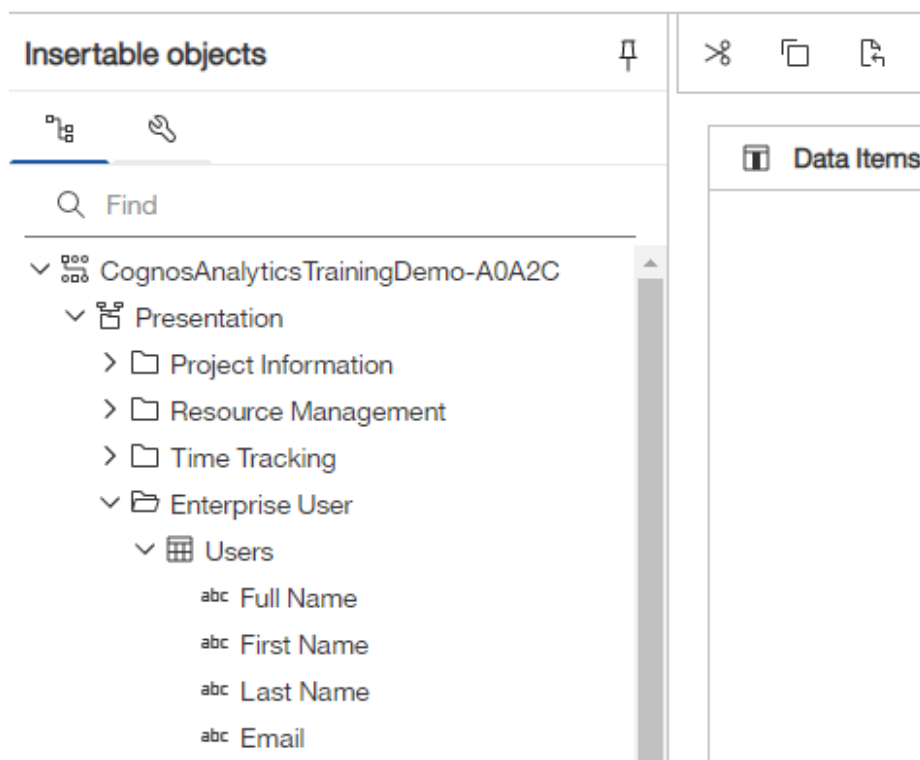
- *User*
- *Net Capacity*

- Click-and-drag to re-arrange your 3 Queries so they look like this:



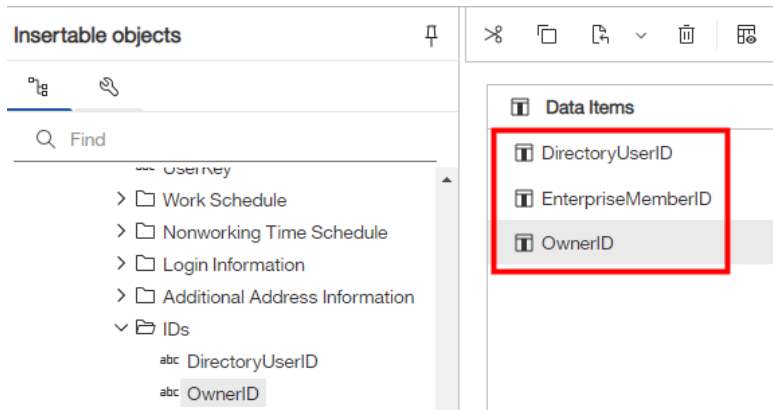
Task 2: Add Data Items to *User* Query and include Filters

- Double-click the *User* Query
- Using the **Sources** tab in the **Insertable objects** pane, navigate to: **Presentation > Enterprise User > Users**



3. From the **IDs** folder, drag over the following **Data items**:

- DirectoryUserID
- EnterpriseMemberID
- OwnerID



4. From **Presentation > Enterprise User > Users**, drag over the following **Data items**:

- Full Name
- Resource Manager
- Timesheets Required
- Status

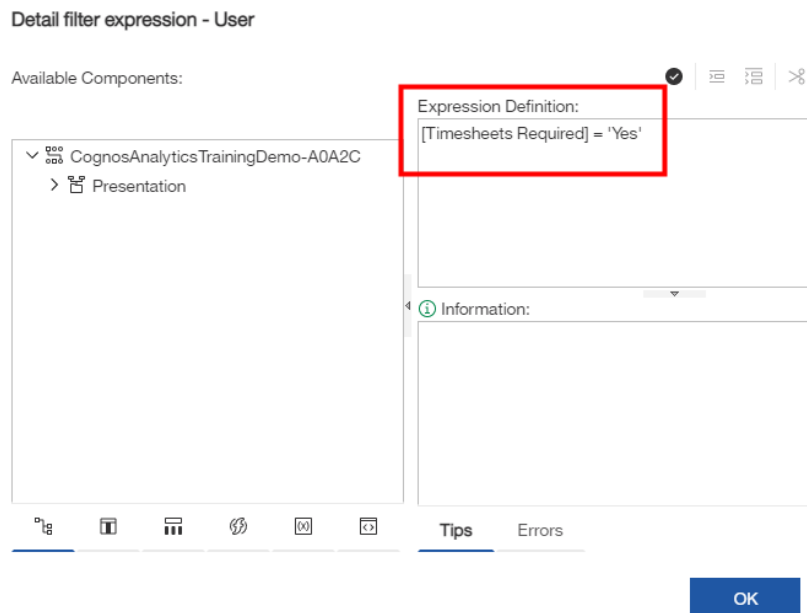
5. From your list of **Data Items** in the **Query**, click-and-drag **Timesheets Required** into the **Detail Filters** box:



6. In the **Expression Definition** box, append the following to **[Timesheets Required]**:

= 'Yes'

7. The finished Expression should be:



8. Click **OK** to close the **Detail filter expression** dialog box

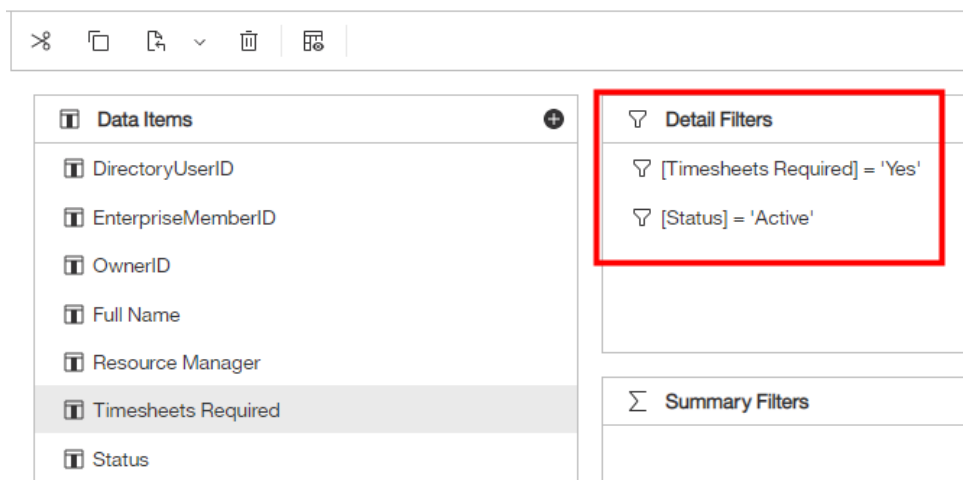
9. From your list of **Data Items** in the **Query**, click-and-drag **Status** into the **Detail Filters** box

10. In the **Expression Definition**, append the following to **[Status]**:

= 'Active'

11. Click **OK**

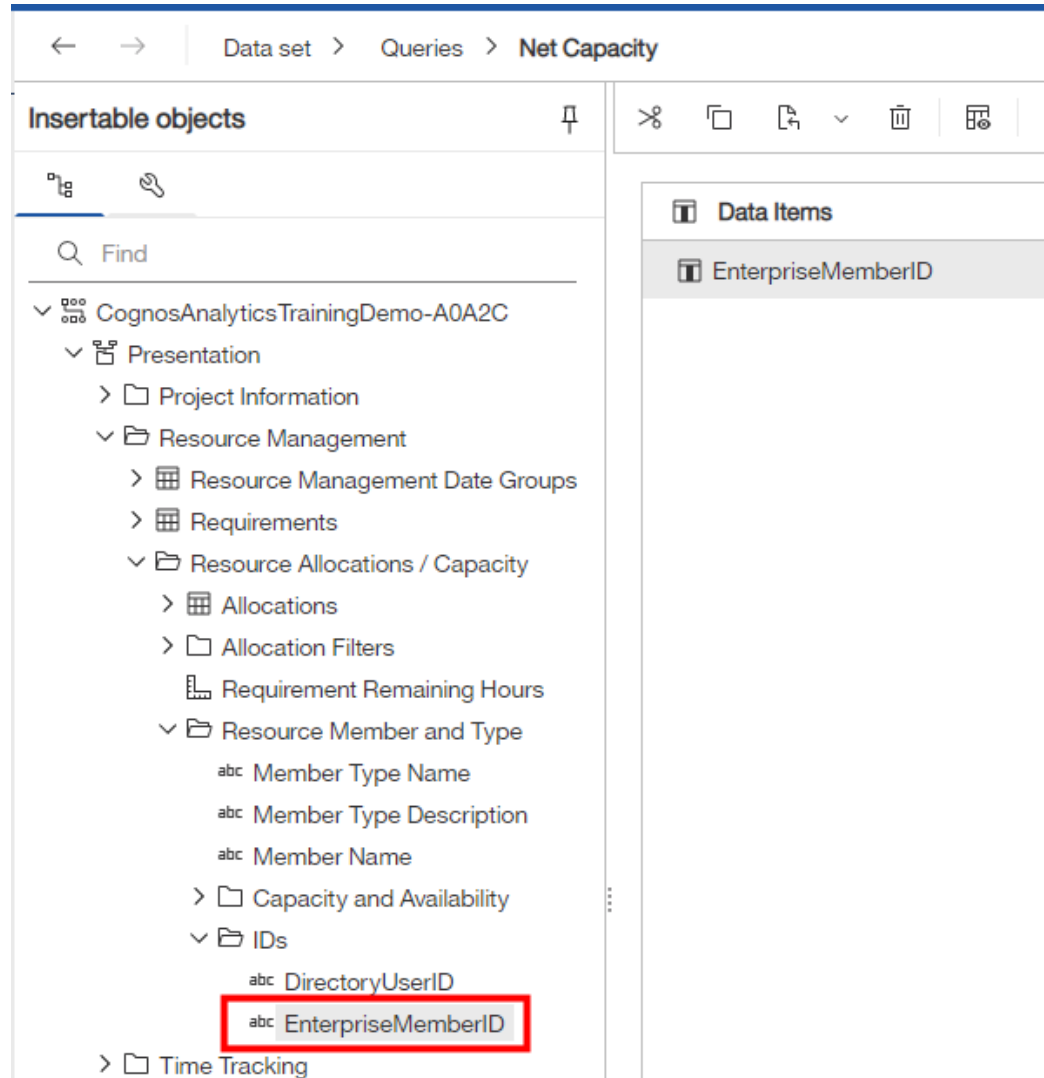
12. Your **Detail Filters** should look like this now:



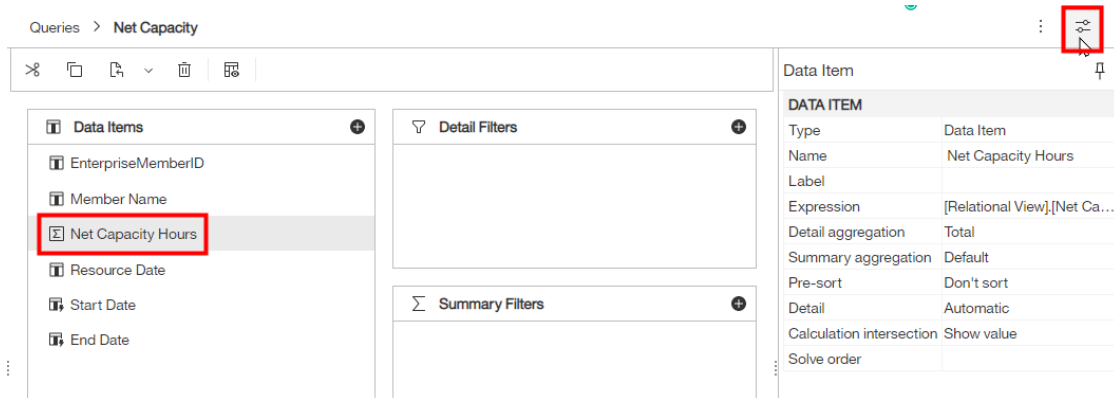
- **Note:** remember to use the single-quote mark around **'Yes'** and **'Status'**. A double-quote mark will cause an error.

Task 4: Add Data Items to the *Net Capacity* Query and include Filter

1. Navigate to **Data set > Queries** and double-click the *Net Capacity* Query
2. Using the **Sources** tab in the **Insertable objects** pane, navigate to: **Presentation > Resource Management > Resource Allocations / Capacity > Resource Member and Type**
3. From the **IDs** folder, drag over the following **Data item**:
 - EnterpriseMemberID



4. From **Presentation > Resource Management > Resource Allocations / Capacity > Resource Member and Type**, add the following Data item:
 - Member Name
5. From **Presentation > Resource Management > Resource Allocations / Capacity > Resource Member and Type > Capacity and Availability**, add the following Data item:
 - Net Capacity Hours
6. With your Data Item **Net Capacity Hours** still selected, open the **Properties** pane:



Queries > Net Capacity

Data Items

- EnterpriseMemberID
- Member Name
- Net Capacity Hours**
- Resource Date
- Start Date
- End Date

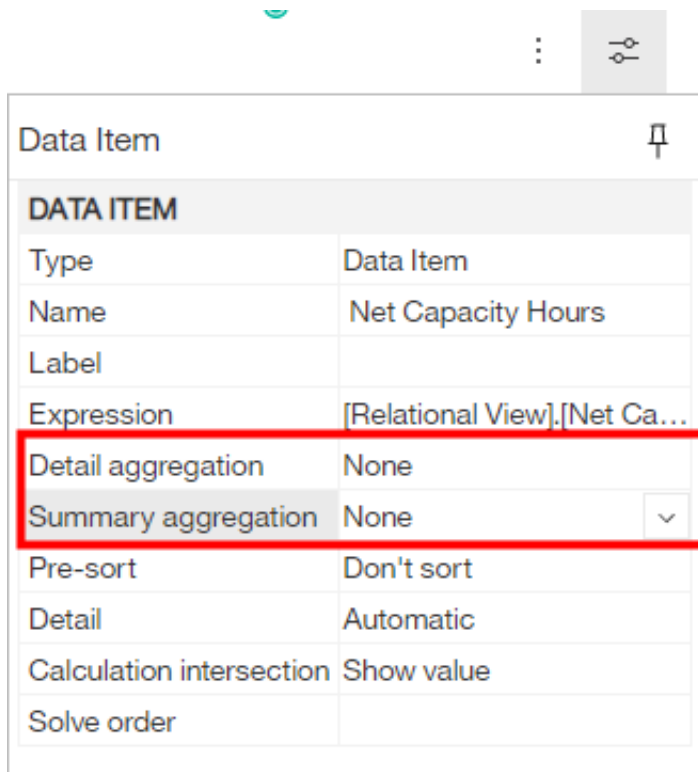
Detail Filters

Summary Filters

Data Item

| DATA ITEM | |
|--------------------------|------------------------------|
| Type | Data Item |
| Name | Net Capacity Hours |
| Label | |
| Expression | [Relational View].[Net Ca... |
| Detail aggregation | Total |
| Summary aggregation | Default |
| Pre-sort | Don't sort |
| Detail | Automatic |
| Calculation intersection | Show value |
| Solve order | |

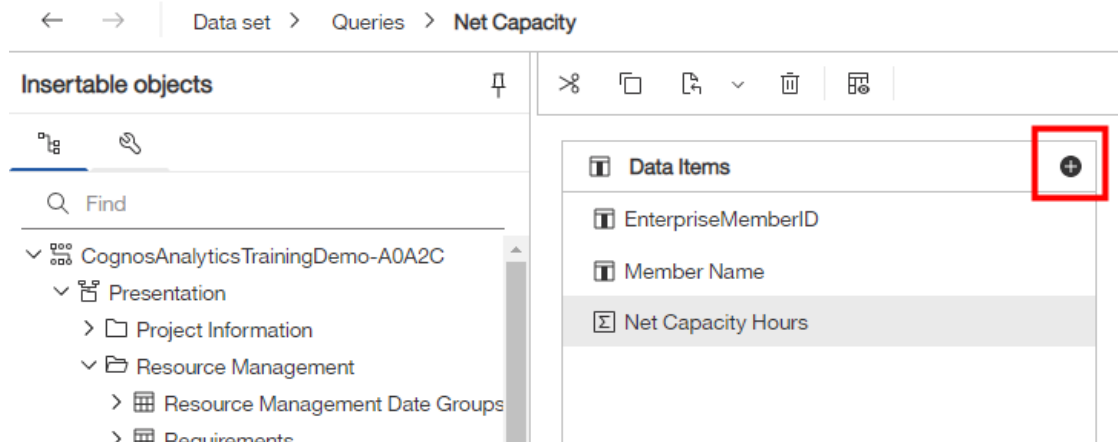
7. In **Properties > DATA ITEM**, set both **Detail aggregation** and **Summary aggregation** to: **None**



Data Item

| DATA ITEM | |
|--------------------------|------------------------------|
| Type | Data Item |
| Name | Net Capacity Hours |
| Label | |
| Expression | [Relational View].[Net Ca... |
| Detail aggregation | None |
| Summary aggregation | None |
| Pre-sort | Don't sort |
| Detail | Automatic |
| Calculation intersection | Show value |
| Solve order | |

8. In the **Data Items** box, click the  icon to create a new custom Data Item:



9. In the **Name** section of the **Data item expression** box, change the name to: *Resource Date*

10. In the **Expression Definition** box, insert the following **Case Statement**:

```
CASE WHEN _day_of_week ([Relational View].[Resource Management Date
Groups].[Resource Day],7) = 1

THEN [Relational View].[Resource Management Date Groups].[Resource Day]

ELSE

_add_days([Relational View].[Resource Management Date Groups].[Resource Day], -
(_day_of_week ([Relational View].[Resource Management Date Groups].[Resource
Day],7)-1))

END
```

11. The result:

Data item expression - Resource Date

Name: Resource Date

Available Components:

- CognosAnalyticsTrainingDemo-A0A2C
 - Presentation

Expression Definition:

```
CASE WHEN _day_of_week ([Relational View].[Resource Management Date Groups].[Resource Day],7) = 1
THEN [Relational View].[Resource Management Date Groups].[Resource Day]
ELSE
_add_days([Relational View].[Resource Management Date Groups].[Resource Day],
-(_day_of_week ([Relational View].[Resource Management Date Groups].[Resource Day],7)-1))
END
```

Information:

No errors.

Tips **Errors**

OK Cancel

12. Click OK

- Note:** The CASE statement above ensures that *Sunday* is used when *Resource Date* is joined with *Start Date* from another Query. This CASE statement is not needed if, in fact, your Daptiv environment's **Timesheet Period Starts On** value is already set to *Sunday*:

Daptiv Admin > Enterprise Settings > Timesheet Properties:

Admin Home Enterprise Settings User Settings **Users** Resources Workspaces


Views: General Properties Workweek Calendar **Timesheet Properties** License Inform

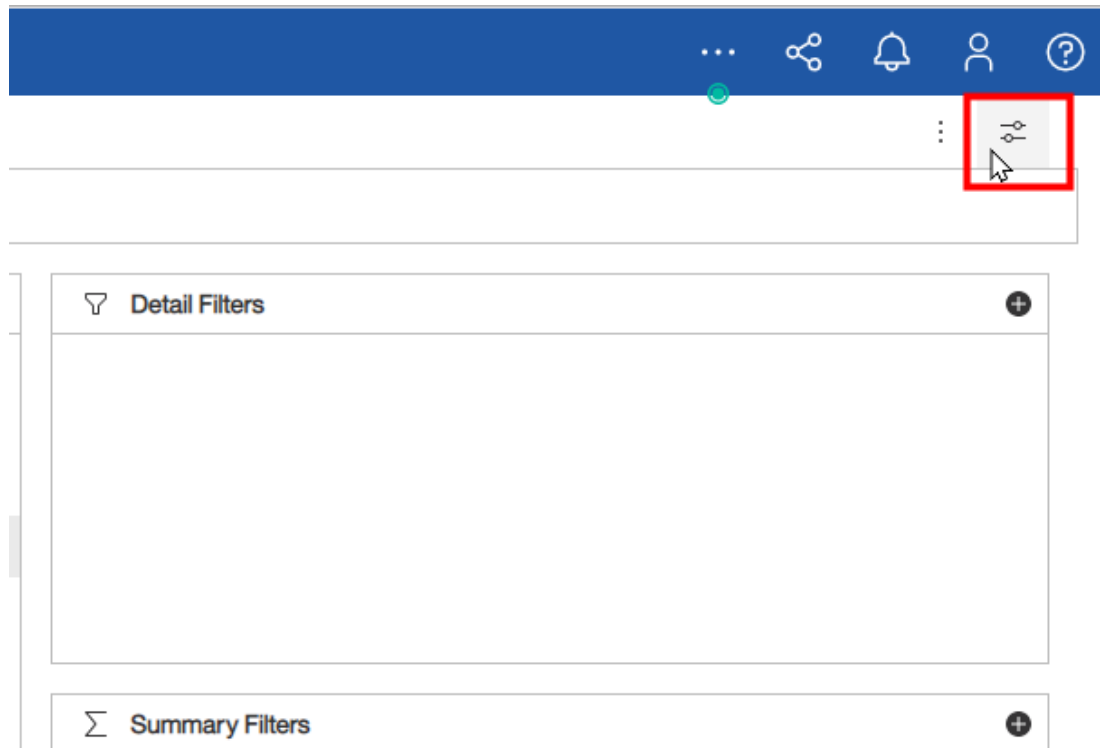
Timesheet Properties Timesheet Approval Settings Timesheet Notification Settings

1. Timesheet Period Settings



Time Period ☒ Weekly ☐ Bimonthly ☐ Monthly


Time Period Starts On **Sunday**

13. In the upper right corner of the window, click the  icon to open **Properties**:




14. Be sure that *Resource Date* is selected in the **Data Items** list
15. In the **Properties** for *Resource Date*, set both **Detail aggregation** and **Summary aggregation** to *None*:

| Data Item | |  |
|--------------------------|-------------------------|---|
| DATA ITEM | | |
| Type | Data Item | |
| Name | Resource Date | |
| Label | | |
| Expression | CASE WHEN _day_of_we... | |
| Detail aggregation | None | |
| Summary aggregation | None |  |
| Pre-sort | Don't sort | |
| Detail | Automatic | |
| Calculation intersection | Show value | |
| Solve order | | |


16. In the **Data Items** box, click the  icon to create a new custom Data Item
17. Change the Data Item **Name** to: *End Date*
18. Insert the following **Case Statement** in the **Expression Definition**:


```
CASE WHEN _day_of_week (current_date,6) = 7
THEN (current_date)
ELSE
_add_days(current_date, -_day_of_week (current_date,6))
END
```

 Data item expression - Data Item1

Name:

Available Components:

▼  CognosAnalyticsTrainingDemo-A0A2C

 >  Presentation







Expression Definition:

```
CASE WHEN _day_of_week (current_date,6) = 7
THEN (current_date)
ELSE
_add_days(current_date, -_day_of_week (current_date,6))
END
```

Information:

current_date
Returns a date value representing the current date of the computer that the database software runs on.


Example: current_date
Result: 2003-03-04

Tips Errors

19. Click **OK**

- **Note:** This CASE statement ensures that *Saturday* is used as the **End Date**.


20. In the **Data Items** box, click the  icon to create a new custom Data Item
21. Change the Data Item **Name** to: *Start Date*
22. Insert the following **Expression Definition**:


`_add_days ([End Date],-83)`

Data item expression - Start Date

Name:

Available Components:

▼  CognosAnalyticsTrainingDemo-A0A2C

 >  Presentation

Expression Definition:

`_add_days ([End Date],-83)`







✓

≡

≡

>

Information:

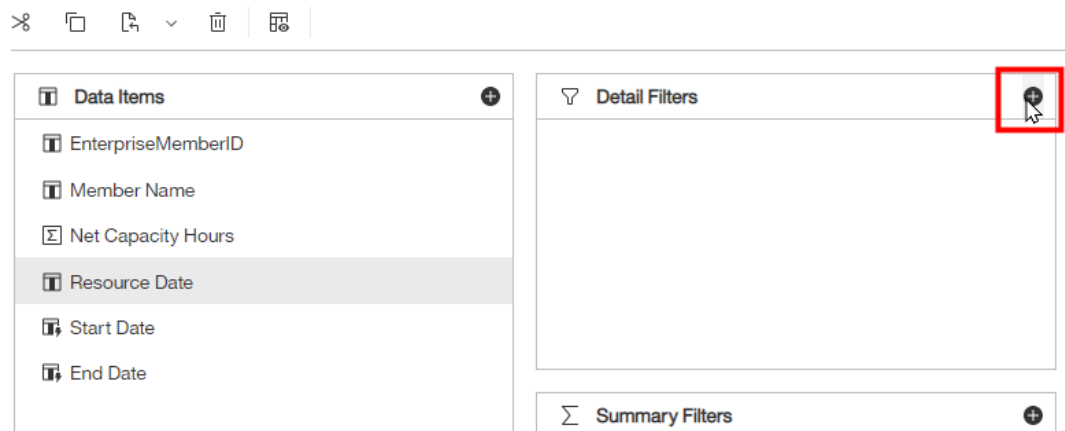
Tips Errors

OK

23. Click **OK**

- **Note:** This statement establishes **Start Date** as 83 days prior to **End Date**.

24. In the **Details Filters** box, click the  icon



25. In the **Expression Definition** box, add the following:

`extract(year, [Resource Date]) between extract(year, _add_years(current_date, -4)) and extract(year, current_date)`

Detail filter expression - Net Capacity

Available Components:

▼ CognosAnalyticsTrainingDemo-A0A2C
 > Presentation

Expression Definition:

`extract(year, [Resource Date]) between extract(year, _add_years(current_date, -4)) and extract(year, current_date)`

Information:

`_add_years (date_expression, integer_expression)`

Adds "integer_expression" years to "date_expression". If the "date_expression" is February 29 and resulting year is non leap year, then the resulting day is set to February 28. In all other cases the returned value has the same day and month as "date_expression".

Tips

Errors

OK

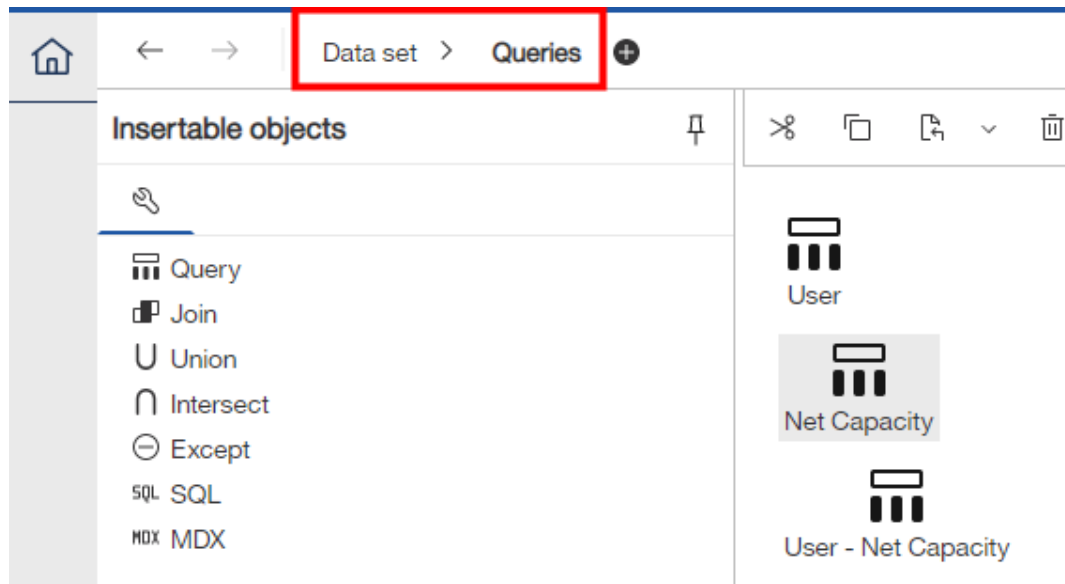
Cancel

26. Click **OK**

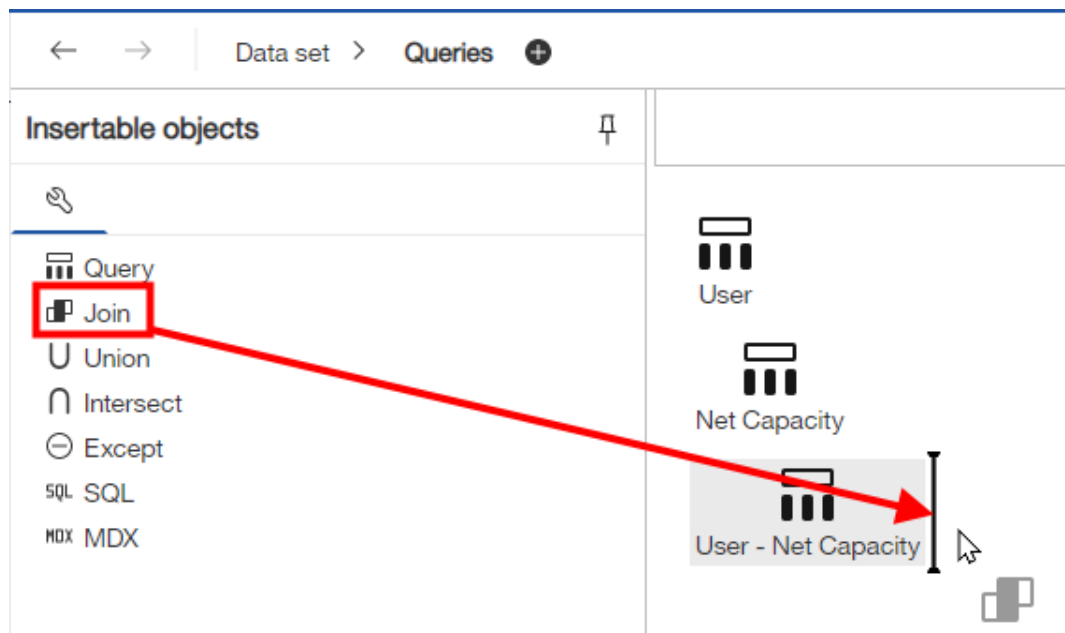
- **Note:** This filter ensures that only the previous 4 years' resource data is included.

Task 5: Add a Join to the *User – Net Capacity* Query

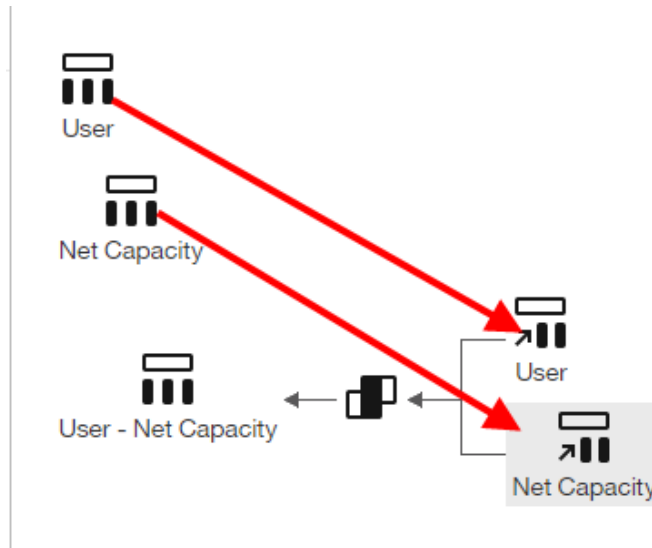
1. Navigate to **Data set > Queries**:




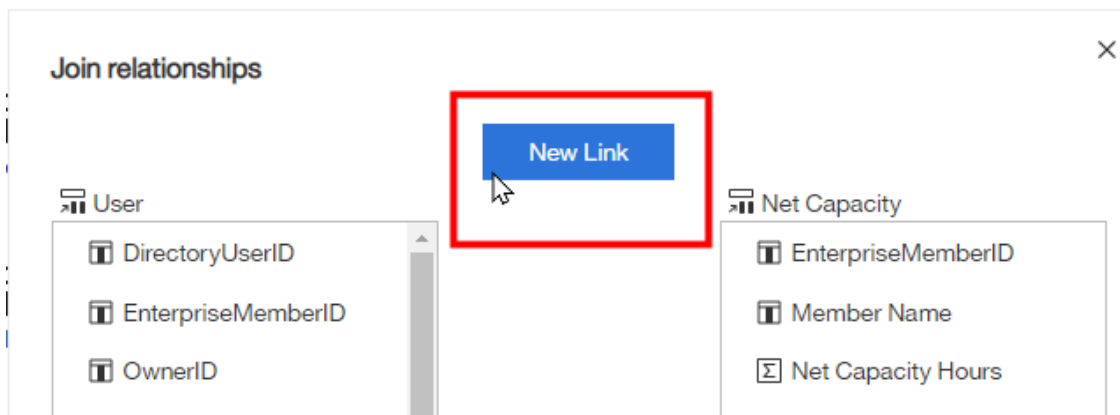
2. From **Insertable objects > Toolbox**, click to select a **Join**, and drag it to the right side of the *User – Net Capacity* Query:



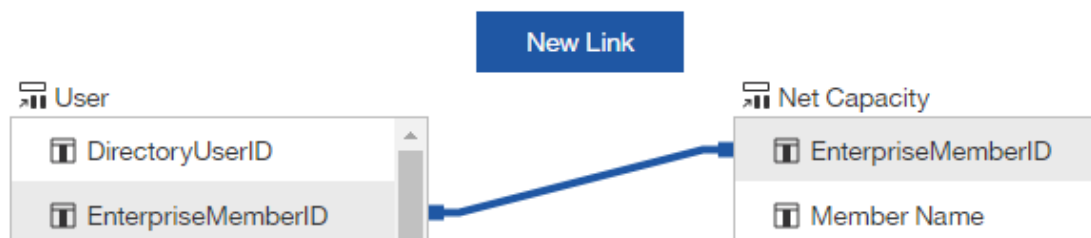
3. Into the first of the 2 empty Join sources, click-and-drag the *User* Query
4. Into the second of the 2 empty Join sources, click-and-drag the *Net Capacity* Query



5. Double-click the **Join**  icon
6. In the **Join relationships** dialog box, click the **New Link** button:



7. Establish the connection between *EnterpriseMemberID* and *EnterpriseMemberID*:



8. Set the **Cardinality** values:

Join relationships
✕

New Link

User

- DirectoryUserID
- EnterpriseMemberID
- OwnerID
- Full Name
- Resource Manager
- Timesheets Required
- Status

Net Capacity

- EnterpriseMemberID
- Member Name
- Net Capacity Hours
- Resource Date
- Start Date
- End Date

| | | |
|--------------|-----------|--------------|
| Cardinality: | Operator: | Cardinality: |
| 1..1 ▼ | = ▼ | 1..n ▼ |

Relationship impact: Each "Net Capacity" has one and only one "User".
Each "User" has one or more "Net Capacity".

Convert to expression...

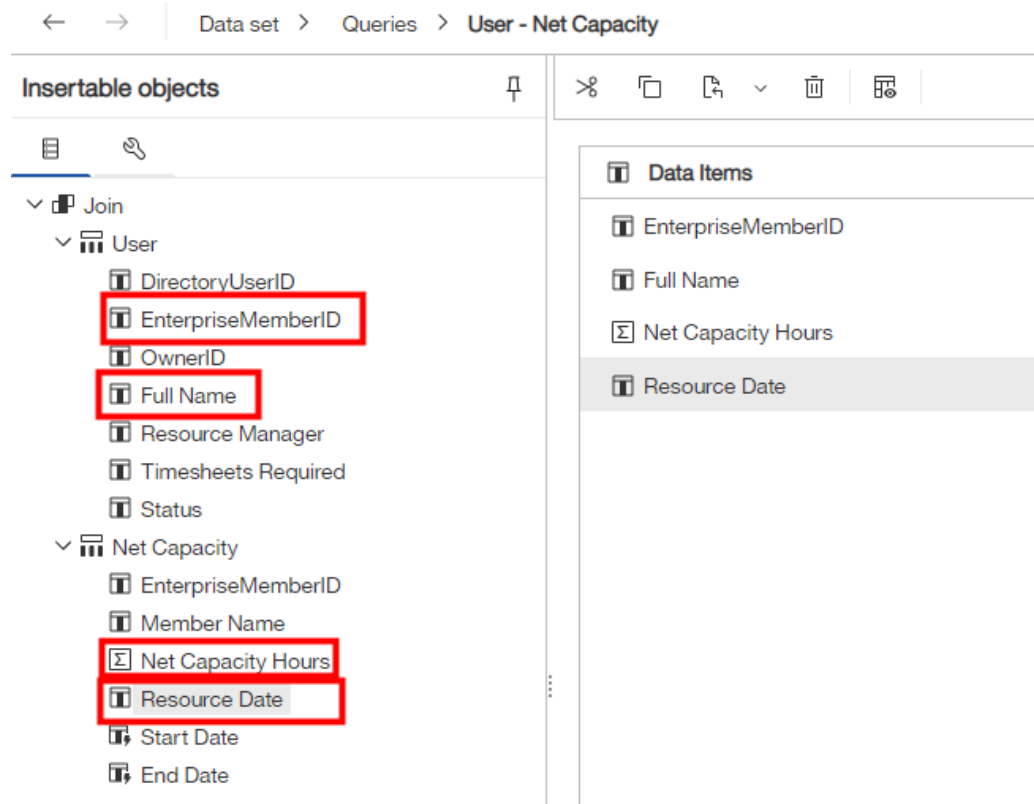
OK

Cancel

9. Click **OK**

Task 6: Add Data Items to the *User – Net Capacity* Query

1. Double-click the *User – Net Capacity* Query
2. From **Insertable objects > Source**, drag over the following **Data Items**:
 - EnterpriseMemberID
 - Full Name
 - Net Capacity Hours
 - Resource Date



← → | Data set > Queries > **User - Net Capacity**

Insertable objects

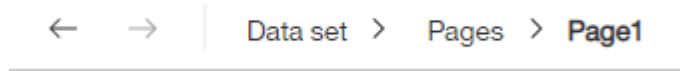
- ▼ Join
 - ▼ User
 - DirectoryUserID
 - EnterpriseMemberID**
 - OwnerID
 - Full Name**
 - Resource Manager
 - Timesheets Required
 - Status
 - ▼ Net Capacity
 - EnterpriseMemberID
 - Member Name
 - Net Capacity Hours**
 - Resource Date**
 - Start Date
 - End Date

Data Items

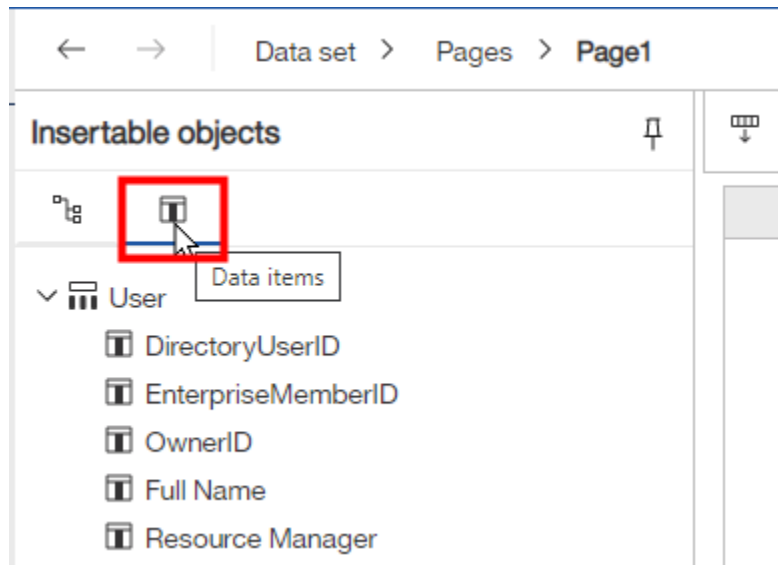
- EnterpriseMemberID
- Full Name
- Net Capacity Hours
- Resource Date**

Task 7: Add the Data Items from the Main Query to Page1

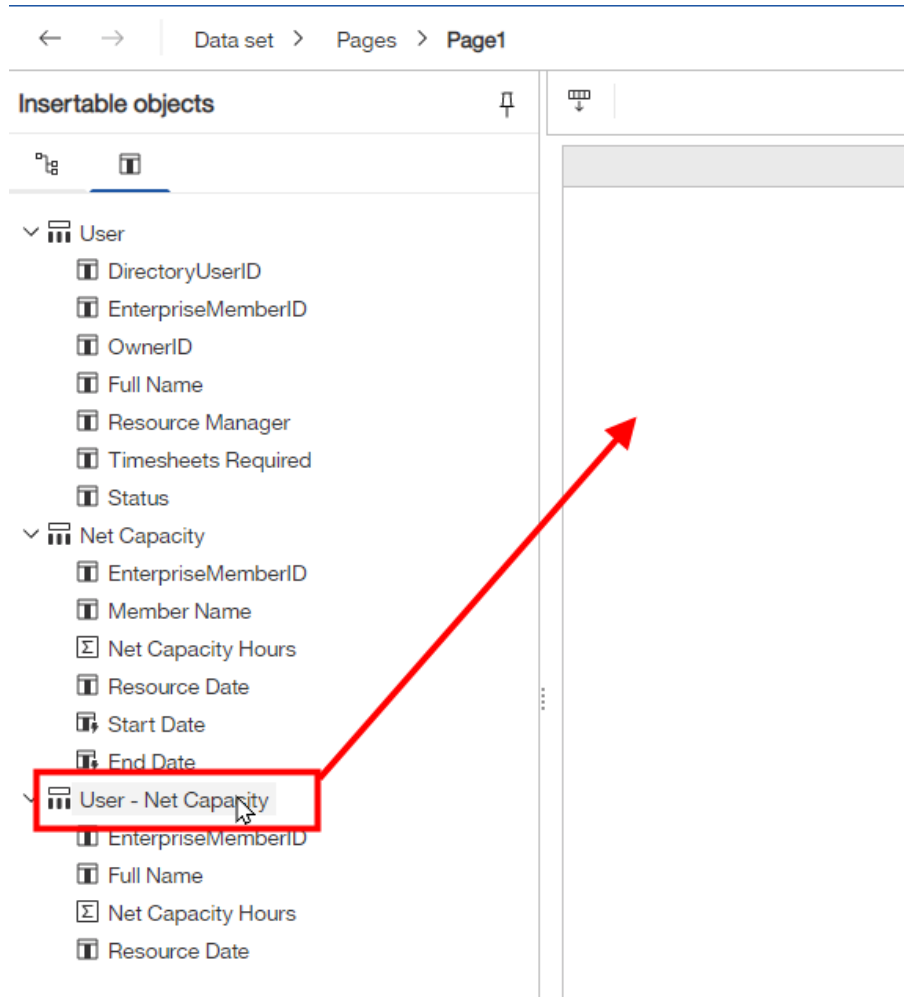
1. Navigate to **Data set > Pages > Page1**:



2. In the **Insertable objects** pane, click the **Data Items** tab:



3. Click the main Query and drag it to Page1:



4. The **table** on *Page1* should look like this:

← → Data set > Pages > Page1

Insertable objects


- User
 - DirectoryUserID
 - EnterpriseMemberID
 - OwnerID
 - Full Name
 - Resource Manager
 - Timesheets Required
 - Status
- Net Capacity
 - EnterpriseMemberID
 - Member Name
 - Net Capacity Hours
 - Resource Date
 - Start Date
 - End Date
- User - Net Capacity
 - EnterpriseMemberID
 - Full Name
 - Net Capacity Hours
 - Resource Date

| EnterpriseMemberID | Full Name | Net Capacity Hours | Resource Date |
|----------------------|-------------|----------------------|-----------------|
| <EnterpriseMemberID> | <Full Name> | <Net Capacity Hours> | <Resource Date> |
| <EnterpriseMemberID> | <Full Name> | <Net Capacity Hours> | <Resource Date> |
| <EnterpriseMemberID> | <Full Name> | <Net Capacity Hours> | <Resource Date> |

☒ Summarize detailed values, suppressing duplicates, for relational data sources
☐ Row suppression


- Note:** If you encountered the following error:

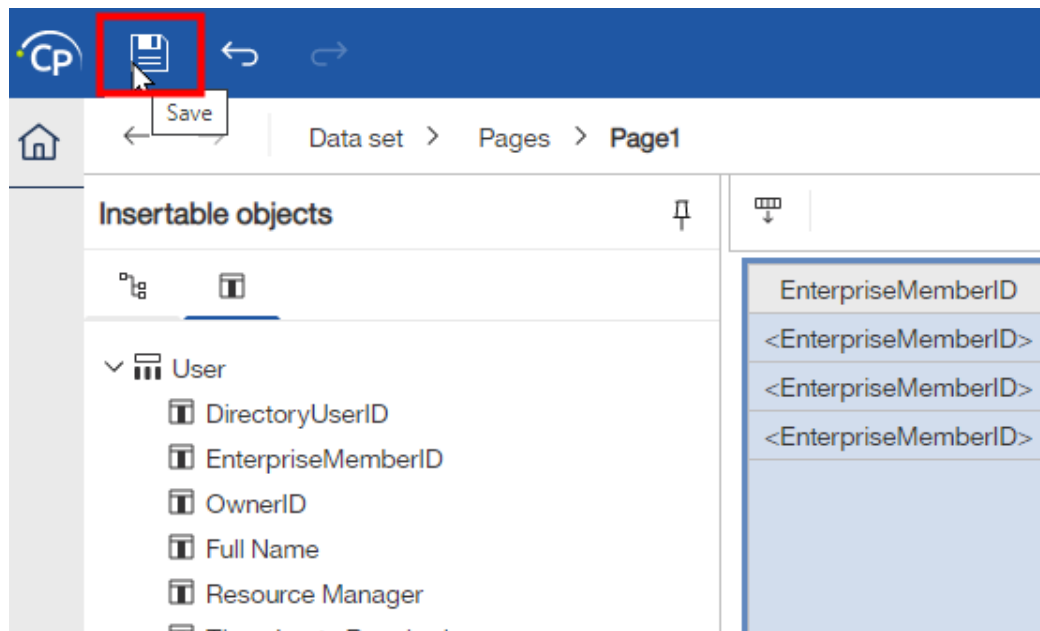
IBM Cognos Analytics - Reporting


 Unable to insert this data item here because the query context "User - Net Capacity" is not the same as the data item's query "Net Capacity".

- Solution:** Click the button at the bottom of the screen, and try again.

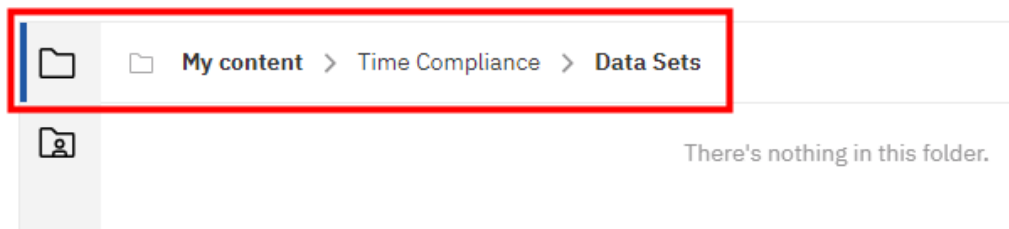
Task 8: Save the Data Set

1. Click the floppy disk  icon in the upper left corner of the window:



2. Choose **Save**
3. Navigate to **My content > Time Compliance > Data Sets**:

Save as

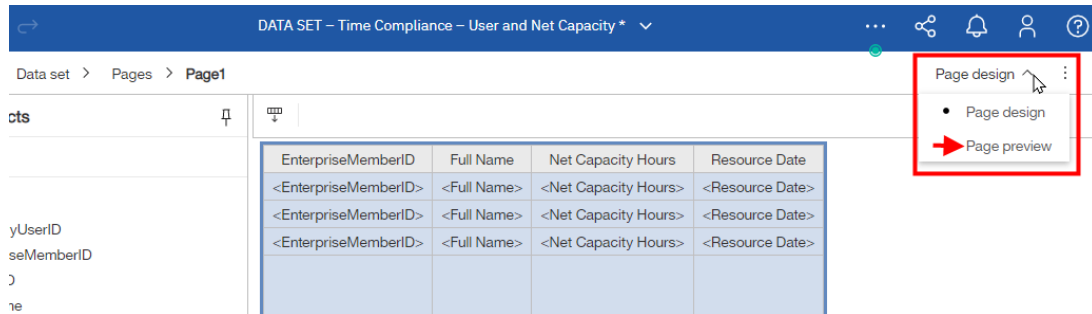


4. Provide the following name:

DATA SET – Time Compliance – User and Net Capacity
5. Click **Save**

Task 9: Preview the data in the Data Set

1. Remaining on **Page1**, change from **Page design** view to **Page preview**:



2. A subset of the data in your **Data Set** will appear in the table:

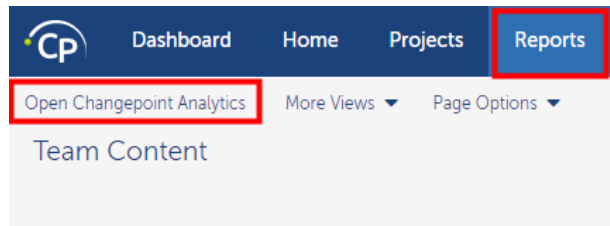
Page preview


| EnterpriseMemberID | Full Name | Net Capacity Hours | Resource Date |
|--|----------------|--------------------|---------------|
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 12/31/17 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 1/7/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 1/14/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 1/21/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 1/28/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 2/4/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 2/11/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 2/18/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 2/25/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 3/4/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 3/11/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 3/18/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 3/25/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 4/1/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 4/8/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 4/15/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 4/22/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 4/29/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 5/6/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 5/13/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 5/20/18 |
| {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 40.00 | 5/27/18 |

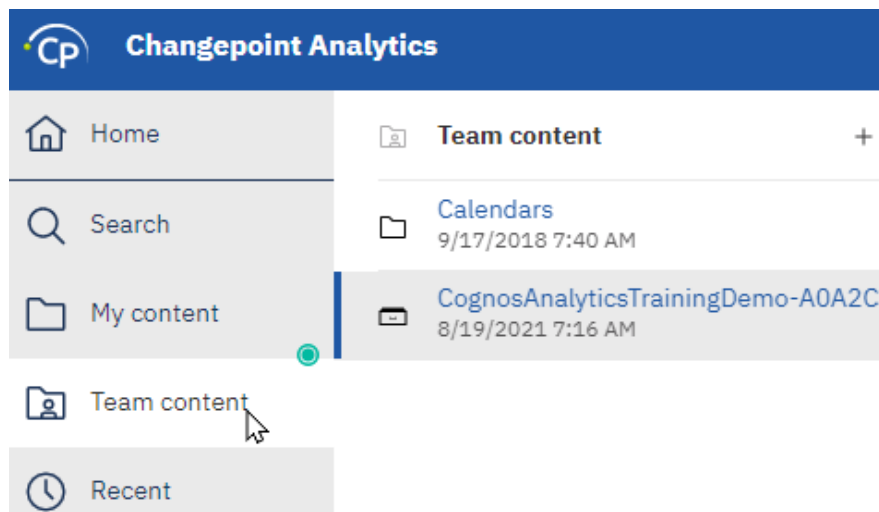
Exercise 3 (Data Sets): Create a Data Set named *DATA SET : Time Compliance – User and Timesheet*

Task 1: Create a Data Set

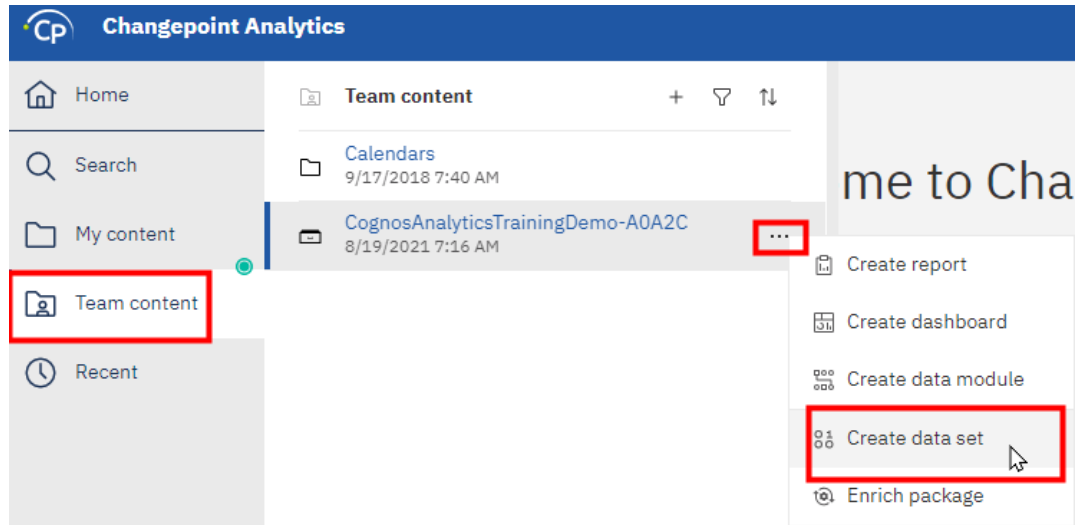
- Open Analytics:



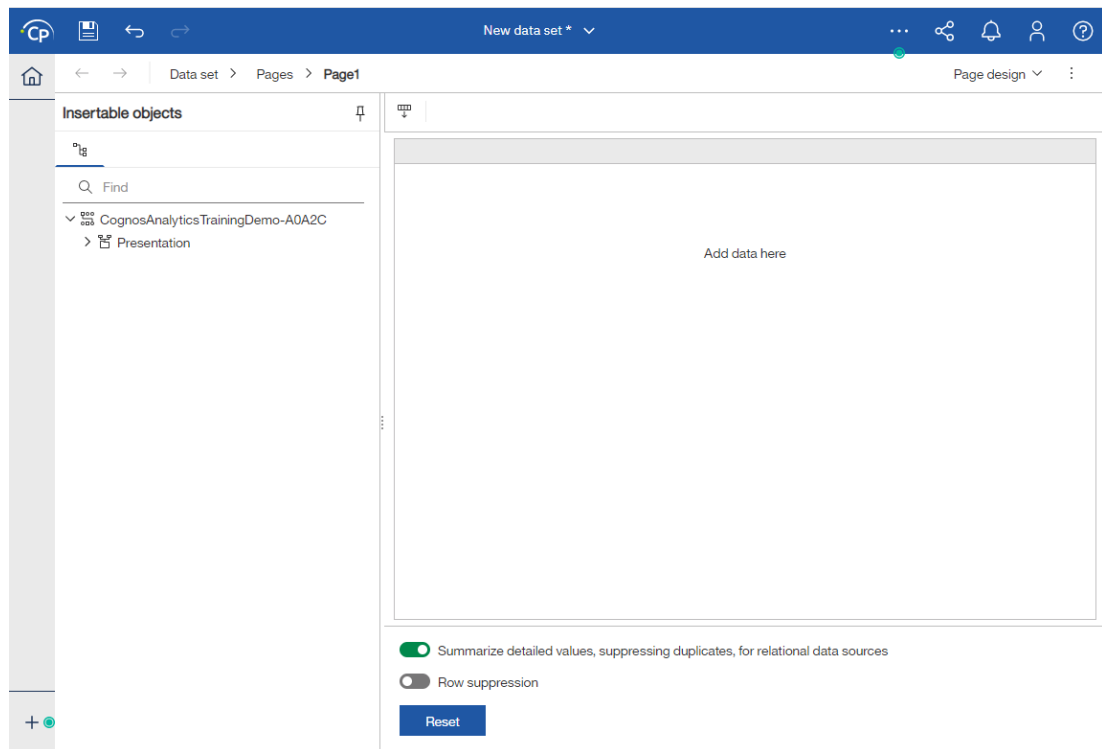
- Click  **Team content** in the left-side navigation column:



- Click the **More menu** next to your Daptiv data package name, then click **Create data set**:

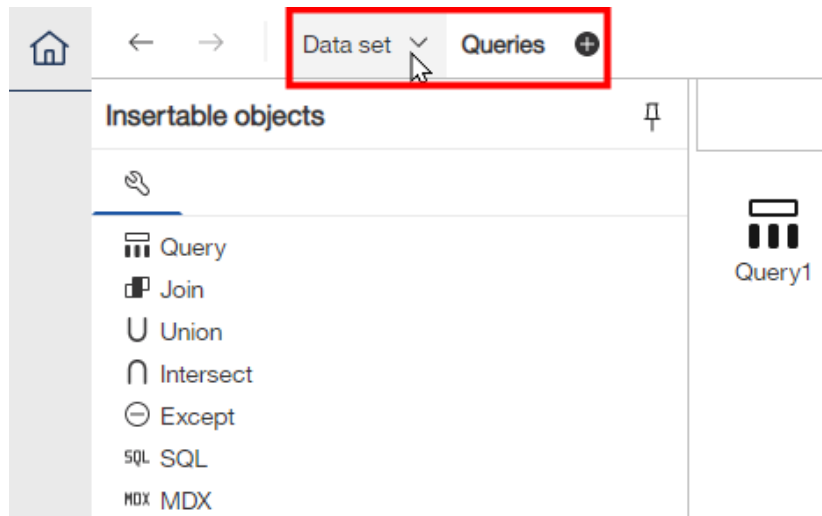


- Your Analytics window should look like this now:

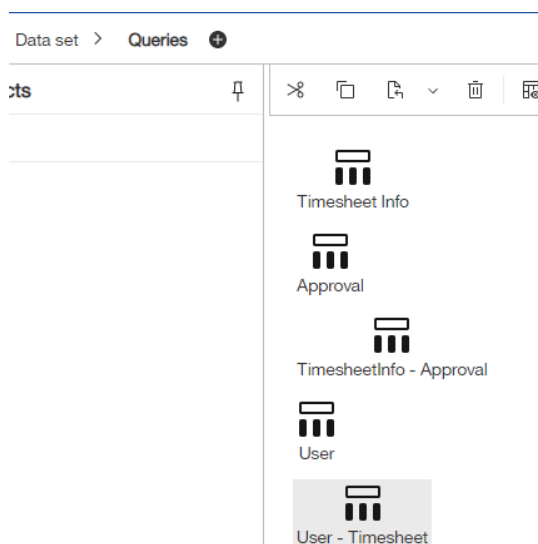


Task 2: Create 4 New Queries

1. Navigate to **Data set > Queries**:

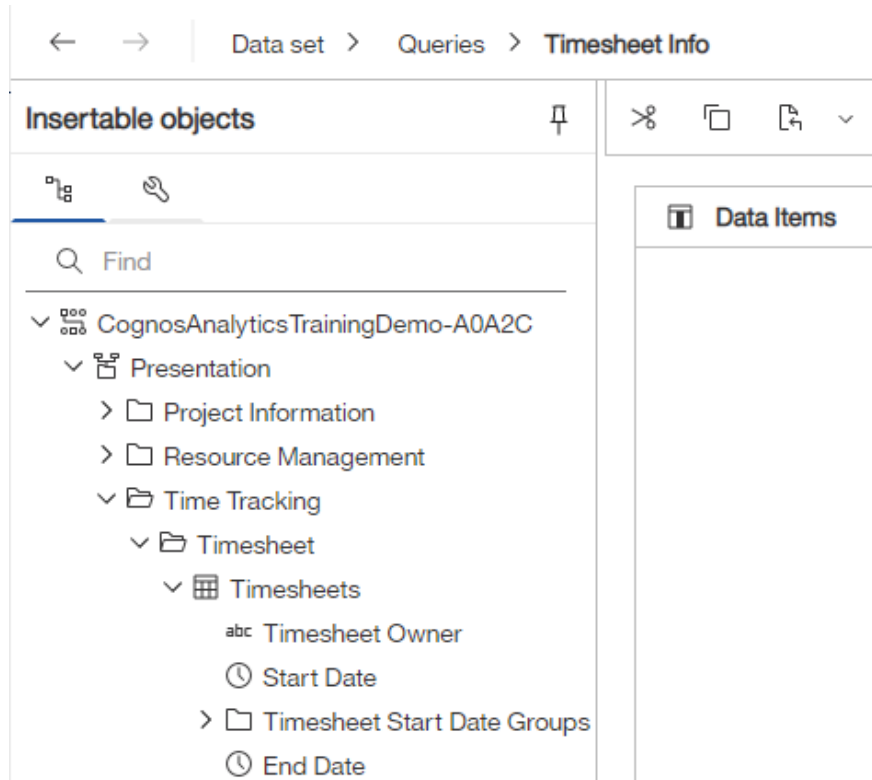


2. The default **Query1** will be your Data Set's main table of data. Rename **Query1** to: *User – Timesheet*
3. Create four additional Queries with the following names:
 - *Timesheet Info*
 - *Approval*
 - *TimesheetInfo – Approval*
 - *User*
4. Click-and-drag to re-arrange your 5 Queries so they look like this:



Task 2: Add Data Items to *Timesheet Info* Query and include Filter

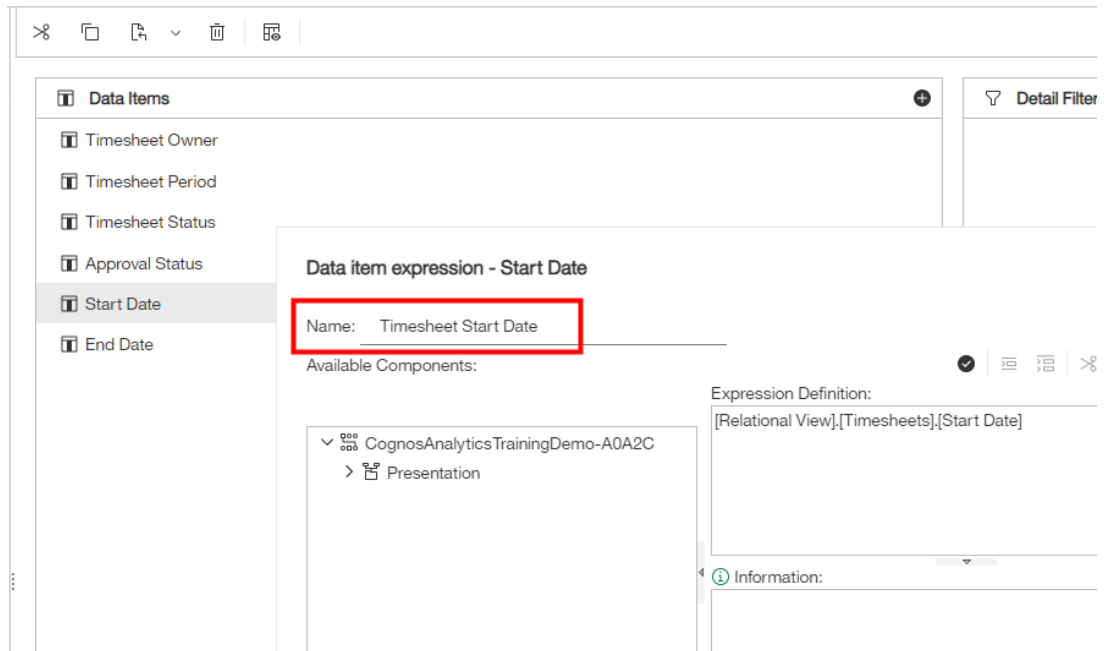
1. Double-click the *Timesheet Info* Query
2. Using the **Sources** tab in the **Insertable objects** pane, navigate to: **Presentation > Time Tracking > Timesheet > Timesheets**



3. Drag over the following **Data items**:

- Timesheet Owner
- Timesheet Period
- Timesheet Status
- Approval Status
- Start Date
- End Date

- Double-click your **Start Date** item and rename it to: *Timesheet Start Date*



Data item expression - Start Date

Name: Timesheet Start Date

Available Components:

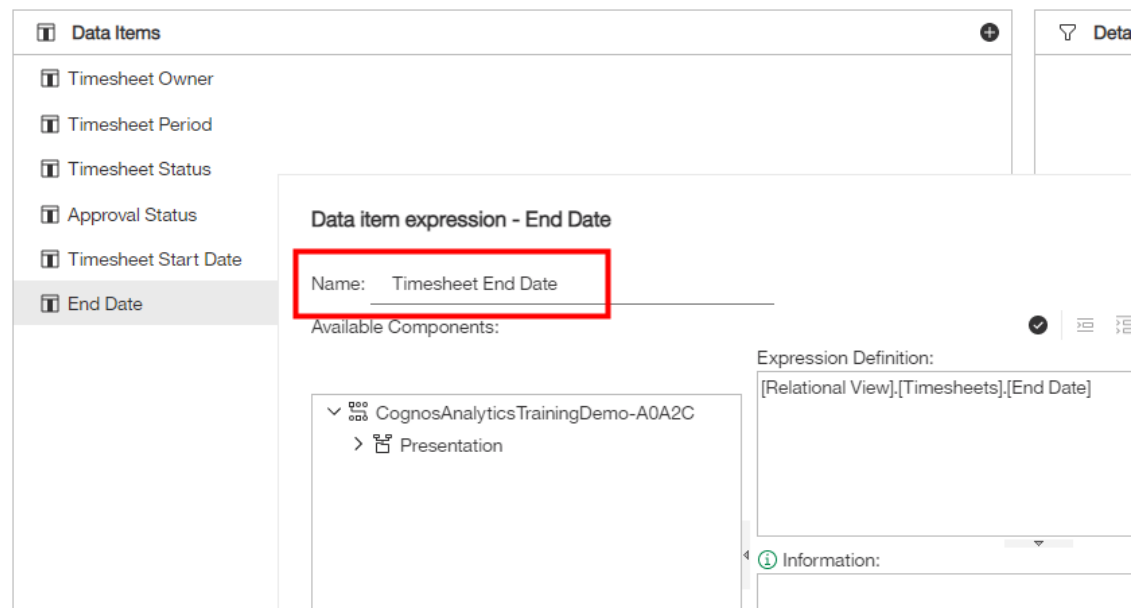
- ✓ CognosAnalyticsTrainingDemo-A0A2C
 - > Presentation

Expression Definition:
[Relational View].[Timesheets].[Start Date]

Information:

- Click **OK**

- Double-click your **End Date** item and rename it to: *Timesheet End Date*



Data item expression - End Date

Name: Timesheet End Date

Available Components:

- ✓ CognosAnalyticsTrainingDemo-A0A2C
 - > Presentation

Expression Definition:
[Relational View].[Timesheets].[End Date]

Information:

- Click **OK**

8. Using the **Sources tab** in the **Insertable objects** pane, navigate to: **Presentation > Time Tracking > Timesheet > Timesheets > IDs**, and add the following to your Query:
 - TimesheetID
 - OwnerID
9. Using the **Sources tab** in the **Insertable objects** pane, navigate to: **Presentation > Time Tracking > Timesheet > Timesheets > Timesheet Owner Information**, and add the following to your Query:
 - Department Name
10. Using the **Sources tab** in the **Insertable objects** pane, navigate to: **Presentation > Time Tracking > Timesheet > Task Work Entries**, and add the following to your Query:
 - Hours Worked

11. In the **Data Items box**, click the  icon to add a new custom Data Item

12. Rename the new Data Item: *End Date*



13. In the **Expression Definition** box, insert the following:

```
CASE WHEN _day_of_week (current_date,6) = 7  
THEN (current_date)  
ELSE  
_add_days(current_date, -_day_of_week (current_date,6))  
END
```

Data item expression - Data Item1

Name: End Date

Available Components:

 CognosAnalyticsTrainingDemo-A0A2C
>  Presentation

Expression Definition:

```

CASE WHEN _day_of_week (current_date,6) = 7
THEN (current_date)
ELSE
_add_days(current_date, -_day_of_week (current_date,6))
END

```

Information:

14. Click **OK**

15. In the **Data Items** box, click the  icon to add a new custom Data Item

16. Rename the new Data Item: *Start Date*



17. In the **Expression Definition** box, insert the following:

```
_add_days ([End Date],-83)
```

Data item expression - Data Item1

Name: Start Date

Available Components:

 CognosAnalyticsTrainingDemo-A0A2C
>  Presentation

Expression Definition:

```
_add_days ([End Date],-83)
```

Information:

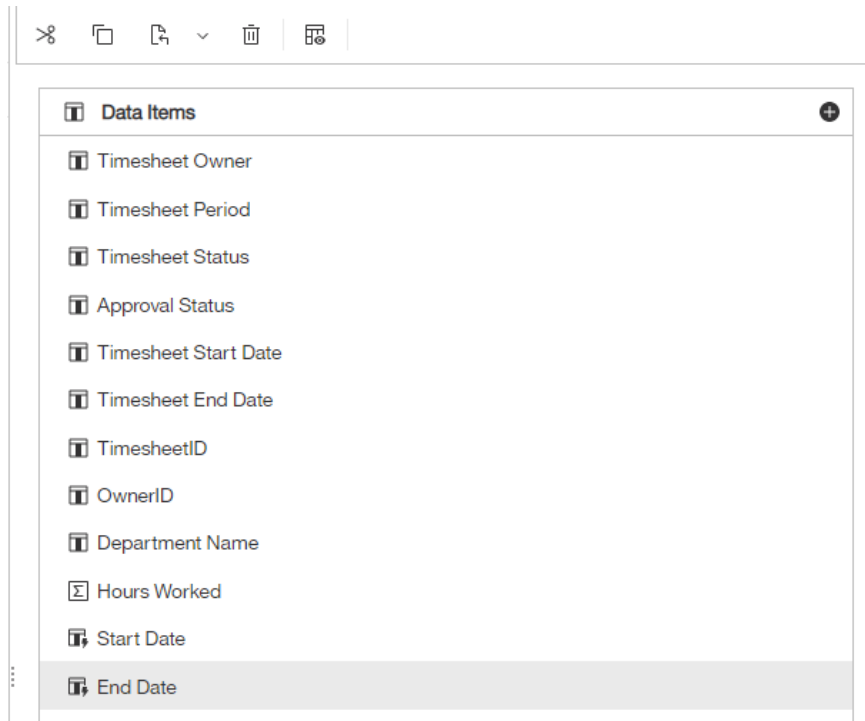
```

_add_days ( date_expression, integer_ex
Returns the date or datetime, depending
"date_expression", that results from addi
days to "date expression".

```

18. Click **OK**

19. Your current list of Data Items should look similar to this:



20. In the **Detail Filters box**, click the **+** icon to add a new custom Filter

21. In the **Expression Definition** box, insert the following:

```
extract(year, [Timesheet Start Date]) between extract(year, _add_years(current_date, -4))
and extract(year, current_date)
```

22. The finished **Expression Definition** should be:

Detail filter expression - Timesheet Info

Available Components:

▼ CognosAnalyticsTrainingDemo-A0A2C
 > Presentation

Expression Definition:
extract(year, [Timesheet Start Date]) between extract(year,
_add_years(current_date, -4)) and extract(year, current_date)

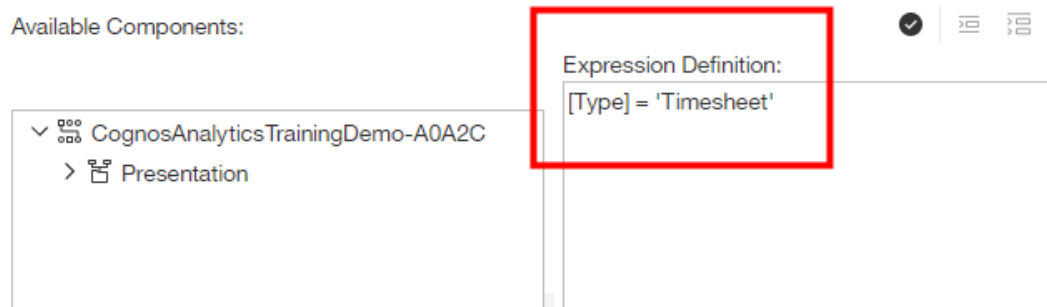
23. Click **OK** to close the **Detail filter expression** dialog box

Task 4: Add Data Items to the *Approval* Query and include Filter

1. Navigate to **Data set > Queries** and double-click the *Approval* Query
2. Using the **Sources** tab in the **Insertable objects** pane, navigate to: **Presentation > Approvals > Request**
3. Drag over the following **Data items**:
 - Type
 - Overall Status
2. From the **IDs** folder, drag over the following **Data item**:
 - ItemID
4. Click-and-drag your *Type* Data Item into the **Detail Filters** box
5. In the **Detail filter expression** dialog box, append: = 'Timesheet'

Detail filter expression - Approval

Available Components:



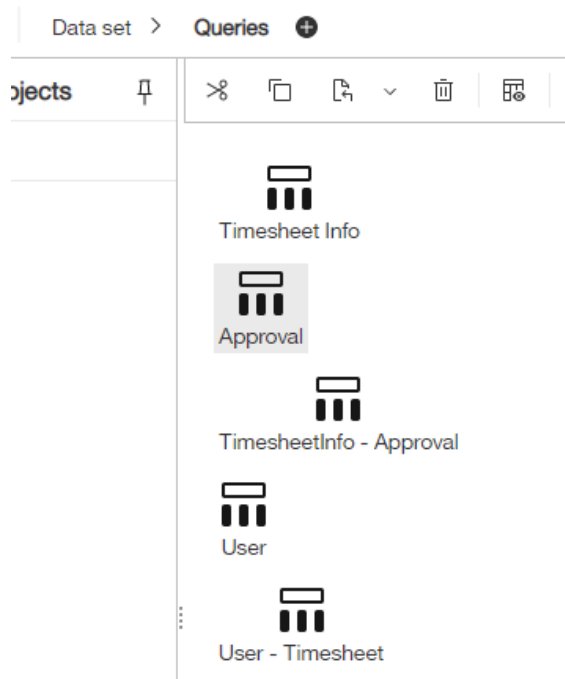
Expression Definition:

[Type] = 'Timesheet'

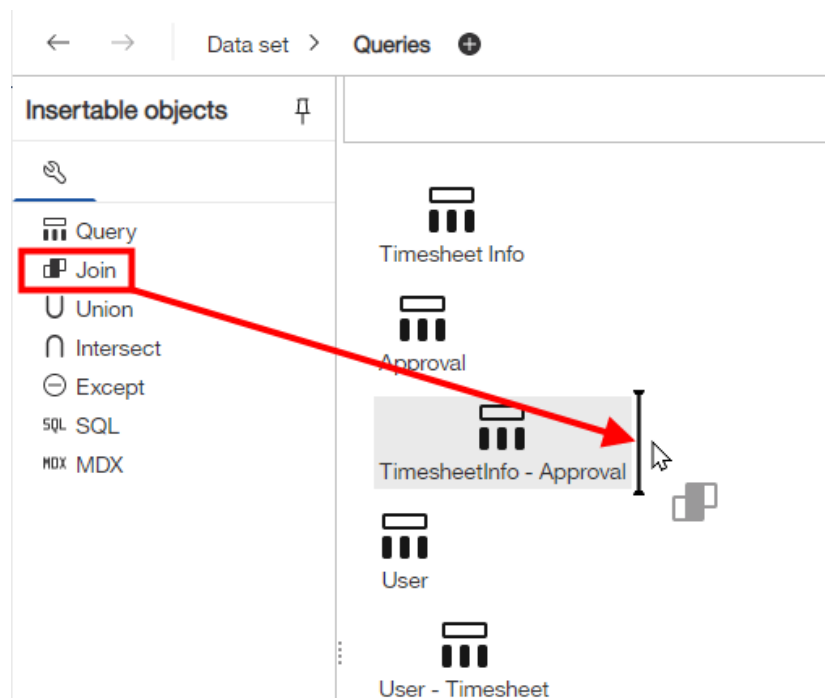
6. Click **OK**

Task 5: Add a Join to the *TimesheetInfo - Approval* Query

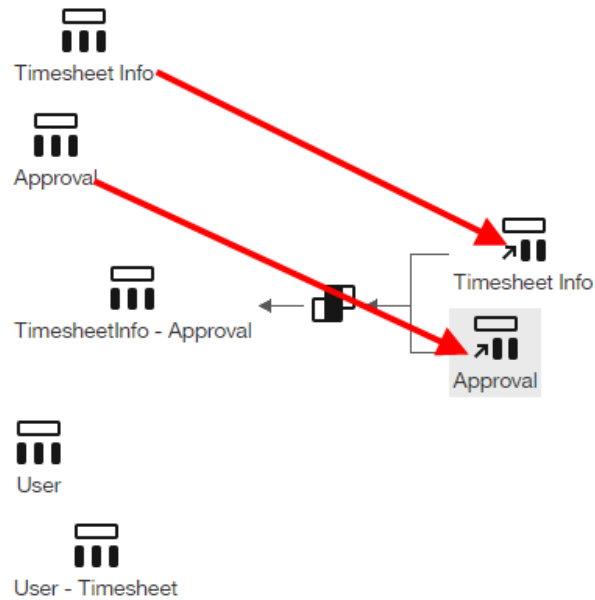
1. Navigate to **Data set > Queries**:




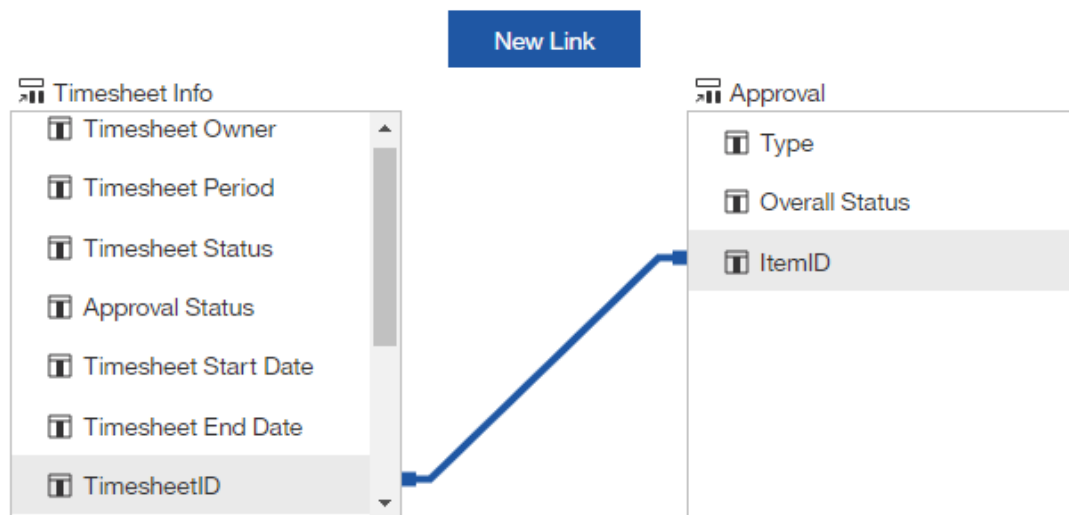
2. From **Insertable objects > Toolbox**, click to select a **Join**, and drag it to the right side of the *TimesheetInfo - Approval* Query:



3. Into the first of the 2 empty Join sources, click-and-drag the *Timesheet Info* Query
4. Into the second of the 2 empty Join sources, click-and-drag the *Approval* Query



5. Double-click the **Join**  icon
6. In the **Join relationships** dialog box, click the **New Link** button
7. Establish the connection between *TimesheetID* and *ItemID*:



8. Set the **Cardinality** values:

Join relationships
✕

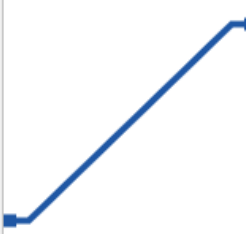
New Link

Timesheet Info

- ☐ Timesheet Owner
- ☐ Timesheet Period
- ☐ Timesheet Status
- ☐ Approval Status
- ☐ Timesheet Start Date
- ☐ Timesheet End Date
- ☐ TimesheetID

Approval

- ☐ Type
- ☐ Overall Status
- ☐ ItemID



| | | |
|--------------|-----------|--------------|
| Cardinality: | Operator: | Cardinality: |
| 1..1 ▼ | = ▼ | 0..n ▼ |

Relationship impact: Each "Approval" has one and only one "Timesheet Info".
Each "Timesheet Info" has zero or more "Approval" (outer join).

Convert to expression...

OK

Cancel

9. Click **OK**

10. Double-click the *TimesheetInfo – Approval* Query

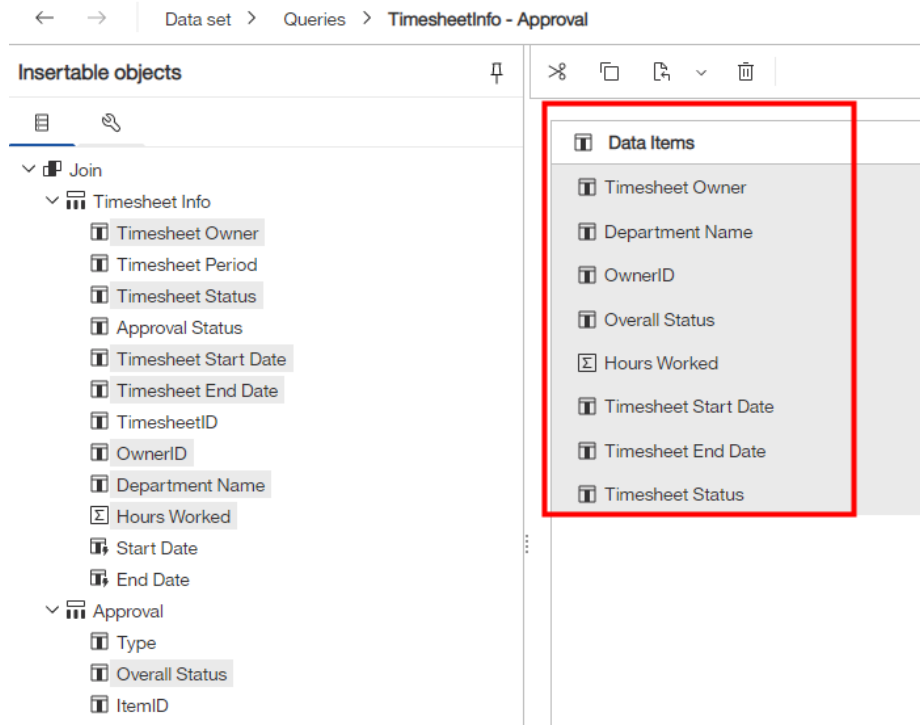
11. From **Insertable objects > Source**, drag over the following items from the joined **Timesheet Info**:

- Timesheet Owner
- Timesheet Status
- Timesheet Start Date
- Timesheet End Date
- OwnerID
- Department Name
- Hours Worked

12. From **Insertable objects > Source**, drag over the following items from the joined **Approval**:

- Overall Status

13. Your list of **Data Items** should look like this now:



The screenshot shows the Planview Daptiv interface with the 'Insertable objects' pane on the left and the 'Data Items' list on the right. The 'Insertable objects' pane is expanded to show the 'Approval' object, which includes the following items:

- Join
 - Timesheet Info
 - Timesheet Owner
 - Timesheet Period
 - Timesheet Status
 - Approval Status
 - Timesheet Start Date
 - Timesheet End Date
 - TimesheetID
 - OwnerID
 - Department Name
 - Hours Worked
 - Start Date
 - End Date
 - Approval
 - Type
 - Overall Status
 - ItemID

The 'Data Items' list on the right is highlighted with a red box and contains the following items:


- Timesheet Owner
- Department Name
- OwnerID
- Overall Status
- Hours Worked
- Timesheet Start Date
- Timesheet End Date
- Timesheet Status

Task 6: Add Data Items to the *User Query* and include Filters

1. Navigate to **Data set > Queries** and double-click the *User Query*
2. Using the **Sources tab** in the **Insertable objects** pane, navigate to: **Presentation > Enterprise User > Users**
3. Drag over the following **Data items**:
 - Organization
 - Full Name
 - Resource Manager
 - Timesheets Required
 - Status
3. From the **IDs** folder, drag over the following **Data item**:
 - DirectoryUserID
 - EnterpriseMemberID
 - OwnerID
4. Click-and-drag your *Timesheets Required* Data Item into the **Detail Filters** box
5. In the **Detail filter expression** dialog box, append: = 'Yes'

Detail filter expression - User

Available Components:





Expression Definition:
 [Timesheets Required] = 'Yes'

6. Click **OK**
7. Click-and-drag your *Status* Data Item into the **Detail Filters** box

8. In the **Detail filter expression** dialog box, append: = 'Active'

Detail filter expression - User

Available Components:

 CognosAnalyticsTrainingDemo-A0A2C
 >  Presentation

Expression Definition:














[Status] = 'Active'

9. Click **OK**

10. Your **Data Items** and **Detail Filters** for your *User* Query should look like this now:

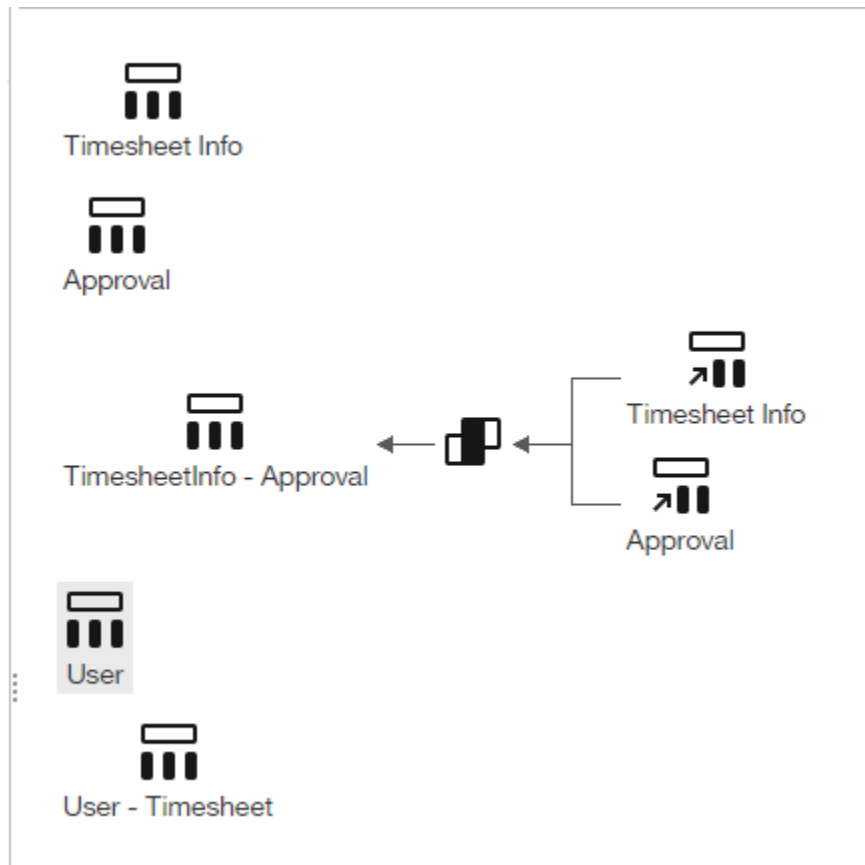
Data set > Queries > **User**

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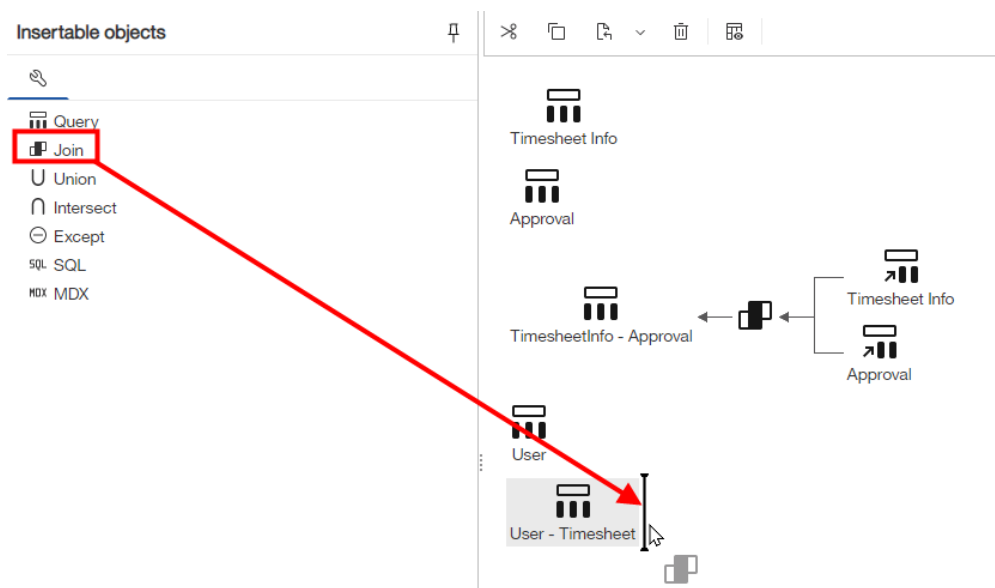
|  Data Items |  Detail Filters |
|--|--|
|  Organization  Full Name  Resource Manager  Timesheets Required  Status  DirectoryUserID  EnterpriseMemberID  OwnerID |  [Timesheets Required] = 'Yes'  [Status] = 'Active' |
| |  Summary Filters |

Task 7: Add a Join to the *User – Timesheet* Query

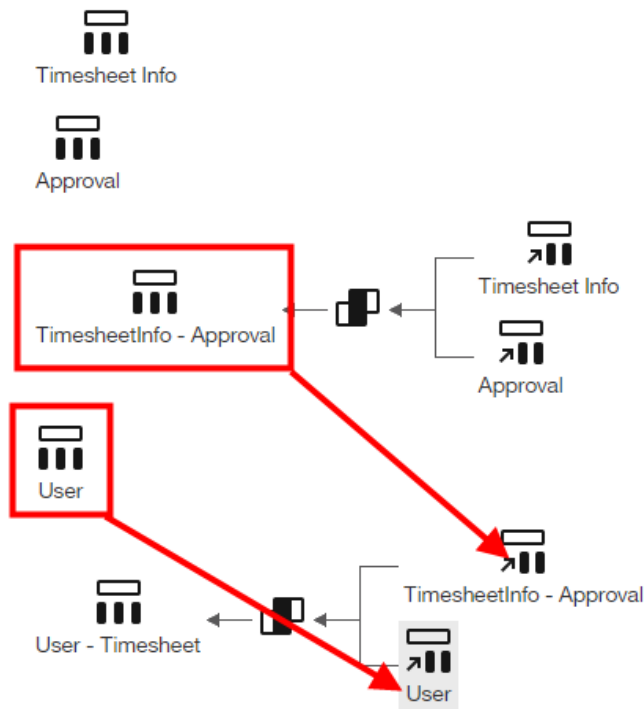
1. Navigate to **Data set > Queries:**



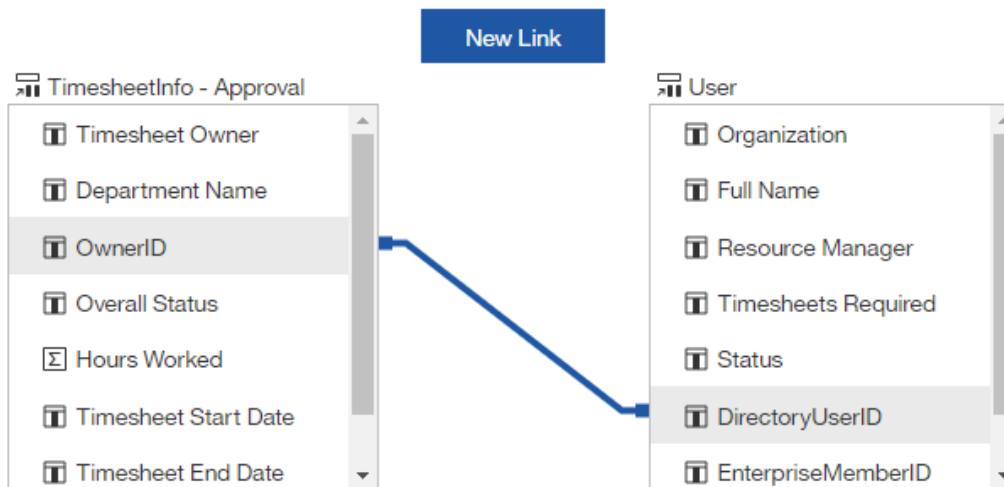
2. From **Insertable objects > Toolbox**, click to select a **Join**, and drag it to the right side of the *User - Timesheet* Query:



3. Into the first of the 2 empty Join sources, click-and-drag the *TimesheetInfo - Approval* Query
4. Into the second of the 2 empty Join sources, click-and-drag the *User* Query



5. Double-click the **Join** icon
6. In the **Join relationships** dialog box, click the **New Link** button
7. Establish the connection between *OwnerID* and *DirectoryUserID*:



8. Set the **Cardinality** values:

Join relationships
×

New Link

TimesheetInfo - Approval

Timesheet Owner

Department Name

OwnerID

Overall Status

Hours Worked

Timesheet Start Date

Timesheet End Date

User

Organization

Full Name

Resource Manager

Timesheets Required

Status

DirectoryUserID

EnterpriseMemberID

Cardinality:

Operator:

Cardinality:

1..n

=

1..1

Relationship impact: Each "User" has one or more "TimesheetInfo - Approval".
Each "TimesheetInfo - Approval" has one and only one "User".

Convert to expression...

OK

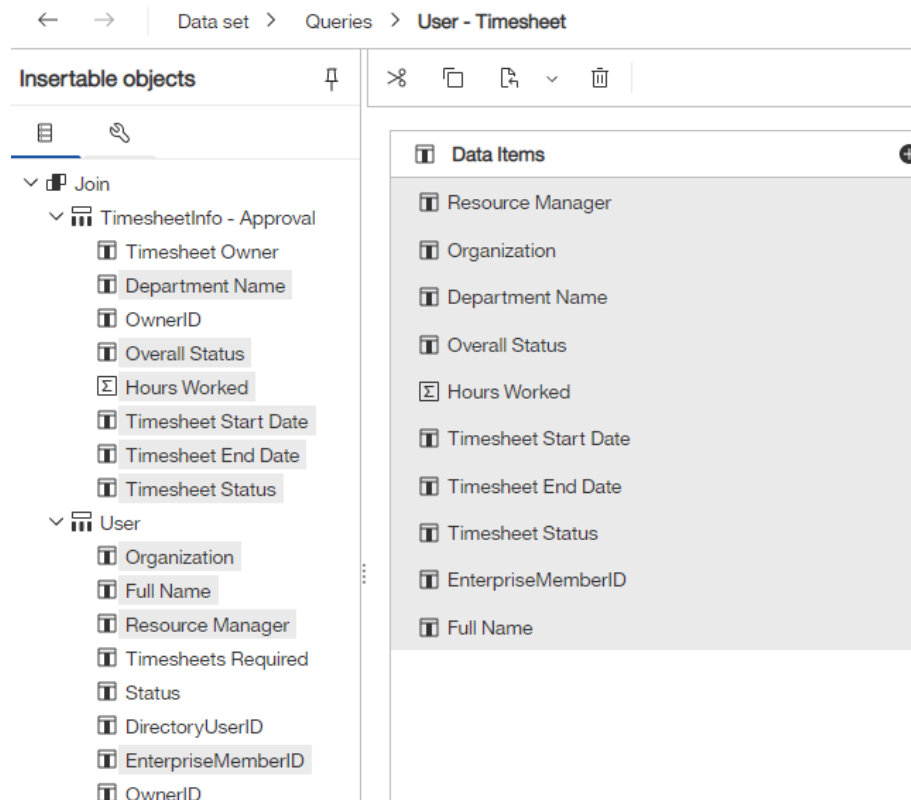
Cancel


9. Click **OK**

Task 8: Add Data Items to the *User – Timesheet* Query

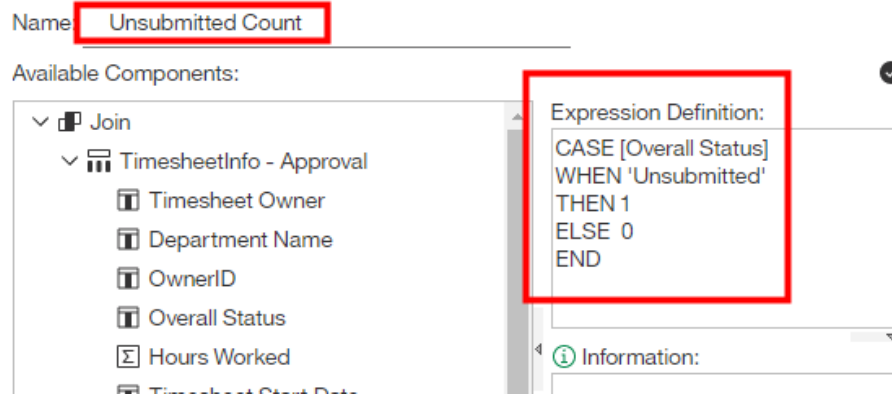
1. Double-click the *User – Timesheet* Query
2. From **Insertable objects > Source**, drag over the following **Data Items** from the joined *TimesheetInfo - Approval*:
 - Department Name
 - Overall Status
 - Hours Worked
 - Timesheet Start Date
 - Timesheet End Date
 - Timesheet Status

3. From **Insertable objects > Source**, drag over the following **Data Items** from the joined *User*:
 - Organization
 - Full Name
 - Resource Manager
 - EnterpriseMemberID

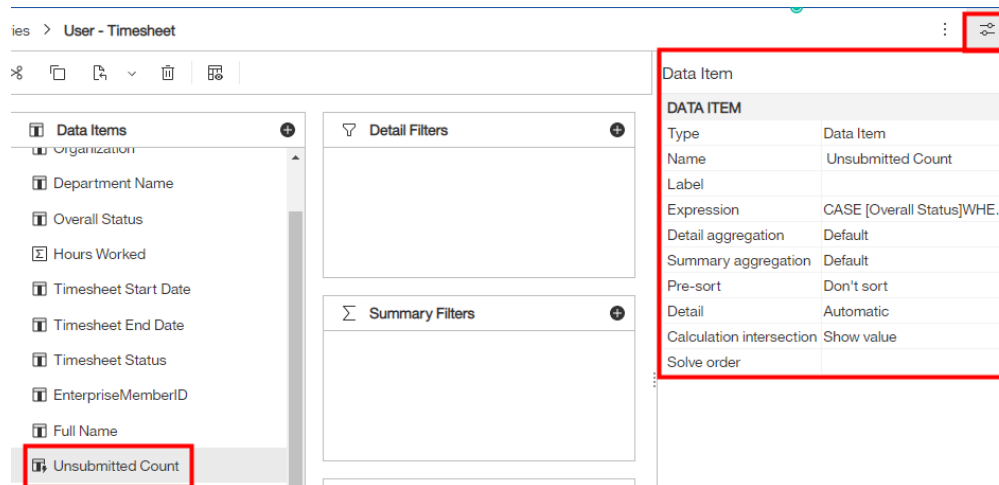


4. Remaining on the *User – Timesheet* Query, click the  icon in the **Data Items** to create a new custom Data Item
5. Change the **Name** of the new item to: *Unsubmitted Count*
6. For the Expression Definition, insert:

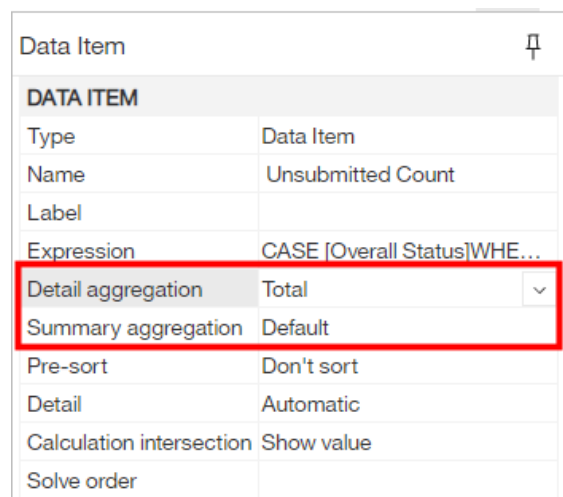

```
CASE [Overall Status]
  WHEN 'Unsubmitted'
  THEN 1
  ELSE 0
END
```




- Click **OK**
- With your **Unsubmitted Count** Data Item still selected, open the **Properties** pane:



- In **Properties** pane > **DATA ITEM**, set **Detail aggregation** value to: **Total**
- Ensure that the **Summary aggregation** value is set to: **Default**



11. Once again, click the  icon in the **Data Items** to create a new custom Data Item
12. Change the **Name** of the new item to: *Pending Count*
13. For the Expression Definition, insert:

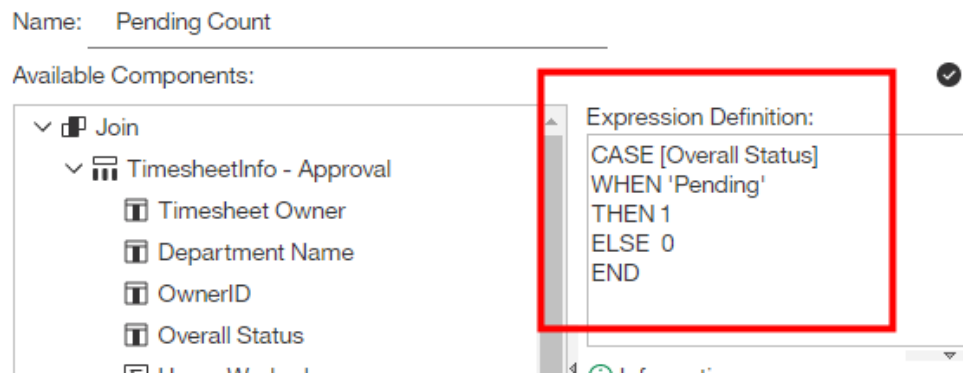
CASE [Overall Status]

WHEN 'Pending'


THEN 1

ELSE 0

END



14. Click **OK**
15. In **Properties pane > DATA ITEM**, set **Detail aggregation** value to: **Total**
16. Ensure that the **Summary aggregation** value is set to: **Default**

17. Once again, click the  icon in the **Data Items** to create a new custom Data Item
18. Change the **Name** of the new item to: *Approved Count*
19. For the Expression Definition, insert:

CASE [Overall Status]

WHEN 'Approved'

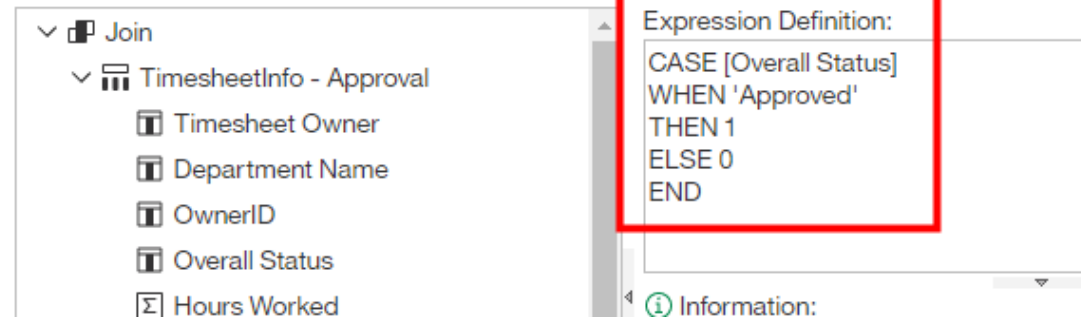
THEN 1

ELSE 0

END

Name: Approved Count

Available Components:




Expression Definition:

```
CASE [Overall Status]
WHEN 'Approved'
THEN 1
ELSE 0
END
```

Information:

20. Click **OK**
21. In **Properties pane > DATA ITEM**, set **Detail aggregation** value to: **Total**
22. Ensure that the **Summary aggregation** value is set to: **Default**

23. Once again, click the  icon in the **Data Items** to create a new custom Data Item
24. Change the **Name** of the new item to: *Declined Count*
25. For the Expression Definition, insert:

CASE [Overall Status]

WHEN 'Declined'

THEN 1


ELSE 0





END

Name: Declined Count

Available Components:

▼  Join


▼  TimesheetInfo - Approval

-  Timesheet Owner
-  Department Name
-  OwnerID
-  Overall Status

Expression Definition:

```
CASE [Overall Status]
WHEN 'Declined'
THEN 1
ELSE 0
END
```

26. Click **OK**
27. In **Properties pane > DATA ITEM**, set **Detail aggregation** value to: **Total**
28. Ensure that the **Summary aggregation** value is set to: **Default**

29. Once again, click the  icon in the **Data Items** to create a new custom Data Item
30. Change the **Name** of the new item to: *Number of Timesheets*
31. For the Expression Definition, insert:

[Pending Count]+[Approved Count]+[Declined Count]+[Unsubmitted Count]


Name: Number of Timesheets

Available Components:

- Join
 - TimesheetInfo - Approval
 - Timesheet Owner
 - Department Name
 - OwnerID
 - Overall Status

Expression Definition:

[Pending Count]+[Approved Count]+[Declined Count]+[Unsubmitted Count]

32. Click **OK**
33. In **Properties pane > DATA ITEM**, set **Detail aggregation** value to: **Total**
34. Ensure that the **Summary aggregation** value is set to: **Default**
35. Once again, click the  icon in the **Data Items** to create a new custom Data Item
36. Change the **Name** of the new item to: *Open Count*
37. For the Expression Definition, insert:

CASE [Timesheet Status]

WHEN 'Open'

THEN 1

ELSE 0

END

Name: Open Count

Available Components:

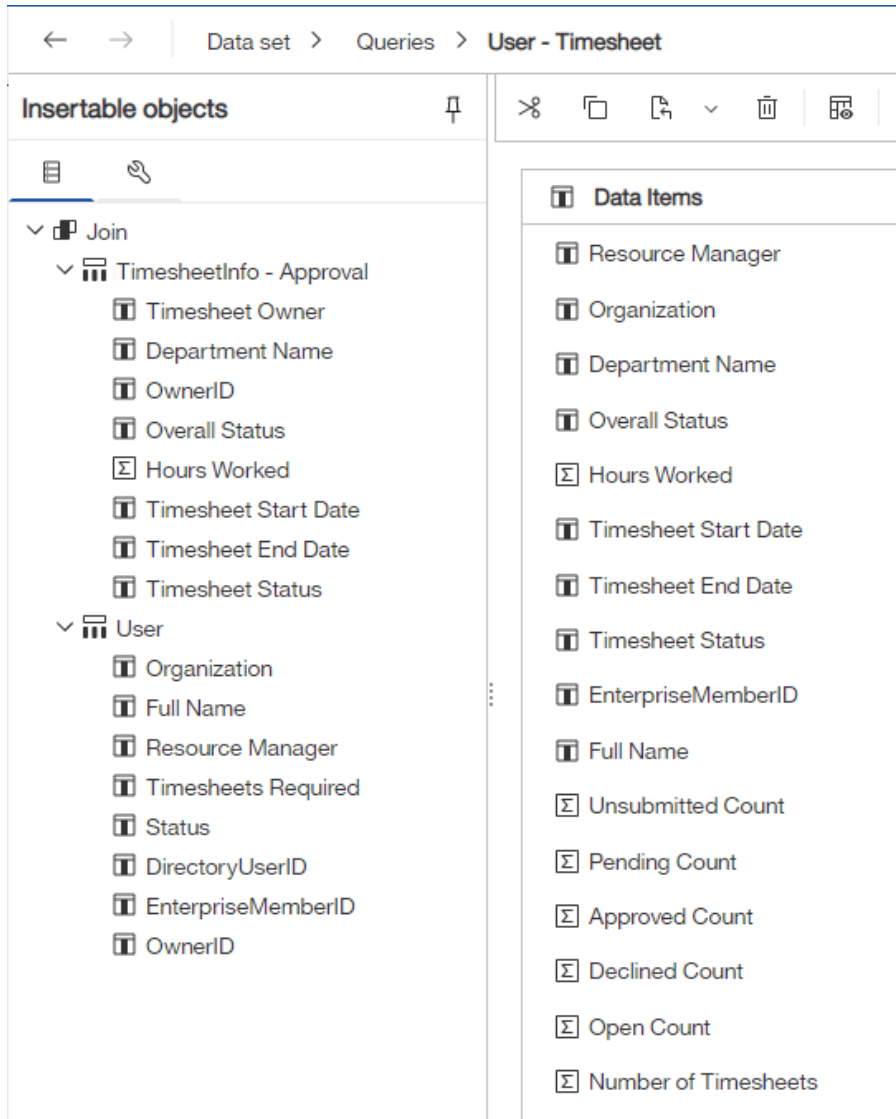
- Join
 - TimesheetInfo - Approval
 - Timesheet Owner
 - Department Name
 - OwnerID
 - Overall Status

Expression Definition:

CASE [Timesheet Status]
WHEN 'Open'
THEN 1
ELSE 0
END

38. Click **OK**

39. In **Properties pane > DATA ITEM**, set **Detail aggregation** value to: **Total**
40. Ensure that the **Summary aggregation** value is set to: **Default**
41. Your finished list of Data Items for your Main Query should look like this now:



← → | Data set > Queries > **User - Timesheet**

Insertable objects

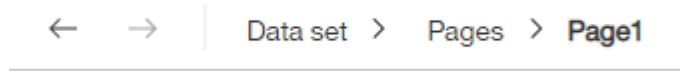
- Join
 - TimesheetInfo - Approval
 - Timesheet Owner
 - Department Name
 - OwnerID
 - Overall Status
 - Hours Worked
 - Timesheet Start Date
 - Timesheet End Date
 - Timesheet Status
 - User
 - Organization
 - Full Name
 - Resource Manager
 - Timesheets Required
 - Status
 - DirectoryUserID
 - EnterpriseMemberID
 - OwnerID

Data Items

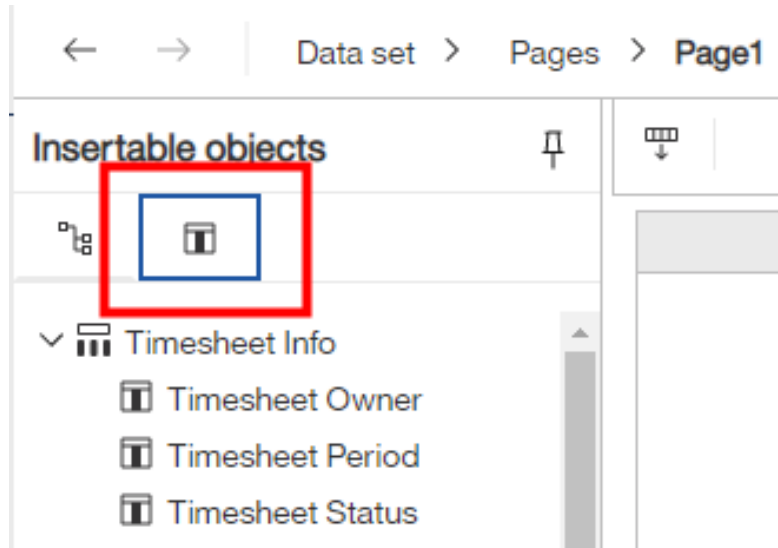
- Resource Manager
- Organization
- Department Name
- Overall Status
- Hours Worked
- Timesheet Start Date
- Timesheet End Date
- Timesheet Status
- EnterpriseMemberID
- Full Name
- Unsubmitted Count
- Pending Count
- Approved Count
- Declined Count
- Open Count
- Number of Timesheets

Task 9: Add the Data Items from the Main Query to Page1

1. Navigate to **Data set > Pages > Page1**:



2. In the **Insertable objects** pane, click the **Data Items** tab:



3. Click the main Query and drag it to Page1:

← → | Data set > Pages > Page1

Insertable objects

- Timesheet Status
- ✓ User
 - Organization
 - Full Name
 - Resource Manager
 - Timesheets Required
 - Status
 - DirectoryUserID
 - EnterpriseMemberID
 - OwnerID
 - ✓ **User - Timesheet**
 - Resource Manager
 - Organization
 - Department Name
 - Overall Status
 - Hours Worked
 - Timesheet Start Date
 - Timesheet End Date
 - Timesheet Status
 - EnterpriseMemberID
 - Full Name
 - Unsubmitted Count
 - Pending Count
 - Approved Count
 - Declined Count
 - Open Count

Add data here

☒ Summarize detailed values, suppressing duplicates, for relation

☐ Row suppression

Reset

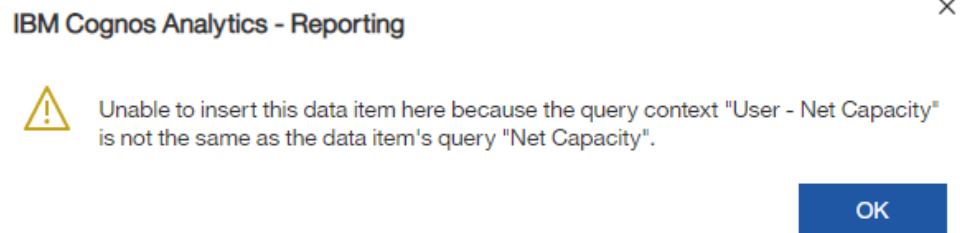
4. The **table** on *Page1* should look like this:

← → | Data set > Pages > Page1

Page design


| Resource Manager | Organization | Department Name | Overall Status | Hours Worked | Timesheet Start Date | Timesheet End Date | Timesheet Status | EnterpriseMemberID | Full Name | Unsubmitted Count | Pending Count | Approved Count | Declined Count | Open Count | Number of Timesheets |
|--------------------|----------------|-------------------|------------------|----------------|------------------------|----------------------|--------------------|----------------------|-------------|---------------------|-----------------|------------------|------------------|--------------|------------------------|
| <Resource Manager> | <Organization> | <Department Name> | <Overall Status> | <Hours Worked> | <Timesheet Start Date> | <Timesheet End Date> | <Timesheet Status> | <EnterpriseMemberID> | <Full Name> | <Unsubmitted Count> | <Pending Count> | <Approved Count> | <Declined Count> | <Open Count> | <Number of Timesheets> |
| <Resource Manager> | <Organization> | <Department Name> | <Overall Status> | <Hours Worked> | <Timesheet Start Date> | <Timesheet End Date> | <Timesheet Status> | <EnterpriseMemberID> | <Full Name> | <Unsubmitted Count> | <Pending Count> | <Approved Count> | <Declined Count> | <Open Count> | <Number of Timesheets> |
| <Resource Manager> | <Organization> | <Department Name> | <Overall Status> | <Hours Worked> | <Timesheet Start Date> | <Timesheet End Date> | <Timesheet Status> | <EnterpriseMemberID> | <Full Name> | <Unsubmitted Count> | <Pending Count> | <Approved Count> | <Declined Count> | <Open Count> | <Number of Timesheets> |

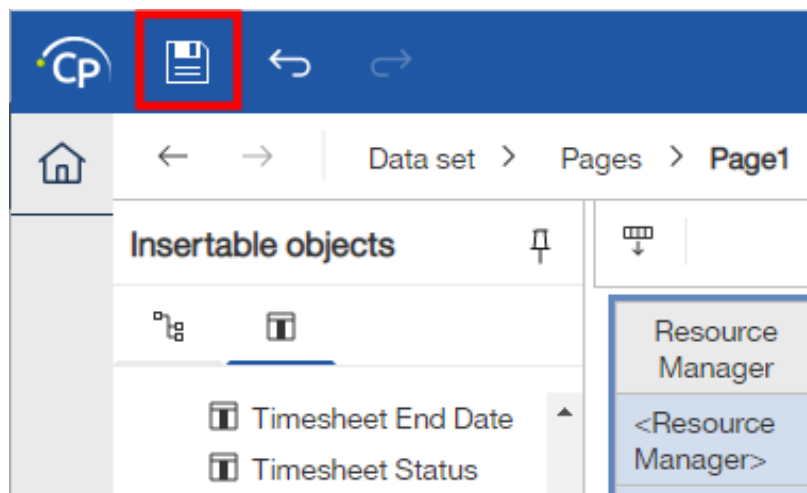
Note: If you encountered the following error:



Solution: Click the **Reset** button at the bottom of the screen, and try again.

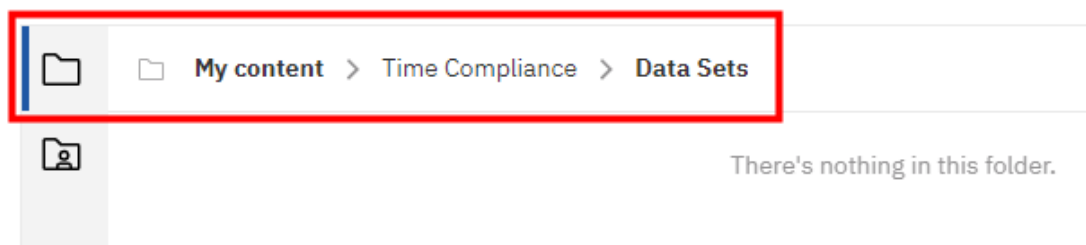
Task 10: Save the Data Set

1. Click the floppy disk  icon in the upper left corner of the window:



2. Choose **Save as**
3. Navigate to **My content > Time Compliance > Data Sets**:

Save as



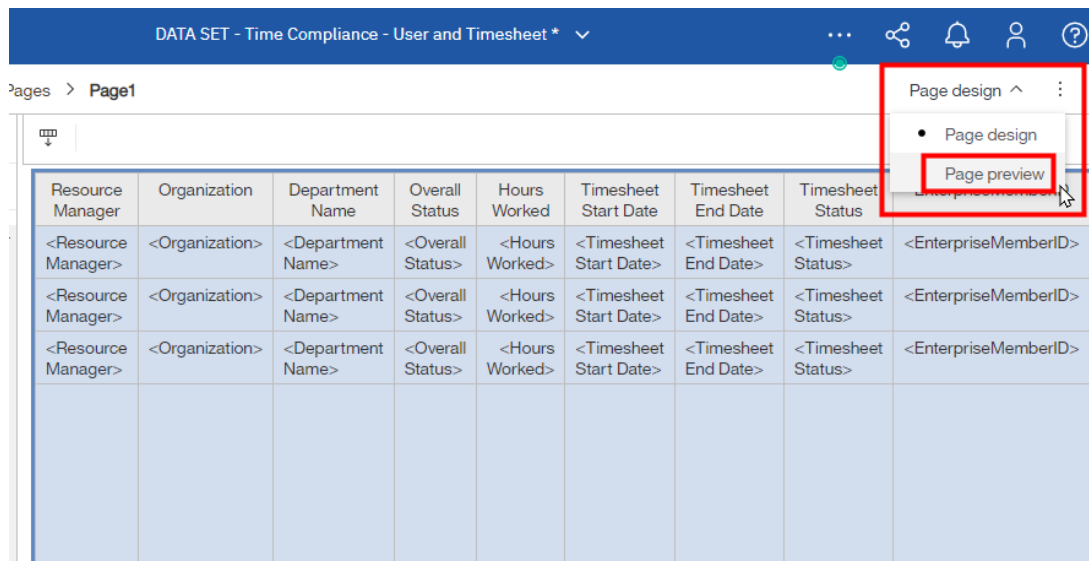
- Provide the following name:

DATA SET – Time Compliance – User and Timesheet

- Click **Save**

Task 11: Preview the data in the Data Set

- Remaining on **Page1**, change from **Page design** view to **Page preview**:



- A subset of the data in your **Data Set** will appear in the table:

| Resource Manager | Organization | Department Name | Overall Status | Hours Worked | Start Date | End Date | Timesheet Status | EnterpriseMemberID | Full Name | Un |
|------------------|--------------|-----------------|----------------|--------------|------------|----------|------------------|--|----------------|----|
| Billy Hargrove | | Engineering | Approved | | 1/24/21 | 1/30/21 | Closed | {E296E596-B486-45E2-8C3E-1C1CEB382501} | Rebecca Thomas | |
| Billy Hargrove | | Engineering | Approved | | 2/14/21 | 2/20/21 | Closed | {E296E596-B486-45E2-8C3E-1C1CEB382501} | Rebecca Thomas | |
| Billy Hargrove | | Engineering | Approved | | 3/7/21 | 3/13/21 | Closed | {E296E596-B486-45E2-8C3E-1C1CEB382501} | Rebecca Thomas | |
| Billy Hargrove | | Engineering | Approved | | 3/14/21 | 3/20/21 | Closed | {E296E596-B486-45E2-8C3E-1C1CEB382501} | Rebecca Thomas | |
| Billy Hargrove | | Engineering | Approved | | 3/28/21 | 4/3/21 | Closed | {E296E596-B486-45E2-8C3E-1C1CEB382501} | Rebecca Thomas | |

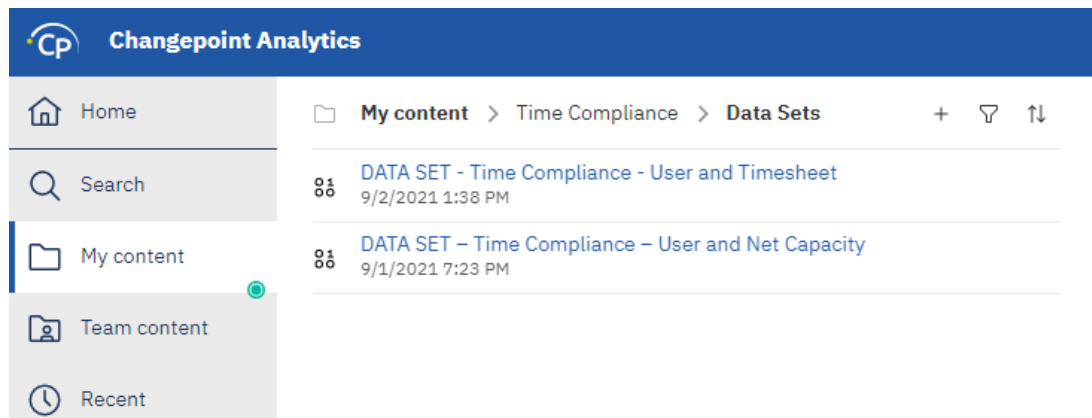
Exercise 4 (Data Sets): Refresh your Data Sets


Scenario:

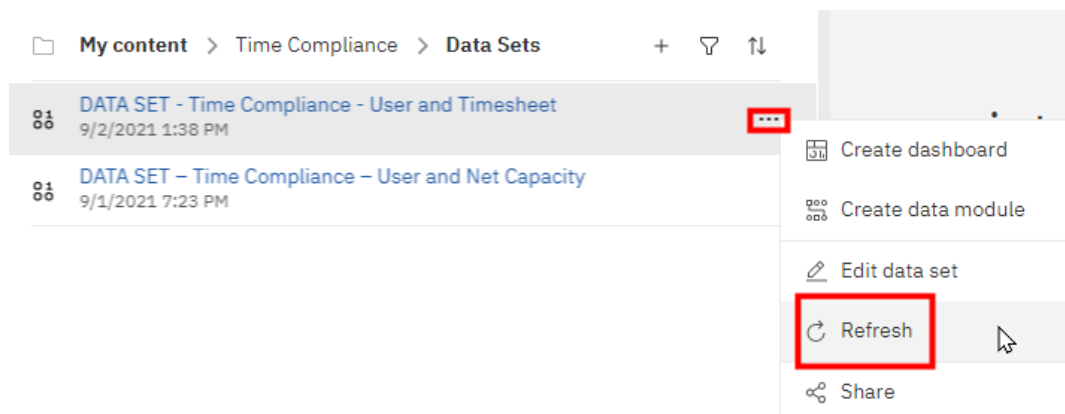
You want to ensure that the data in your **Data Sets** is up-to-date.

Task 1: Select your Data Items and apply Filters

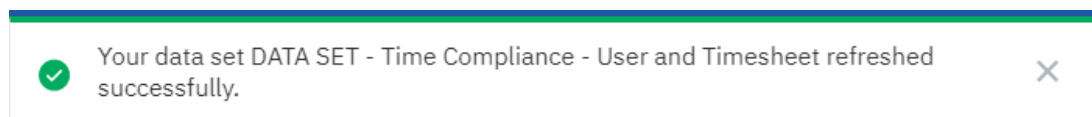
1. Navigate to your **Data Sets Folder**:



2. Use the **More menu** and select  **Refresh** :



3. When you see the success message (below), **refresh** your second Data Set:



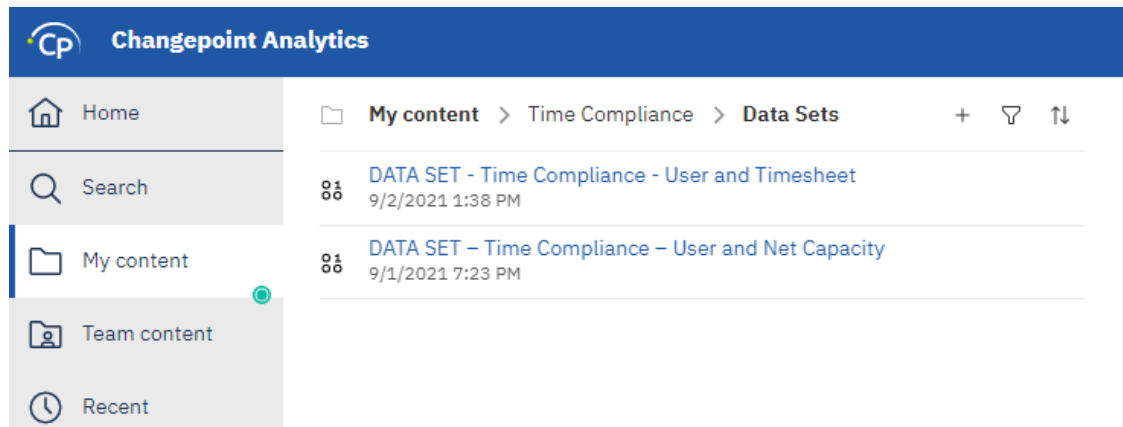
Exercise 5 (Data Module): Create the Data Module

Scenario:

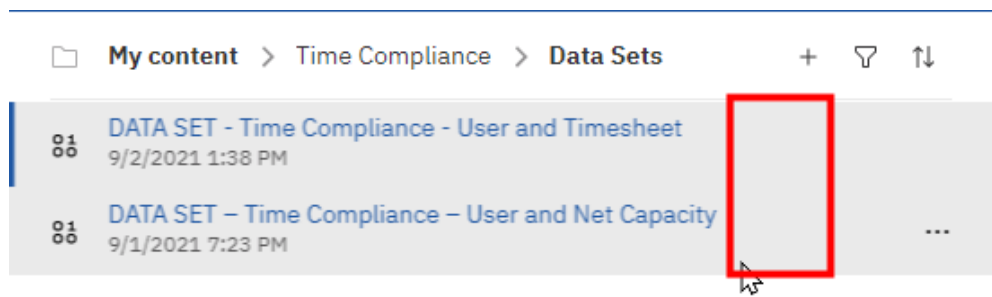
Now that you have created your Data Sets, the next step is to organize them into a **Data Module** and establish the relationship between the Data Sets.

Task 1: Select your Data Sets and create a Data Module

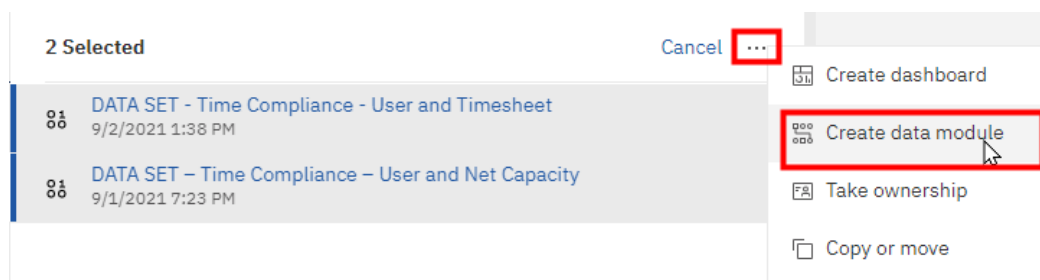
4. Navigate to your **Data Sets Folder**:



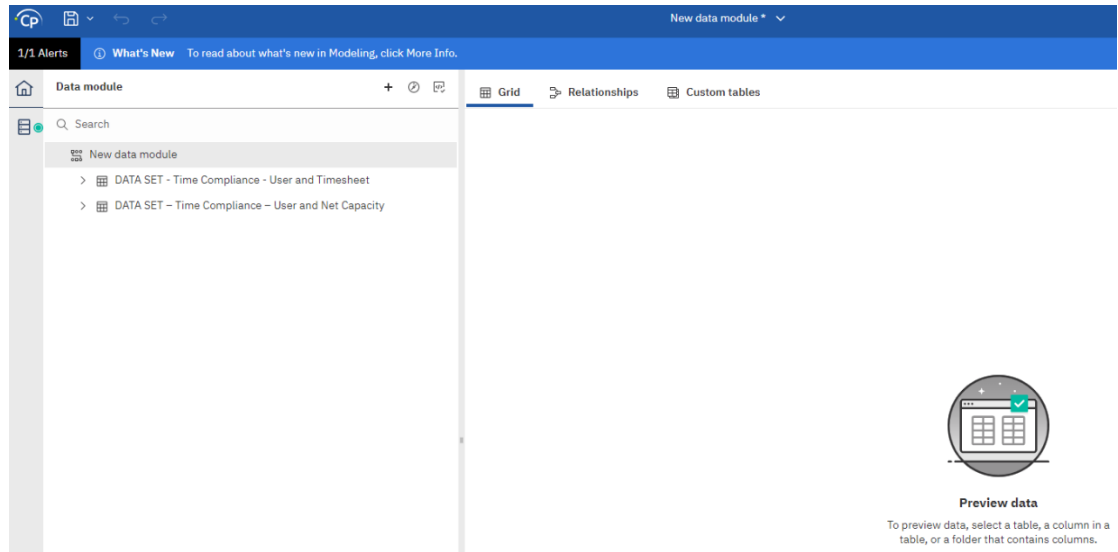
1. Click to select your first **Data Set**, then Ctrl+click your second **Data Set**. Click to the side or beneath, so that you avoid opening either Data Set:



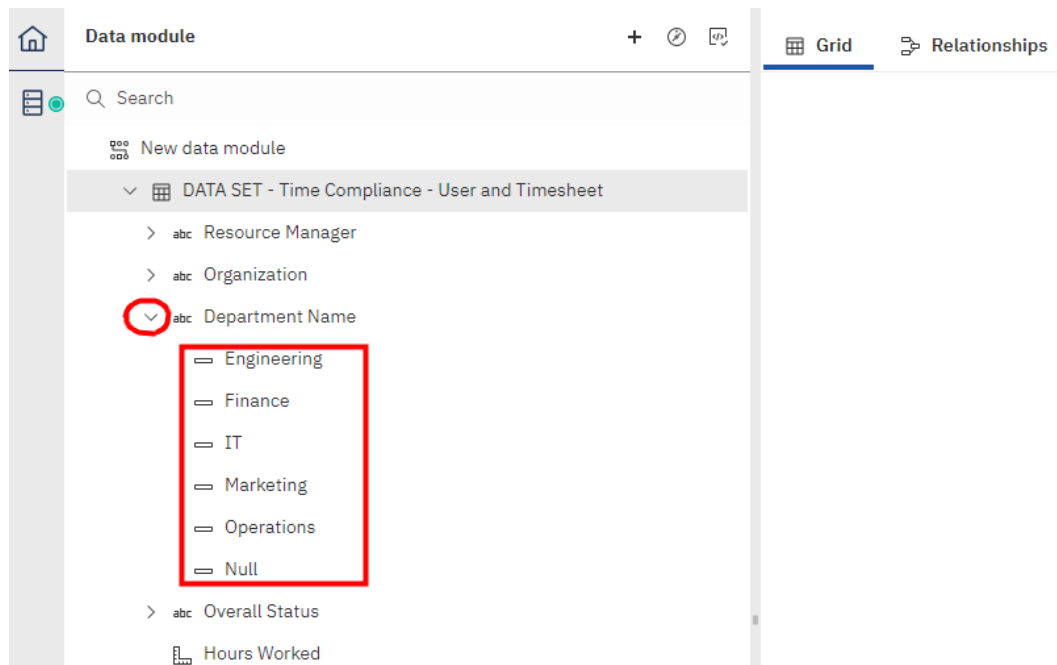
2. With both Data Sets selected, use the **More menu** in the upper right and select **Create data module**



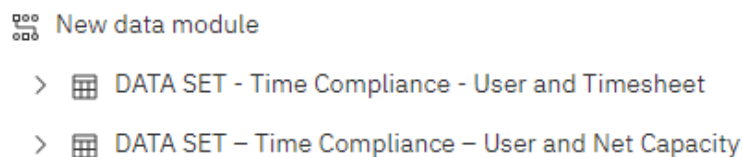
3. Your screen should look like this:



4. Confirm that your **Data Sets** have data in them, by clicking to expand any one Data Item. It should expand and show you the contents of the Data Item:

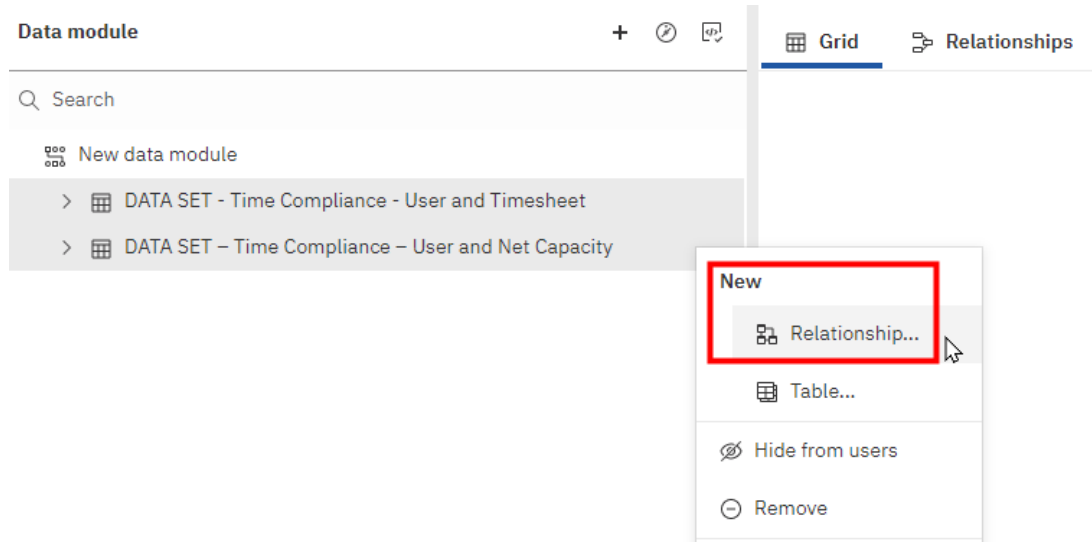


5. Collapse the expanded view so that you see only the 2 Data Sets again:



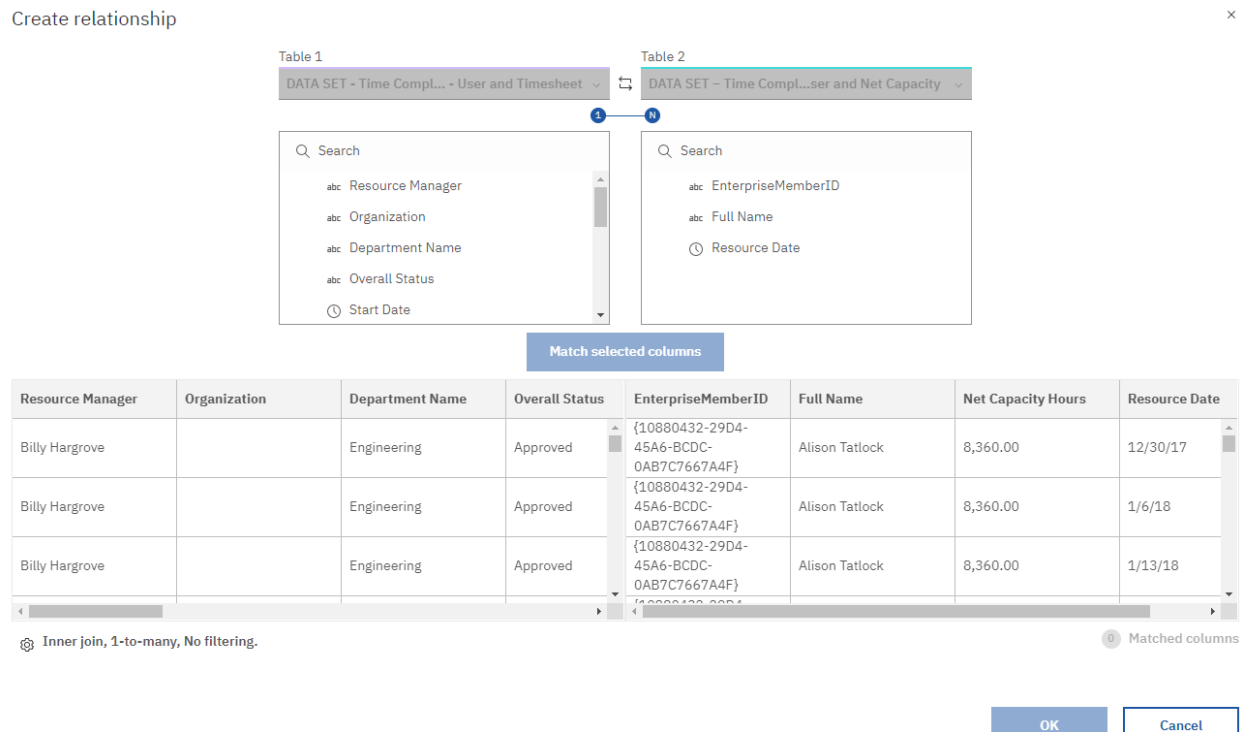
Task 2: Create the relationship between the Data Sets

1. Click to select your first **Data Set**, then Ctrl+click your second **Data Set**
2. Right-click and choose **New > Relationship...**



3. The **Create relationship** dialog box appears:

Create relationship



The 'Create relationship' dialog box shows two tables being related. Table 1 is 'DATA SET - Time Compl... - User and Timesheet' and Table 2 is 'DATA SET - Time Compl...ser and Net Capacity'. The columns for each table are listed in search boxes. A 'Match selected columns' button is present. Below the search boxes, a table shows the resulting relationship data. At the bottom, there are 'OK' and 'Cancel' buttons.

| Resource Manager | Organization | Department Name | Overall Status | EnterpriseMemberID | Full Name | Net Capacity Hours | Resource Date |
|------------------|--------------|-----------------|----------------|--|----------------|--------------------|---------------|
| Billy Hargrove | | Engineering | Approved | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 8,360.00 | 12/30/17 |
| Billy Hargrove | | Engineering | Approved | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 8,360.00 | 1/6/18 |
| Billy Hargrove | | Engineering | Approved | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock | 8,360.00 | 1/13/18 |

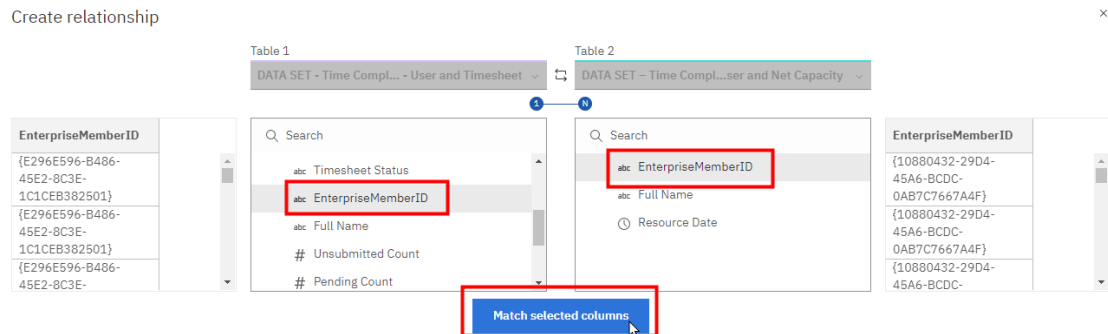
Inner join, 1-to-many, No filtering.

Matched columns

OK Cancel

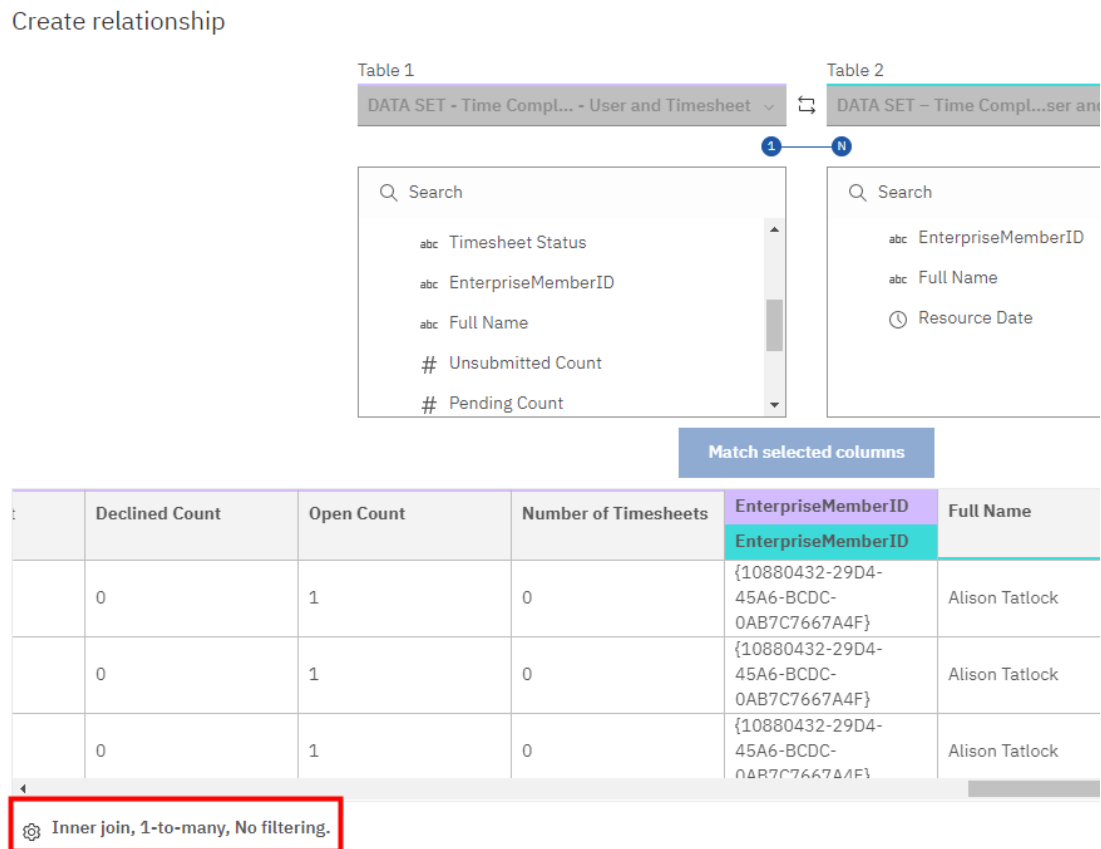
- Click select **EnterpriseMemberID** in both sides, then click the **Match selected columns** button:

Create relationship



- Click the **Refresh** button
- Confirm that the **Relationship Type** is **Inner join, 1-to-1, No filtering**

Create relationship



Match selected columns

| | Declined Count | Open Count | Number of Timesheets | EnterpriseMemberID | Full Name |
|--|----------------|------------|----------------------|--|----------------|
| | 0 | 1 | 0 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock |
| | 0 | 1 | 0 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock |
| | 0 | 1 | 0 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | Alison Tatlock |

Inner join, 1-to-many, No filtering.

7. If incorrect, click the ⚙️ menu and set the **Cardinality** to **1-to-1**

Create relationship

Relationship Type

- ☒ Inner join
- ☐ Left outer join
- ☐ Right outer join
- ☐ Full outer join

Cardinality

- ☒ 1-to-1
- ☐ 1-to-many
- ☐ Many-to-1

Optimization

- ☒ No filtering
- ☐ Unique values
- ☐ Range of values
- ☐ Unique values in a subquery
- ☐ Unique or range of values

Match selected columns

Pending Count Approved Count Declined Count

Data will appear here

Refresh

⚙️ Inner join, 1-to-1, No filtering.

8. Match a 2nd set of columns: click to select **Start Date** and **Resource Date** in the boxes, then click the **Match selected columns** button:

Create relationship

Match selected columns

| Declined Count | Open Count | Number of Timesheets | EnterpriseMemberID | Full Name | Net Capacity Hours | Resource Date |
|----------------|------------|----------------------|----------------------------|----------------|--------------------|---------------|
| 0 | 1 | 0 | {10880432-29D4-45A6-BCDC-} | Alison Tatlock | 8,360.00 | 12/30/17 |

9. Click the **Refresh** button

10. Several rows will populate to preview the matched columns of data:

Edit relationship

Table 1

DATA SET - Time Compl...ser and Net Capacity

Search

- EnterpriseMemberID
- Full Name
- Resource Date

Table 2

DATA SET - Time Compl... - User and Timesheet

Search

- Resource Manager
- Department Name
- Overall Status
- Start Date
- End Date

Match selected columns

| Full Name | Net Capacity Hours | EnterpriseMemberID | Resource Date | Resource Manager | Department Name | Overall Status | Hours Wor |
|----------------|--------------------|--|---------------|------------------|-----------------|----------------|-----------|
| Alison Tatlock | 40.00 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | 8/22/21 | Report Trainer | Null | Pending | Null |
| Alison Tatlock | 40.00 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | 8/29/21 | Report Trainer | Null | Null | Null |
| Alison Tatlock | 40.00 | {10880432-29D4-45A6-BCDC-0AB7C7667A4F} | 9/5/21 | Report Trainer | Null | Null | Null |

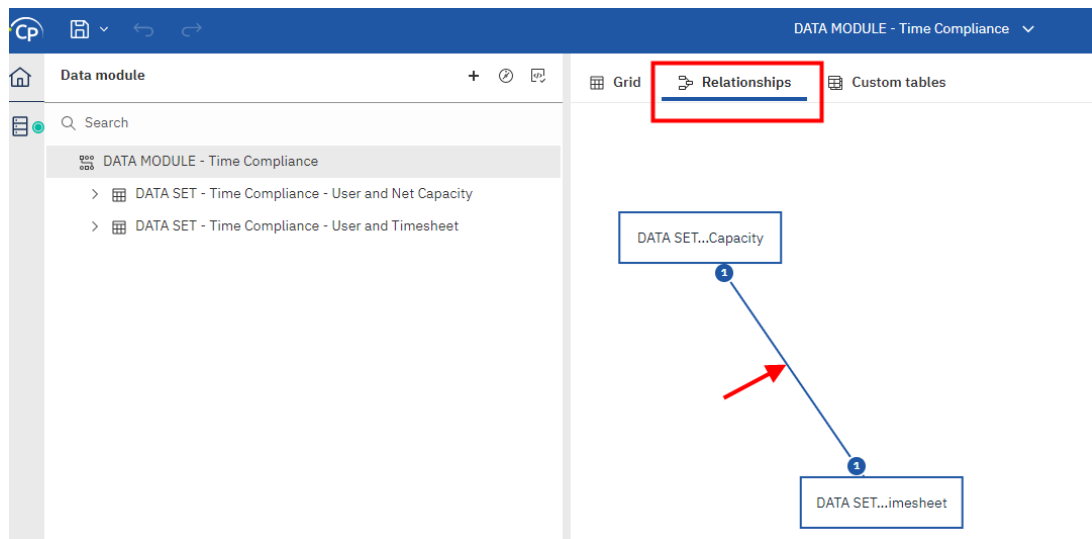
Inner join, 1-to-1, No filtering.

Matched columns

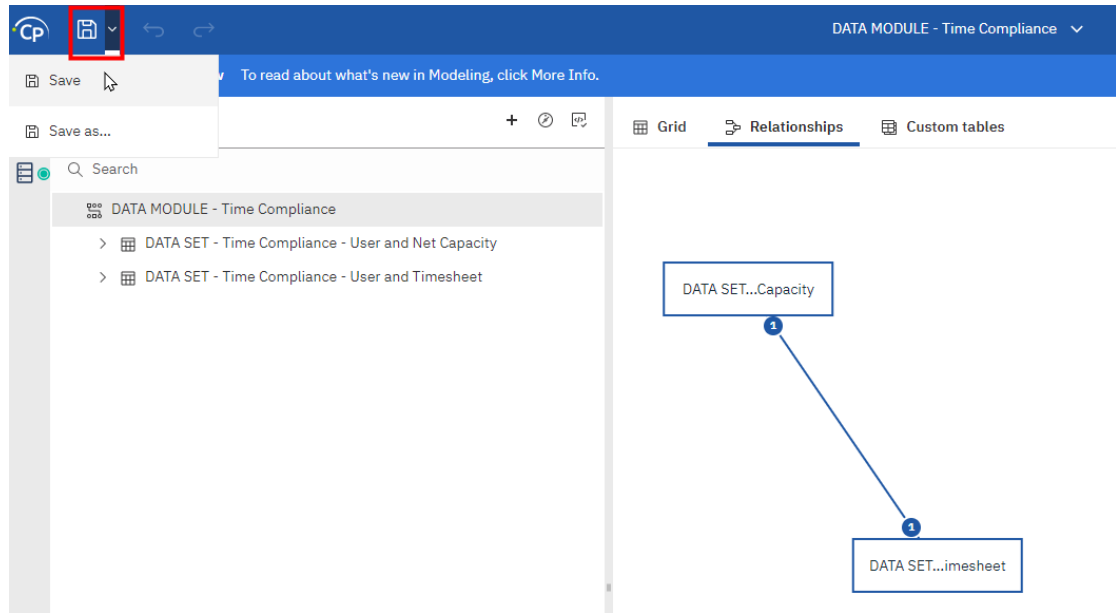
OK Cancel

11. Click **OK** to close the **Create relationship** dialog box

12. Change from **Grid view** to **Relationships view** to see a graphical representation of the Data Sets' connection. (Double-click the blue line to make edits to the relationship, if necessary.)

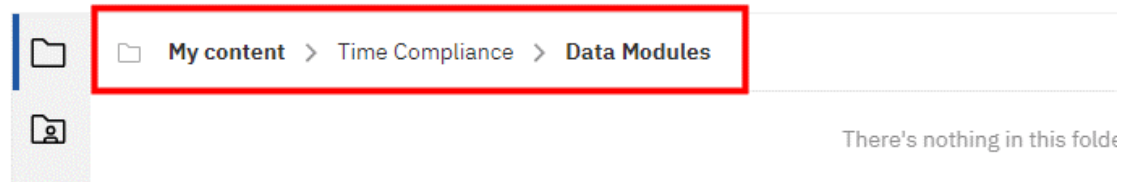


13. Click the disk icon, then **Save as...**:



14. Navigate to **My content > Time Compliance > Data Modules**:

Save as



15. Provide a descriptive name: *DATA MODULE – Time Compliance*

16. Click **OK**

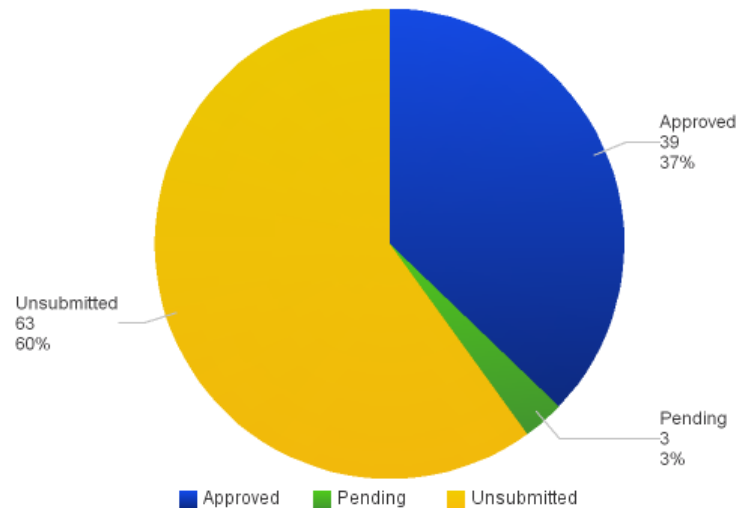
Exercise 6 (Data Module): Import or Create a Time Compliance Report and Point it to Your New Data Module

Scenario:

A common Time Compliance report (see below) that queries against the Net Capacity data in your main Cognos Data Model can be very time-consuming. For better performance, point a Time Compliance report to run against your new ***Time Compliance Data Module***.


Time Compliance Reporting

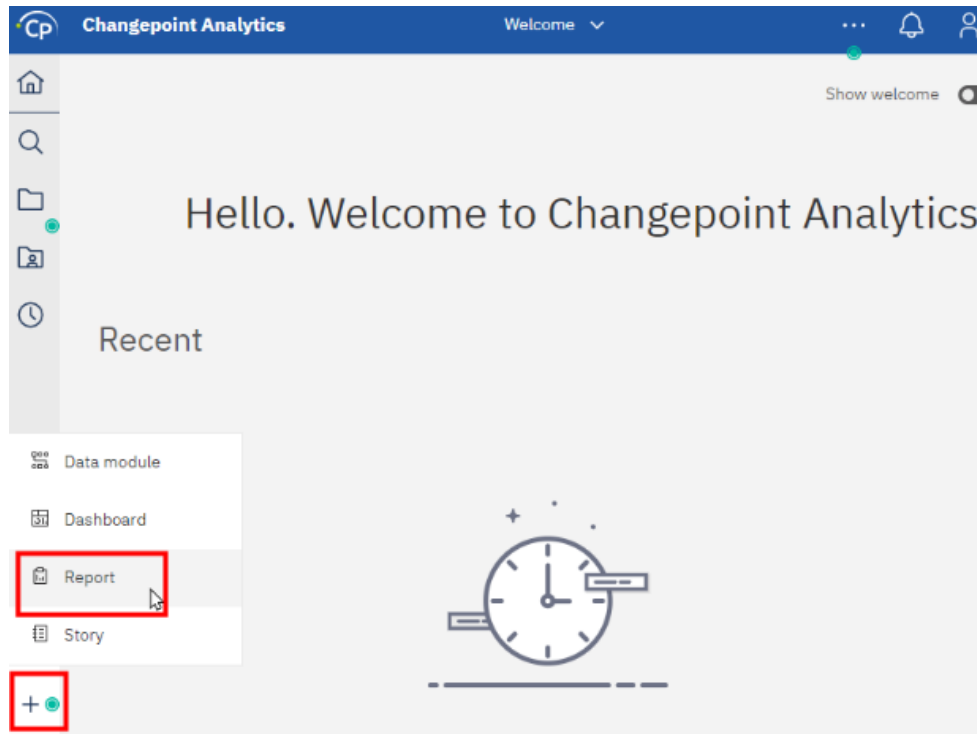
| Over all Compliance | Over all Number of Timesheets | Over all Open Count |
|---------------------|-------------------------------|---------------------|
| 37% | 105 | 63 |



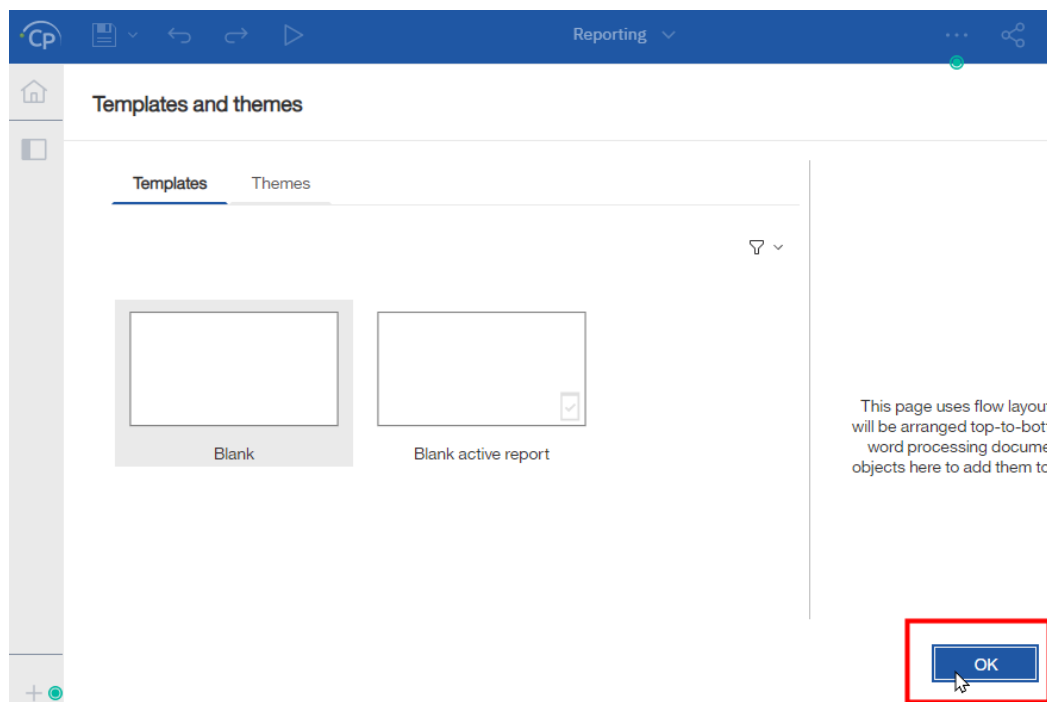
| Resource Manager | Compliance (%) | Number of Timesheets | Open | Pending | Approved | Declined | Unsubmitted |
|-------------------|----------------|----------------------|-----------|----------|-----------|----------|-------------|
| Billy Hargrove | 67% | 12 | 4 | 0 | 8 | 0 | 4 |
| Claudia Henderson | 42% | 12 | 7 | 0 | 5 | 0 | 7 |
| Matt Duffer | 55% | 11 | 2 | 3 | 6 | 0 | 2 |
| Nancy Wheeler | 58% | 12 | 5 | 0 | 7 | 0 | 5 |
| Report Trainer | 18% | 40 | 33 | 0 | 7 | 0 | 33 |
| Will Byers | 33% | 18 | 12 | 0 | 6 | 0 | 12 |
| Overall | 37% | 105 | 63 | 3 | 39 | 0 | 63 |

Task 1: Create a new <blank> report

- Using the left-side navigation menu in the Analytics portal, click the  icon, then click **Report**:



- Click the **OK** button:



Task 2: Import XML report

1. Double-click to open the XML text file embedded here:



2. **Select** and **copy** the entire block of text in the XML text file:

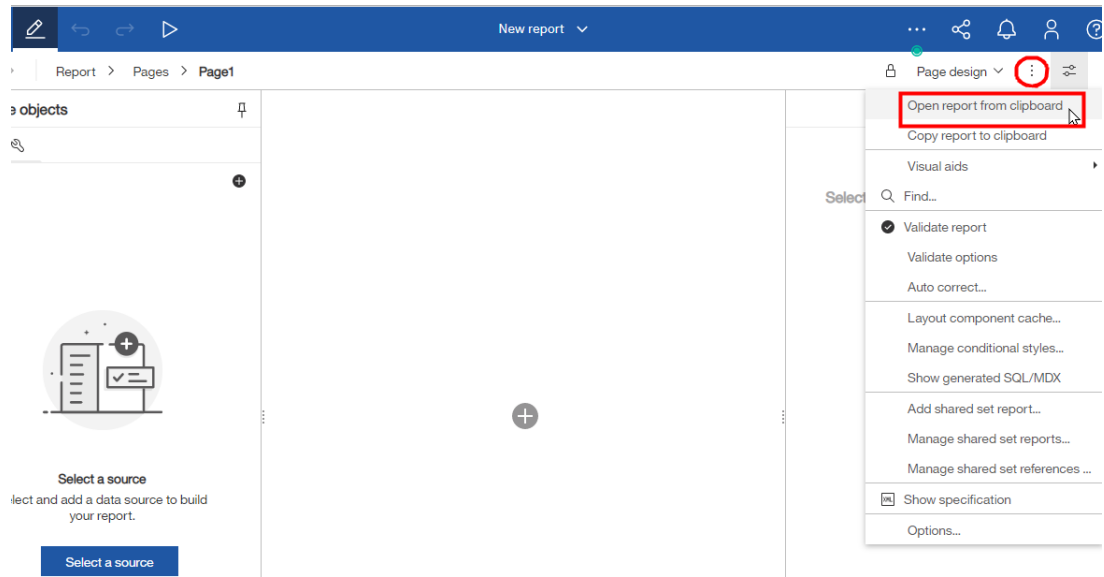


```

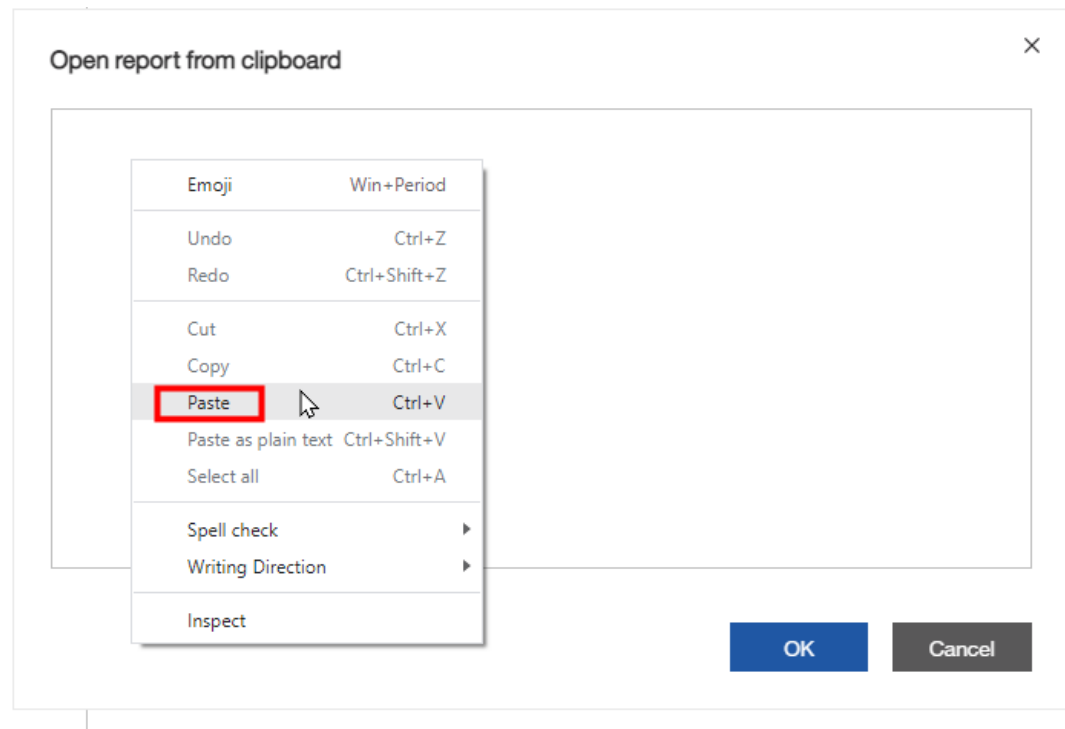
<report xmlns="http://developer.cognos.com/schemas/report/15.5/"
expressionLocale="en-us" useStyleVersion="11.6">
  <drillBehavior/>
  <layouts>
    <layout>
      <reportPages>
        <page name="Page1">
          <style>
            <defaultStyles>
              <defaultStyle
refStyle="pg"/>
            </defaultStyles>
          </style>
          <pageBody>
            <style>
              <defaultStyles>
                <defaultStyle refStyle="pb"/>
              </defaultStyles>
              <style>
                <CSS value="text-align:center;font-size:9pt"/>
              </style>
            </style>
            <contents><table><style><CSS value="border-collapse:collapse;margin-top:20px"/></style><tableRows><tableRow><tableCells><table
Cell><contents><list horizontalPagination="true" name="List2" refQuery="P1-User and
  
```

3. Return to your new <blank> report

- Click the **More menu** in the upper right, then click **Open report from clipboard**:

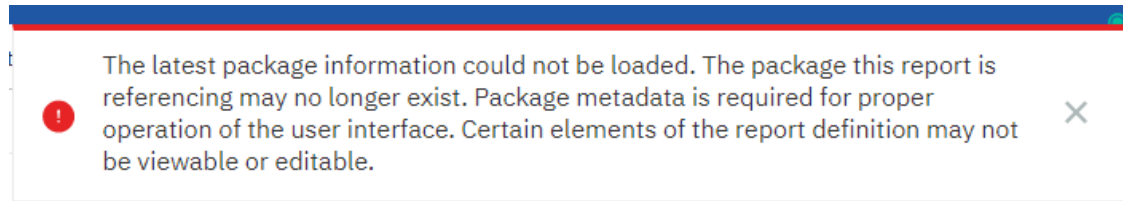


- Subsequently, in the new **Open report from clipboard** window, **paste** the text you copied from the XML text file:

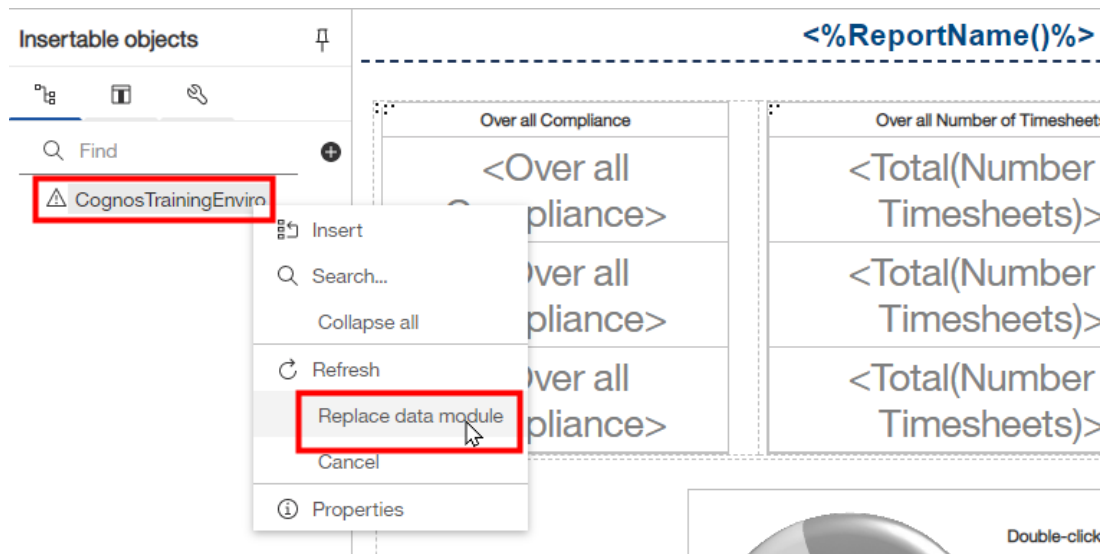


- Click **OK**

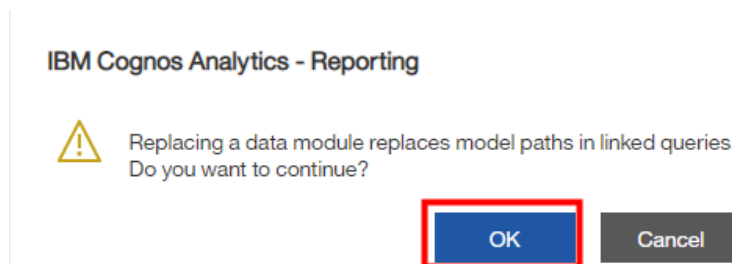
- You will encounter the following warning message, which is to be expected:



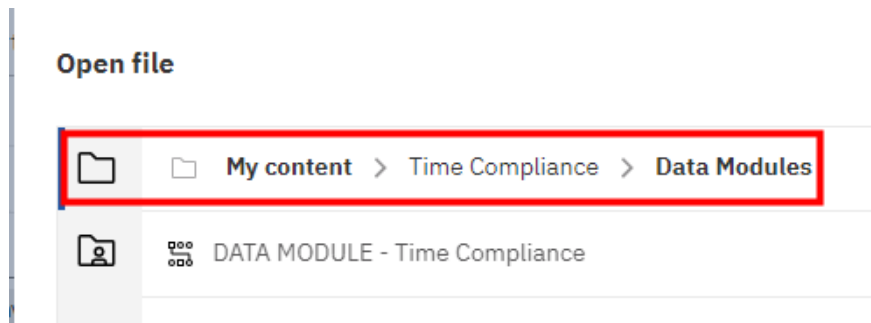
- Click the **X** to close the warning (above)
- In the **Insertable objects** pane, **right-click** the invalid package name, then click **Replace data module**:



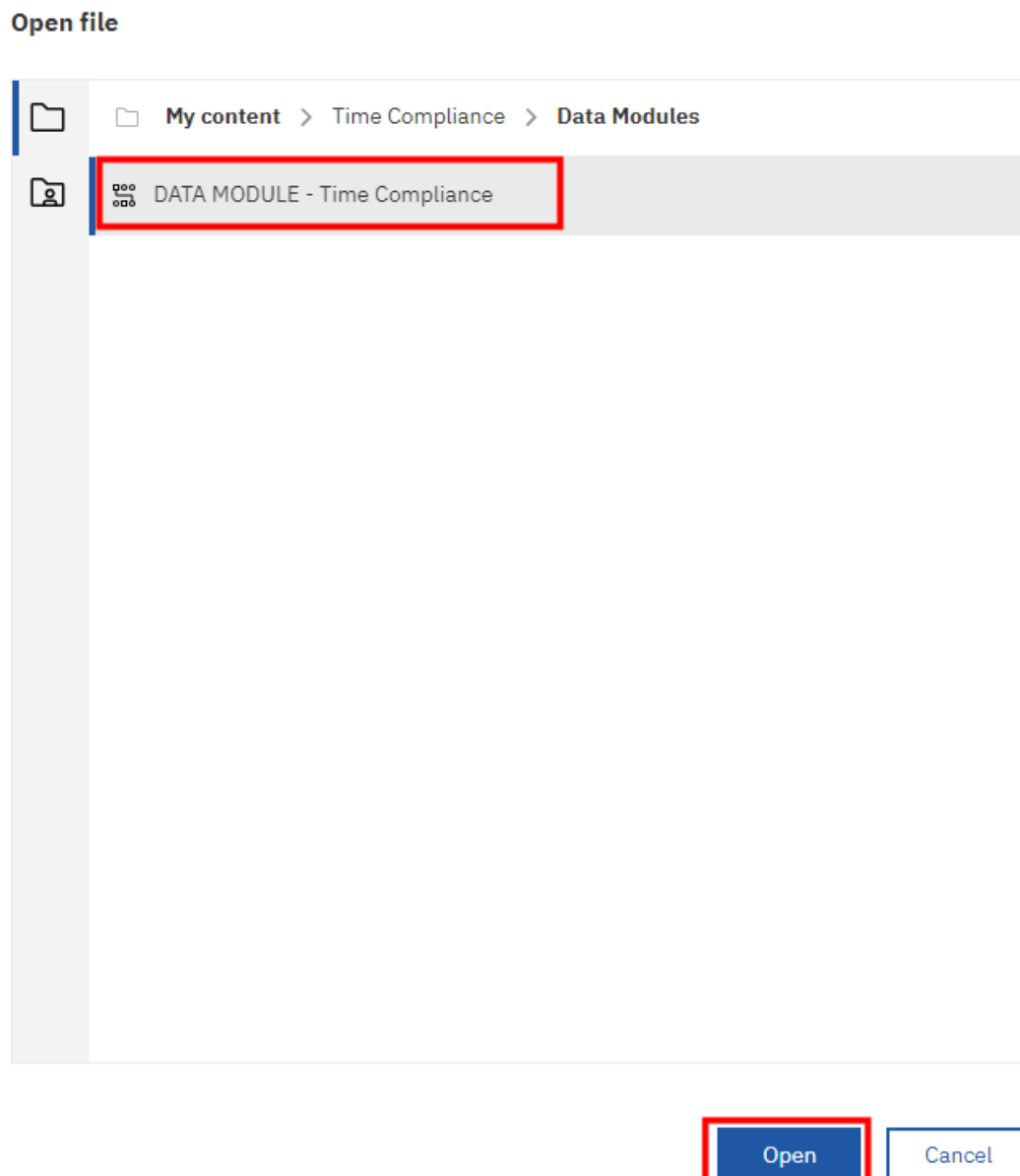
- Click **OK** in the subsequent warning:



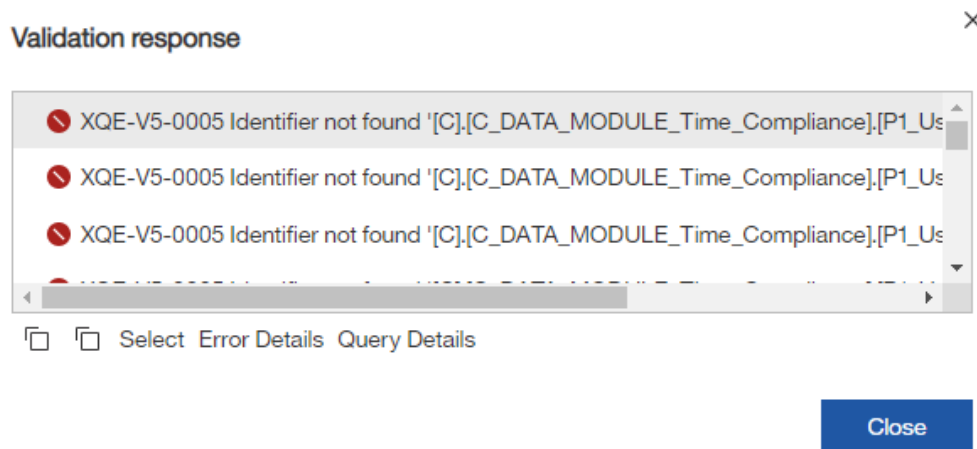
11. In the **Open file** window that appears, navigate to the location where you saved your new *Time Compliance* **Data Module**:



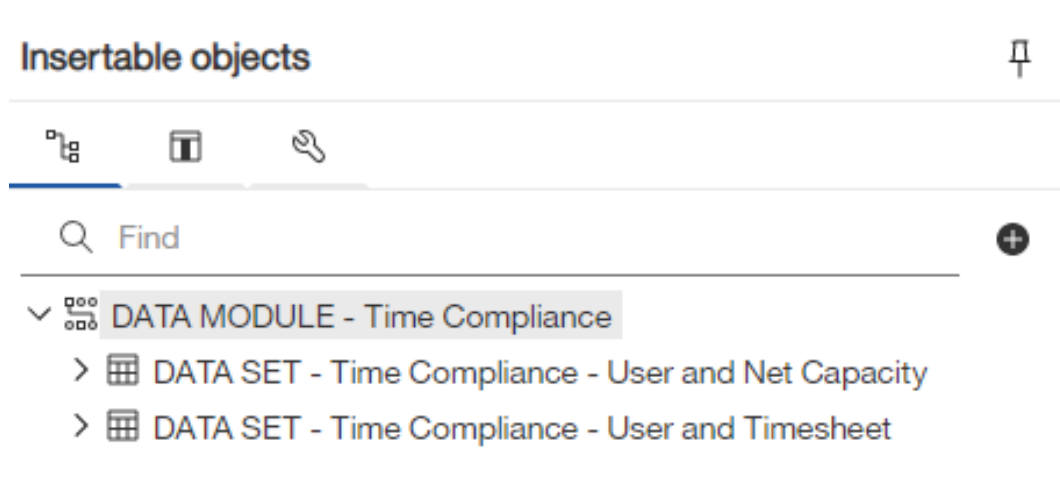
12. Click to select your new *Time Compliance* Data Module, then click **Open**:



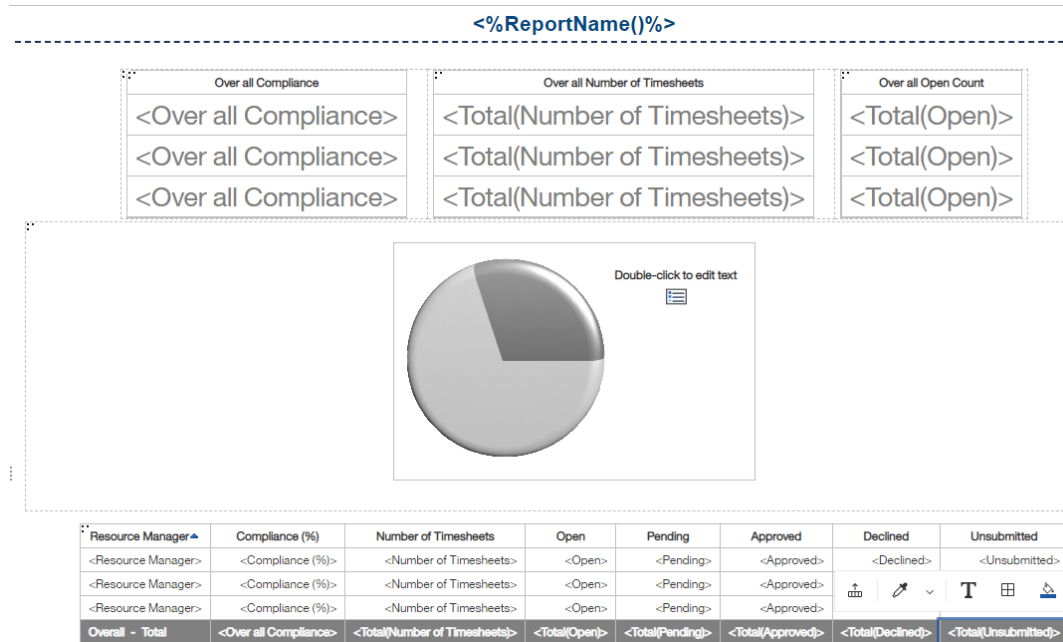
13. You will see a **Validation response** informational window that highlights several errors. This is to be expected. You will resolve these errors below. Click **Close** to close the window:



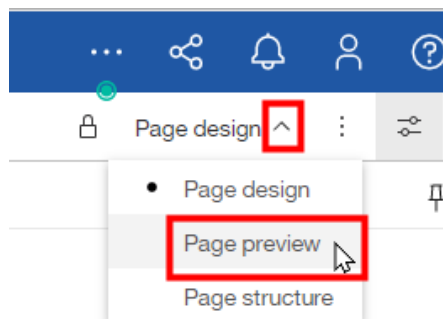
14. At this moment, you should see your Data Module and its constituent Data Sets listed in the **Insertable objects** pane > **Sources** tab:




15. You should also see the report structure in the **report canvas area**:



16. To quickly verify if this report is functional, change from **Page design view** to **Page preview view**:



17. You will encounter a warning message and an option to view **Details**:


 The report could not run because a server error occurred.

Options:

- [↶ Undo](#)
- [Switch to page design view](#)
- [Auto correct the problems](#)
- [Close this report](#)

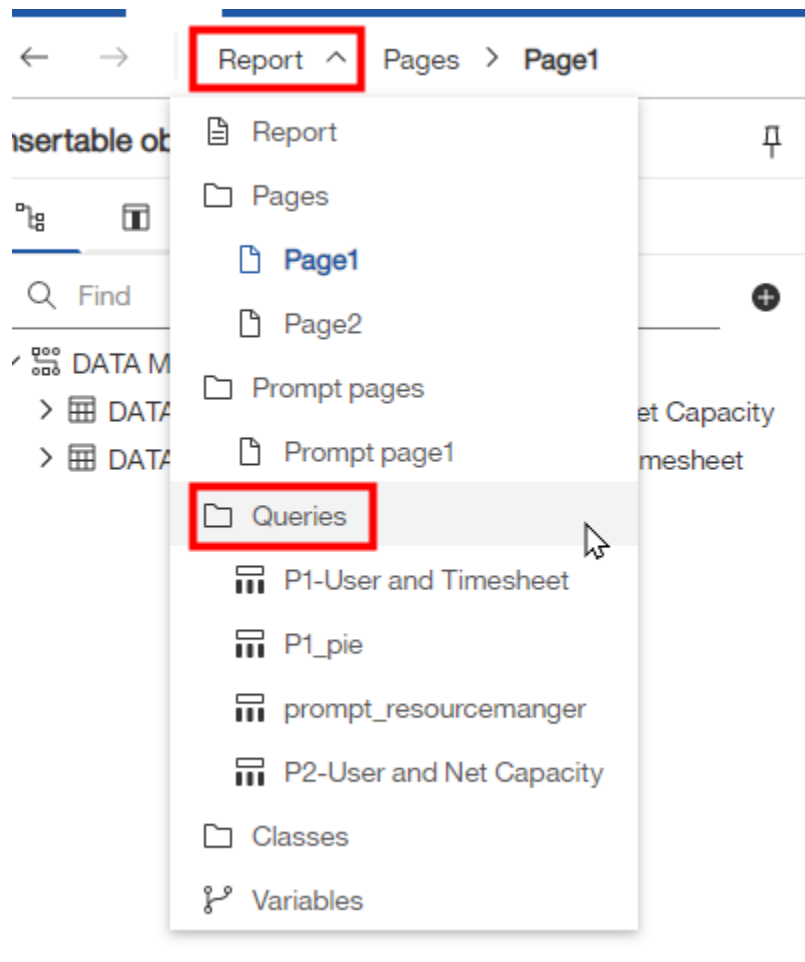
Details:

XQE-V5-0005 Identifier not found '[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_C
 RSV-SRV-0042 Trace back:
 RSReportService.cpp(764): XQEEException: CCL_CAUGHT: RSReportService::processImpl()
 RSReportServiceMethod.cpp(262): XQEEException: CCL_RETHROW: RSReportServiceMethod::proc
 RSASyncExecutionThread.cpp(887): XQEEException: RSASyncExecutionThread::checkException
 RSASyncExecutionThread.cpp(331): XQEEException: CCL_CAUGHT: RSASyncExecutionThread::runI
 RSASyncExecutionThread.cpp(932): XQEEException: CCL_RETHROW: RSASyncExecutionThread::p
 Execution/RSRenderExecution.cpp(585): XQEEException: CCL_RETHROW: RSRenderExecution::exe
 Assembly/RSDocAssemblyDispatch.cpp(340): XQEEException: CCL_RETHROW: RSDocAssemblyDi
 Assembly/RSLayoutAssembly.cpp(79): XQEEException: CCL_RETHROW: RSLayoutAssembly::asser
 Assembly/RSDocAssemblyDispatch.cpp(449): XQEEException: CCL_RETHROW: RSDocAssemblyDi
 Assembly/RSReportPagesAssembly.cpp(185): XQEEException: CCL_RETHROW: RSReportPagesAss
 Assembly/RSDocAssemblyDispatch.cpp(385): XQEEException: CCL_RETHROW: RSDocAssemblyDi

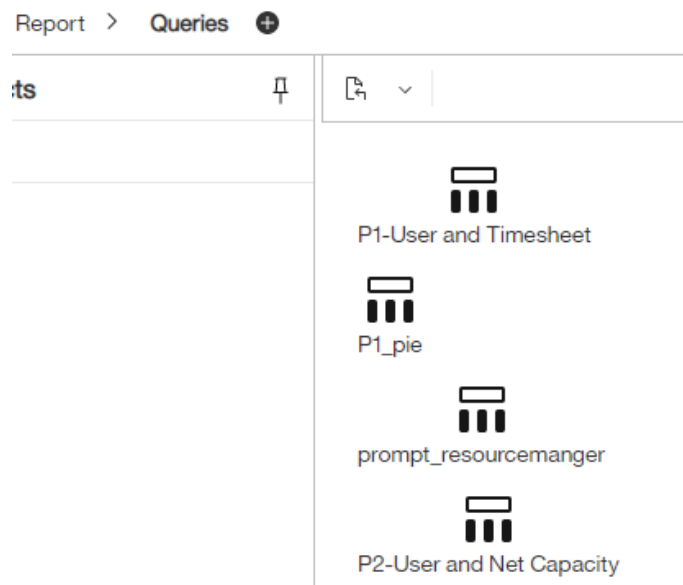
- **Note:** You will fix these errors in the next task below.

Task 3: [Update the name references](#) to the Data Items in your Queries

1. Navigate to the list of Queries:



2. You will see 4 separate Queries that were imported as part of the XML text file:



3. Double-click to open the first Query **P1-User and Timesheet**:

P1-User and Timesheet

Data Items

- Resource Manager
- Number of Timesheets
- Open
- Pending
- Approved
- Declined
- Unsubmitted
- Compliance (%)
- Total(Number of Timesheets)
- Total(Open)
- Total(Pending)
- Total(Approved)
- Total(Declined)
- Total(Unsubmitted)
- Over all Compliance
- Timesheet start date
- Start Date
- End Date

Detail Filters

- [Resource Manager] in ?p_resourcemanager?
- [Timesheet start date] between [Start Date] and...

Summary Filters

Slicer


4. Confirm that this Query has **errors** by viewing the tabular data:

P1-User and Timesheet


Data Items

- Resource Manager
- Number of Timesheets
- Open

- Look for an important clue in the first line of the error message:

 The report could not run because a server error occurred.

Options:

-  Refresh
- Close this report

Details:

```
XQE-V5-0005 Identifier not found '[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Resource_Manager]'.
RSV-SRV-0042 Trace back:
RSReportService.cpp(764): XQEException: CCL_CAUGHT: RSReportService::processImpl()
RSReportServiceMethod.cpp(262): XQEException: CCL_RETHROW: RSReportServiceMethod::process(): asynchRunSpecific
```

- Return to your report Query (*P1-User and Timesheet*)
- Double-click the first **Data Item** (*Resource Manager*) to open its **Expression Definition**:

Data item expression - Resource Manager ×

Name:

Available Components:

DATA MODULE - Time Compliance

- DATA SET - Time Compliance - User and
- DATA SET - Time Compliance - User and

Expression Definition:

```
[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Resource_Manager]
```

Information:

Tips Errors

- Triple-click the Expression Definition to select all the text:

Expression Definition:

```
[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Resource_Manager]
```


9. Double-click the Resource Manager Data Item in your Data Module:

Data item expression - Resource Manager

Name: Resource Manager

Available Components:

- DATA MODULE - Time Compliance
 - DATA SET - Time Compliance - User and Net Capacity
 - DATA SET - Time Compliance - User and Timesheet
 - Department Name
 - Overall Status
 - Hours Worked
 - Start Date
 - End Date
 - Timesheet Status
 - Organization
 - Full Name
 - Resource Manager**
 - Open Count
 - Number of Timesheets

Expression Definition:

```
[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].
[Resource_Manager]
```

10. Note the revised **Expression Definition**, that now matches your Data Set nomenclature:

Expression Definition:

```
[C].[C_DATA_MODULE_Time_Compliance].[User_Timesheet_0].
[Resource_Manager]
```

11. Click **OK** to close the **Data item expression** dialog box

12. Repeat for the remaining Data Items in the Query

Note: you do not have to modify the following:

- Compliance (%)
- Total(Number of Timesheets)
- Total(Open)
- Total(Pending)
- Total(Declined)
- Total(Unsubmitted)
- Over all Compliance

Note: [Timesheet_Start_Date] in your imported Expression Definition needs to be replaced by your **Data Item** called Start Date

Data item expression - Timesheet start date

Name: Timesheet start date

Available Components:

The screenshot shows the 'Available Components' list on the left, which includes a tree structure under 'DATA MODULE - Time Compliance'. The 'Start Date' item is highlighted with a red box. On the right, the 'Expression Definition' field contains the text: `[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Timesheet_Start_Date]`. The `Timesheet_Start_Date` part is highlighted with a red box.

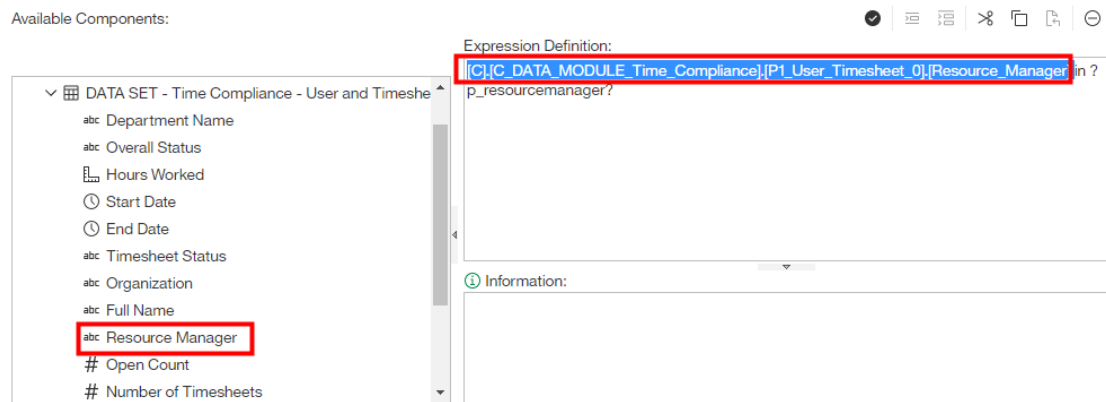
13. Navigate to the next Query called *P1_pie*:

The screenshot shows the 'Queries' list in the Planview Daptiv interface. The 'P1_pie' query is highlighted with a red box. The list also includes 'P1-User and Timesheet', 'prompt_resourcemanager', and 'P2-User and Net Capacity'.

14. Open the Data Item *Overall Status* and fix its Expression Definition:

The screenshot shows the 'Overall Status' data item in the 'Available Components' list, highlighted with a red box. An arrow points from this item to the 'Expression Definition' field on the right, which contains the text: `[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Overall_Status]`. The entire expression is highlighted with a red box.

15. Open the **second Detail Filter** and correct its Expression Definition:



Available Components:

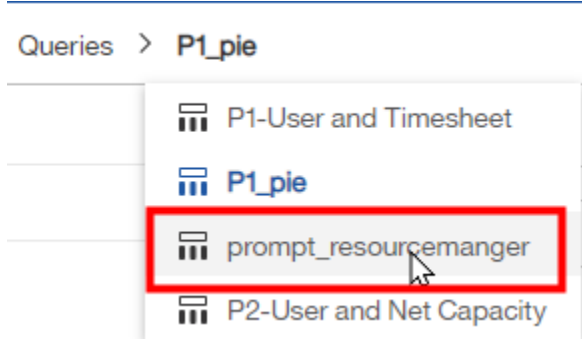
- DATA SET - Time Compliance - User and Timesheet
 - abc Department Name
 - abc Overall Status
 - Hours Worked
 - Start Date
 - End Date
 - Timesheet Status
 - Organization
 - Full Name
 - Resource Manager**
 - Open Count
 - Number of Timesheets

Expression Definition:

[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Resource_Manager]

Information:

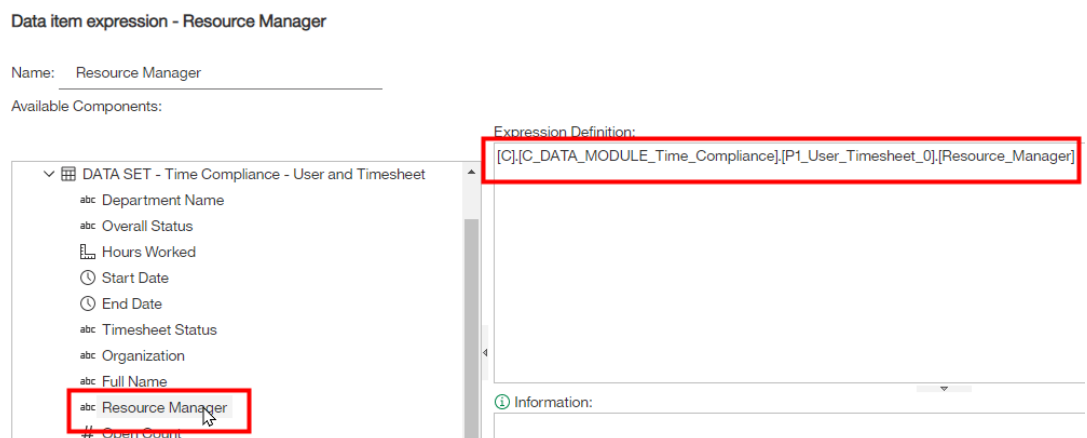
16. Navigate to the next Query called *prompt_resourcemanager*:



Queries > P1_pie

- P1-User and Timesheet
- P1_pie
- prompt_resourcemanager**
- P2-User and Net Capacity

17. Double-click the *Resource Manager Data Item* and fix its Expression Definition:



Data item expression - Resource Manager

Name: Resource Manager

Available Components:

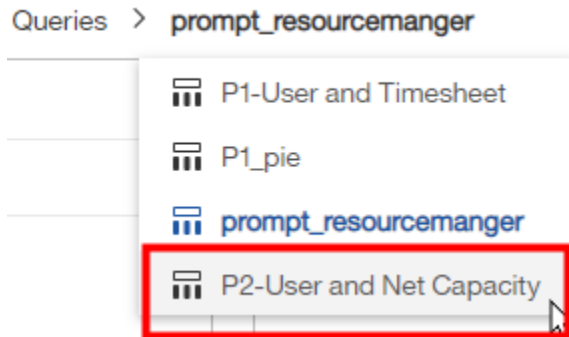
- DATA SET - Time Compliance - User and Timesheet
 - abc Department Name
 - abc Overall Status
 - Hours Worked
 - Start Date
 - End Date
 - Timesheet Status
 - Organization
 - Full Name
 - Resource Manager**
 - Open Count

Expression Definition:

[C].[C_DATA_MODULE_Time_Compliance].[P1_User_Timesheet_0].[Resource_Manager]

Information:

18. Navigate to the final Query called *P2-User and Net Capacity*:

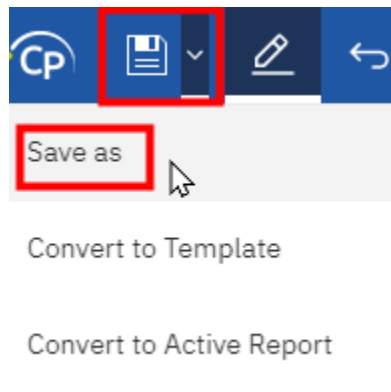


19. Correct the following Data Items by replacing their Expression Definitions with the proper Data Items from your Data Module:

- Resource Manager
- Full Name
- Net Capacity Hours
- Hours Worked
- Overall Status
- Timesheet Status
- Time sheet start date
- End Date
- Resource Date

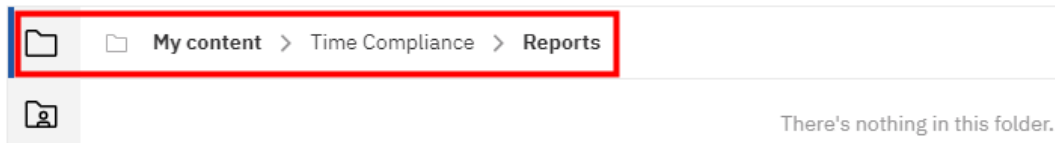
Task 4: Save your new report

1. Click the floppy disk icon, then click **Save as**:



2. Navigate to your previously defined **Reports folder**:

Save as



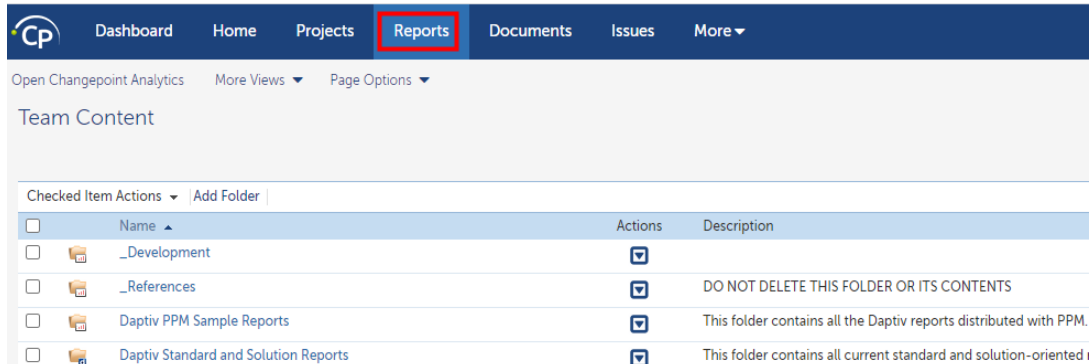
3. Provide a **name** for your new report, then click **Save**:

Save as:

Save

Task 5: Run your new Time Compliance report from Daptiv > Reports

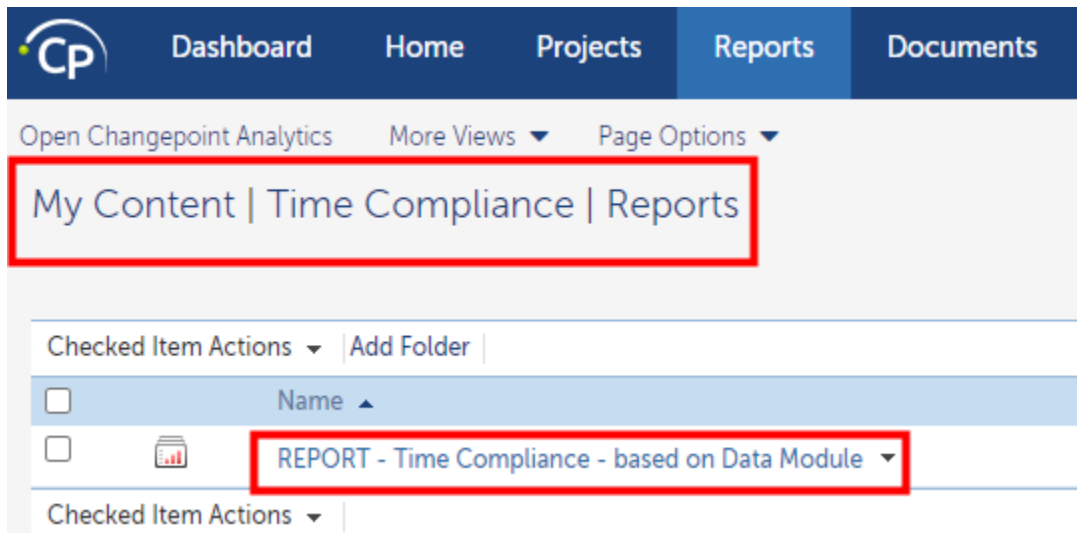
1. Navigate to your browser tab or window where Daptiv is open, and make sure you are on the **Reports** tab:



The screenshot shows the Daptiv interface with the 'Reports' tab selected in the top navigation bar. Below the navigation bar, there are links for 'Open Changepoint Analytics', 'More Views', and 'Page Options'. The main content area is titled 'Team Content' and contains a table with columns for 'Name', 'Actions', and 'Description'. The table lists several folders, including '_Development', '_References', 'Daptiv PPM Sample Reports', and 'Daptiv Standard and Solution Reports'. The 'Reports' tab is highlighted with a red box.

| Checked Item Actions | Name | Actions | Description |
|--------------------------|--------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | _Development | <input checked="" type="checkbox"/> | |
| <input type="checkbox"/> | _References | <input checked="" type="checkbox"/> | DO NOT DELETE THIS FOLDER OR ITS CONTENTS |
| <input type="checkbox"/> | Daptiv PPM Sample Reports | <input checked="" type="checkbox"/> | This folder contains all the Daptiv reports distributed with PPM. |
| <input type="checkbox"/> | Daptiv Standard and Solution Reports | <input checked="" type="checkbox"/> | This folder contains all current standard and solution-oriented reports. |

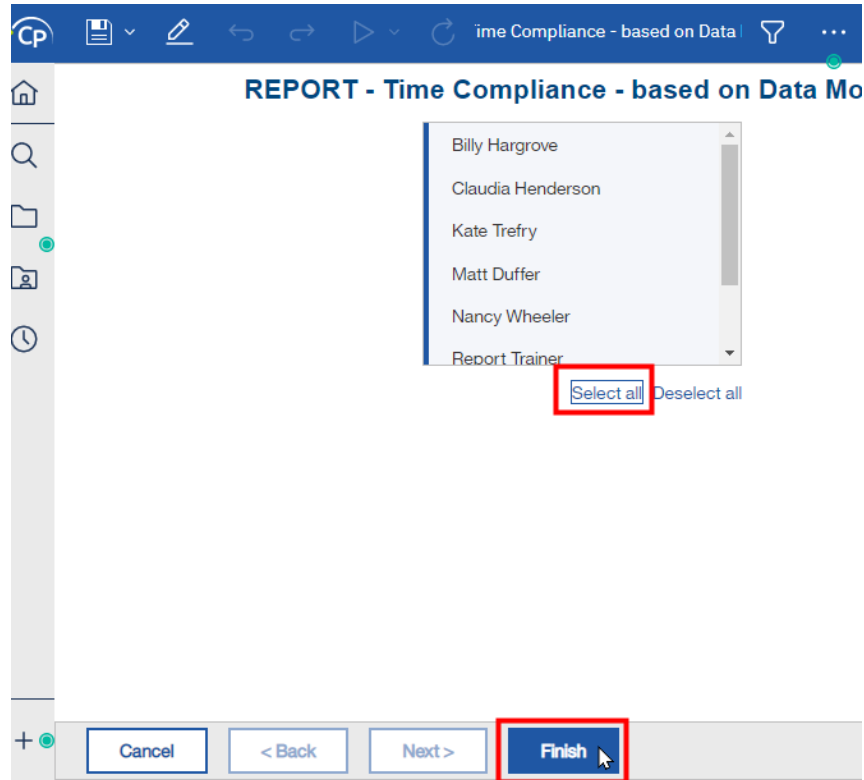
2. Navigate to where you saved your new Time Compliance **report**:



The screenshot shows the Daptiv interface with the 'Reports' tab selected. Below the navigation bar, there are links for 'Open Changepoint Analytics', 'More Views', and 'Page Options'. The main content area is titled 'My Content | Time Compliance | Reports'. Below this title, there is a table with columns for 'Name' and 'Actions'. The table lists a report named 'REPORT - Time Compliance - based on Data Module'. The 'Reports' tab and the report name are highlighted with red boxes.

| Checked Item Actions | Name | Actions |
|--------------------------|---|-------------------------------------|
| <input type="checkbox"/> | REPORT - Time Compliance - based on Data Module | <input checked="" type="checkbox"/> |

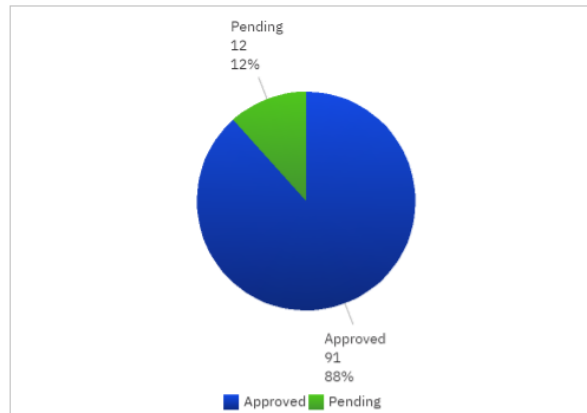
3. Click the name of your report to launch it
4. If you encounter any errors, such as “Identifier not found . . .”, return to your report and fix the Data Items in your Queries.
5. If you encounter a **Prompt**, click **Select all**, then click **Finish**:



6. Your report runs and displays the relevant information:

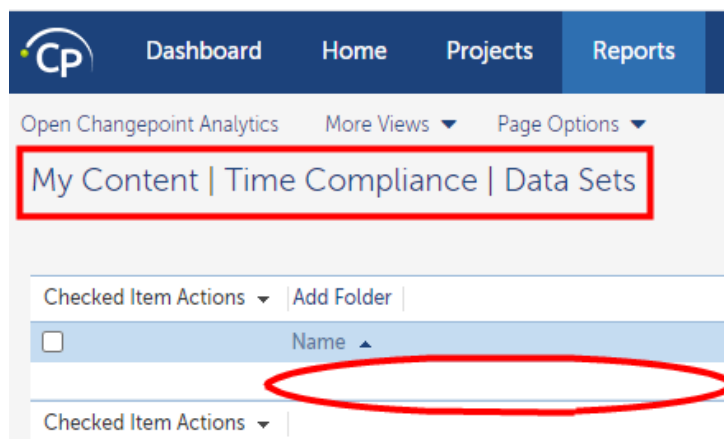
REPORT - Time Compliance - based on Data Module

| | | |
|---------------------|-------------------------------|---------------------|
| Over all Compliance | Over all Number of Timesheets | Over all Open Count |
| 85% | 46 | 80 |



| Resource Manager | Compliance (%) | Number of Timesheets | Open | Pending | Approved | Declined | Unsubmitted |
|------------------------|----------------|----------------------|-----------|----------|-----------|----------|-------------|
| Billy Hargrove | 100% | 8 | 4 | 0 | 8 | 0 | 0 |
| Claudia Henderson | 100% | 5 | 7 | 0 | 5 | 0 | 0 |
| Kate Trefry | | 0 | 3 | 0 | 0 | 0 | 0 |
| Matt Duffer | 67% | 9 | 2 | 3 | 6 | 0 | 0 |
| Nancy Wheeler | 100% | 7 | 5 | 0 | 7 | 0 | 0 |
| Report Trainer | 64% | 11 | 41 | 4 | 7 | 0 | 0 |
| Will Byers | 100% | 6 | 12 | 0 | 6 | 0 | 0 |
| | | 0 | 6 | 0 | 0 | 0 | 0 |
| Overall - Total | 85% | 46 | 80 | 7 | 39 | 0 | 0 |

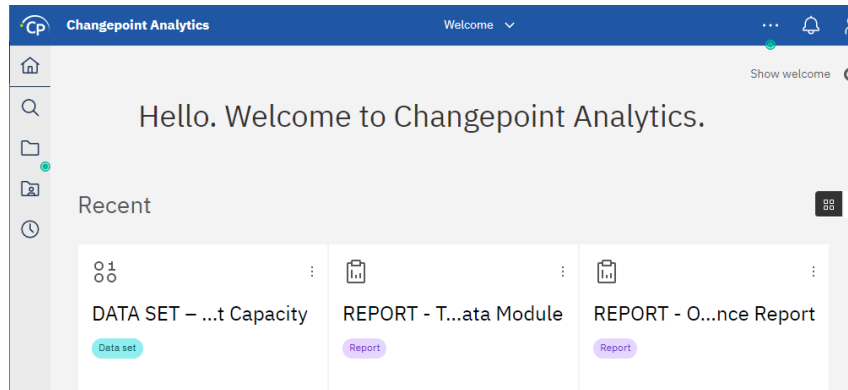
- **Note:** in **Daptiv > Reports**, you will not see your existing **Data Sets** nor **Data Module**. For example, navigate to where you saved your **Data Sets**:



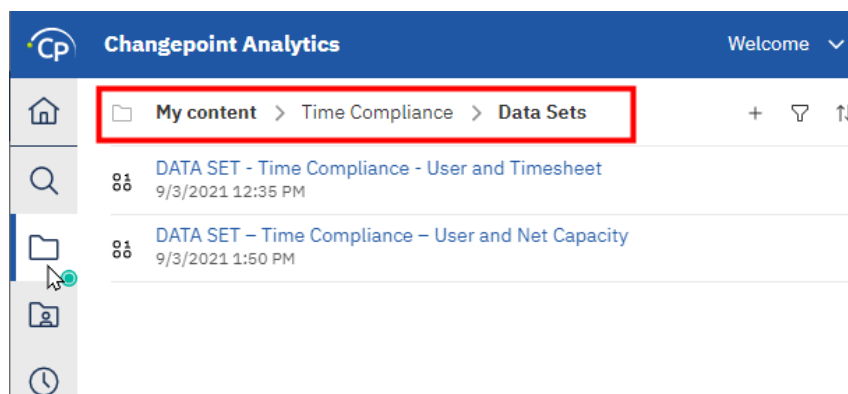
- Your **Data Sets** and **Data Modules** are only visible via the **Analytics portal**.

Task 6: Set a refresh schedule for the Data Sets

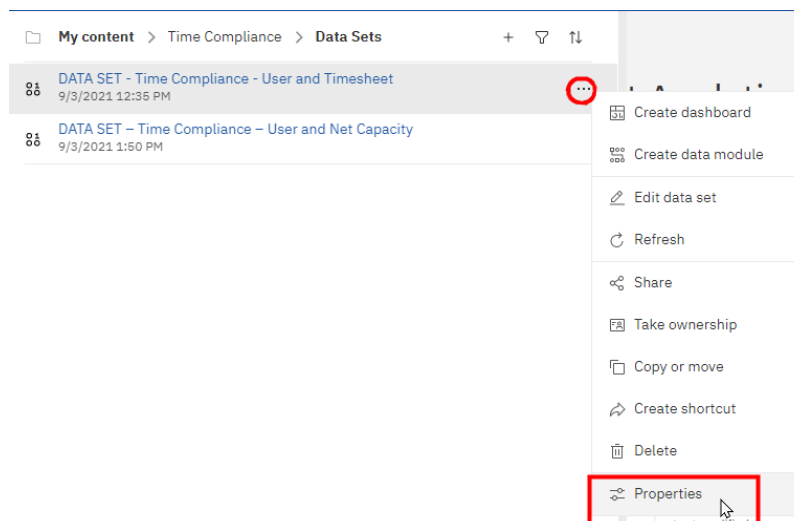
1. Return to your still-open **Analytics portal**, or re-launch Analytics if necessary:



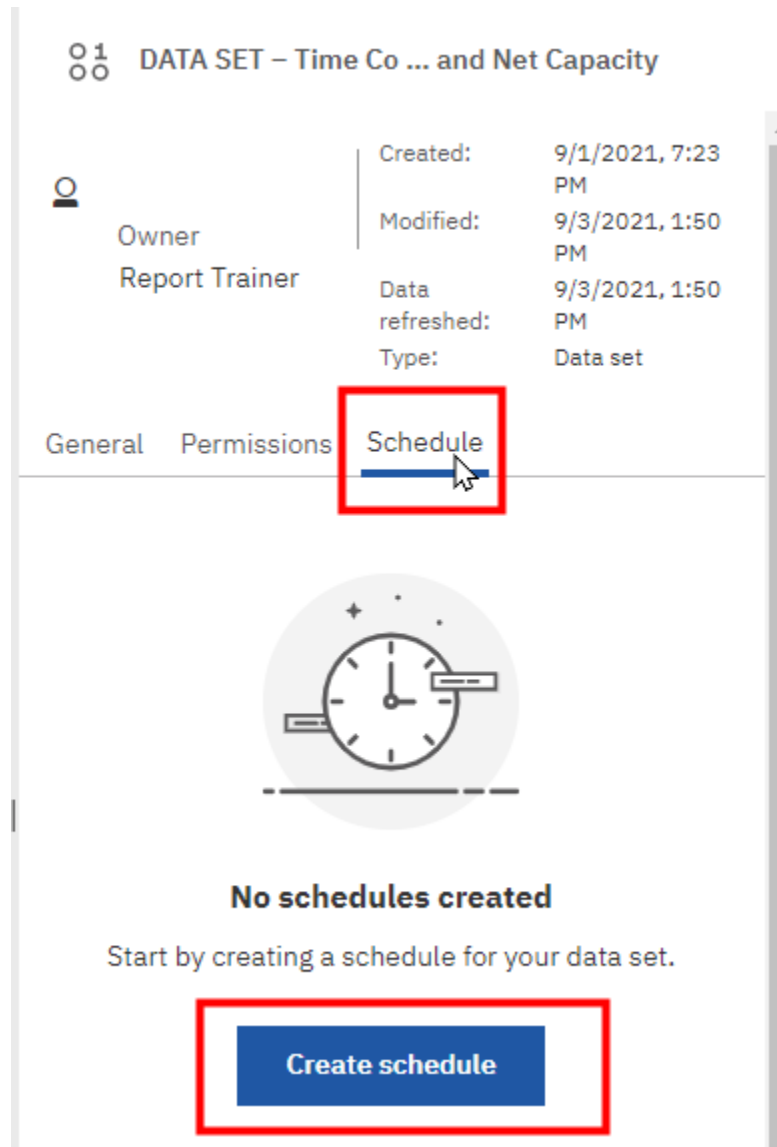
2. Navigate to the location where you saved your **Data Sets**:



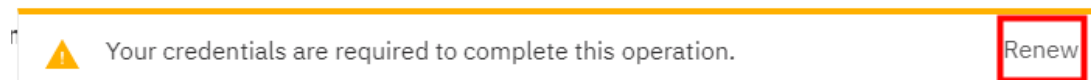
3. For your first Data Set listed (and repeat these steps for your second Data Set), click the **More menu**, then click **Properties**:



4. In the **Properties** of the Data Set, click **Schedule**, then click **Create schedule**:



5. If you encounter the following warning message, click **Renew**:



6. Set the **Frequency Type** to: **Daily**
7. Set **Repeat every** to: **1 Day**
8. Set the **Period Start** to: tomorrow at **12:00 AM**
9. Click **Save**

DATA SET – Time Compliance – User and Net Capacity

Schedule

Frequency

Type

Daily

▼

Repeat every

1

^

▼

Day(s)

▼

☐ Daily time interval ⓘ

Period

Start

📅

2021-09-14

🕒

12:00 AM

☒ No end date

Save

- **Note:** you can *disable*, *edit*, and *delete* this scheduled refresh by returning to the **Data Set > Properties > Schedule**:

DATA SET – Time Co ... and Net Capacity

Owner

Report Trainer

Created:

9/1/2021, 7:23 PM

Modified:

9/3/2021, 1:50 PM

Data refreshed:

9/3/2021, 1:50 PM

Type:

Data set

General

Permissions

Schedule

Enable

Edit

Delete

Schedule

Run every 1 Day(s) from September 14, 2021 at 12:00 AM.

Credentials

Report Trainer

CognosAnalyticsTrainingDemo@daptiv.com

Priority

3

Delivery