Lab Guide

Reporting 301:

Reporting Administration Topics

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admin / Knowledge17

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report.admin / Knowledge17

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Lab Setup

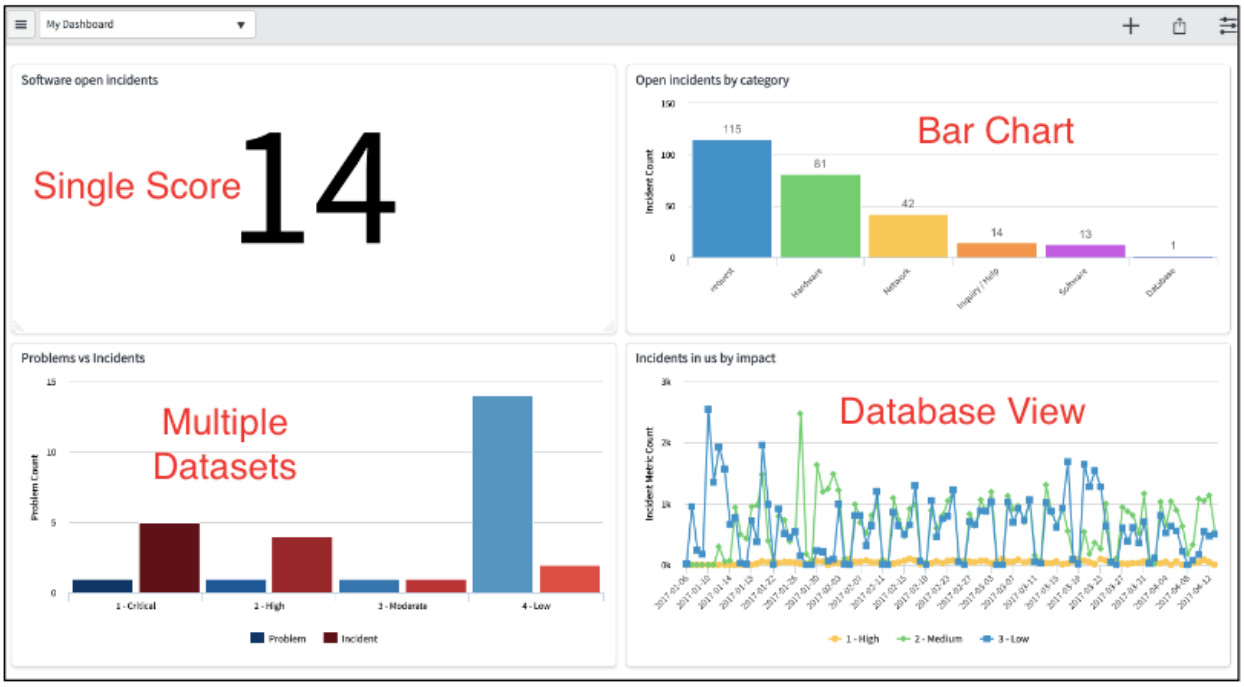
In this scenario, there is a global dashboard with the following 4 report widgets:

- Single Score
- Bar Chart
- Database View
- Multiple Dataset

There are a few problems with this dashboard that you (as the designated report admin) need to address. This is a cross-section of common mistakes that you received:

1. The top two reports show different data for *open software incidents*. Using different filters is a common mistake. You should create and maintain Report sources so you have always one truth to report on.
2. The bottom-left report is showing both incident and problems. How can you do that?
3. The last report is extremely slow to load; what's going on?

Other topics in this lab: Maps, Metrics, Dynamic Filters, General Troubleshooting, and Important Properties.



Lab Goal

Story:

In our production dashboards, we have reports created by several users that are trying to get the same numbers (maybe different chart types, styling differences) but the results are different.

What can we do? How can we help our users to create correct reports?

We, as Reporting Administrators, can solve that problem by creating and maintaining Report Sources.

Lab 1
Reports Sources

This lab explores how to create and maintain Report sources, a useful way of helping our users to create good reports with the proper conditions.

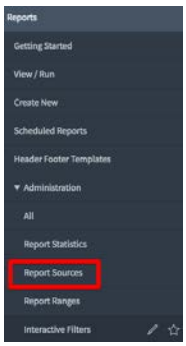
The goals of this lab are to:

- Create a Report Source
- Edit a Report Source
- Use a Report Source in a Report
- Create a Report Source from the Report Builder

Create a Report Source

1. Navigate to the unique instance URL provided to you and log on with the Report admin credentials.

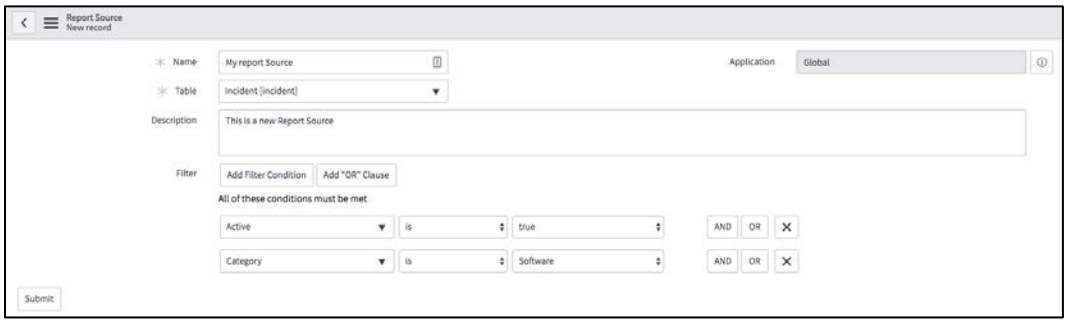
2. Navigate to **Reports > Administration -> Report Sources**.



3. Click **New** to create a new Report Source.



4. Fill all the fields in the form with data, for example **Table Incident** and some conditions.



5. Click **Submit** to save the report source.

Lab Success Verification

1. Search the created report source in the list to check that has been created.

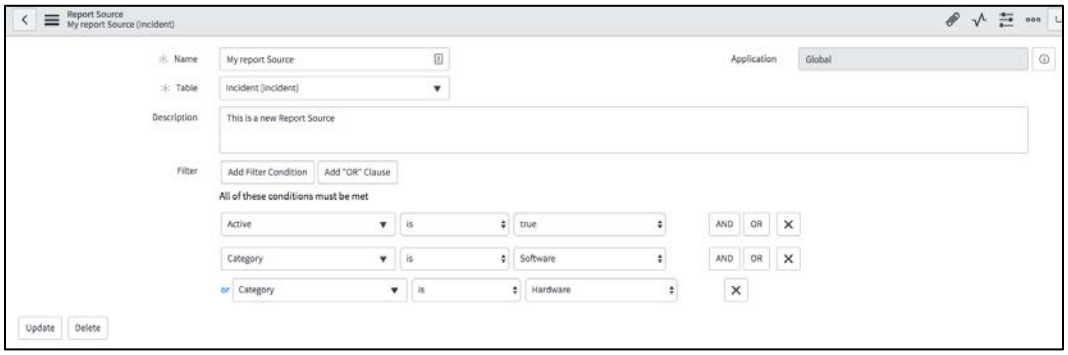


Edit a Report Source

1. Navigate to **Reports > Administration -> Report Sources.**

2. Open the Report Source that was created before (in the example My Report Source).

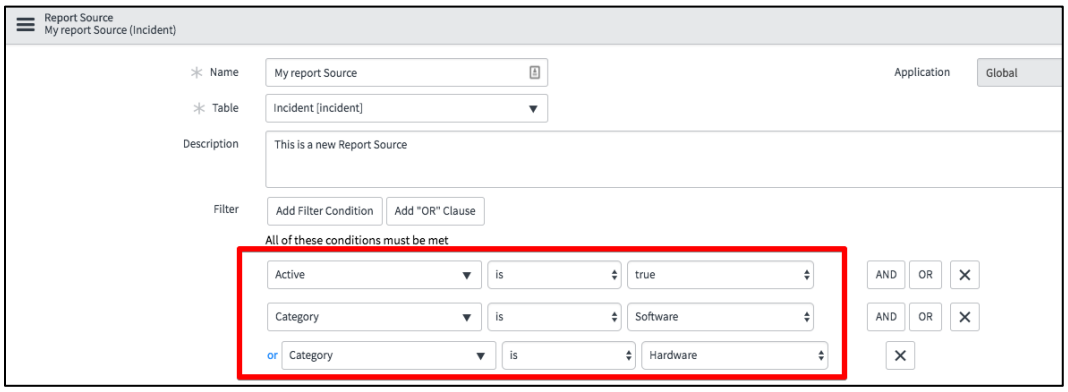
3. **Change** the conditions (for example adding a new condition).



4. Click **Update** to update the report source.

Lab Success Verification

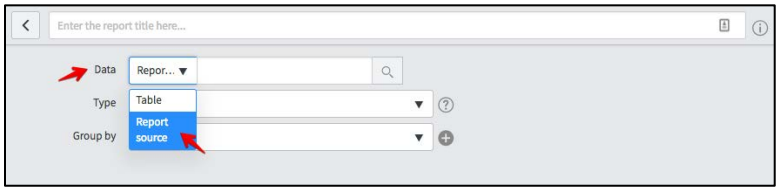
1. Search the created report source in the list and open it to check that the conditions have been updated.



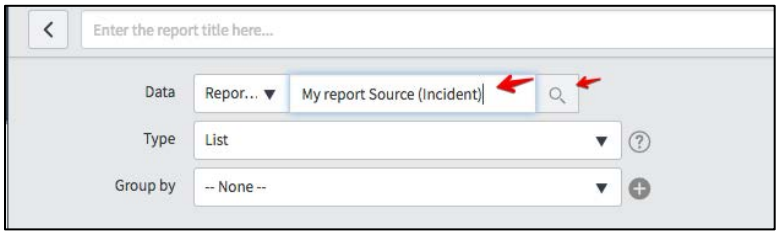
Create a Report Source in a Report

1. Navigate to **Reports > Create New.**

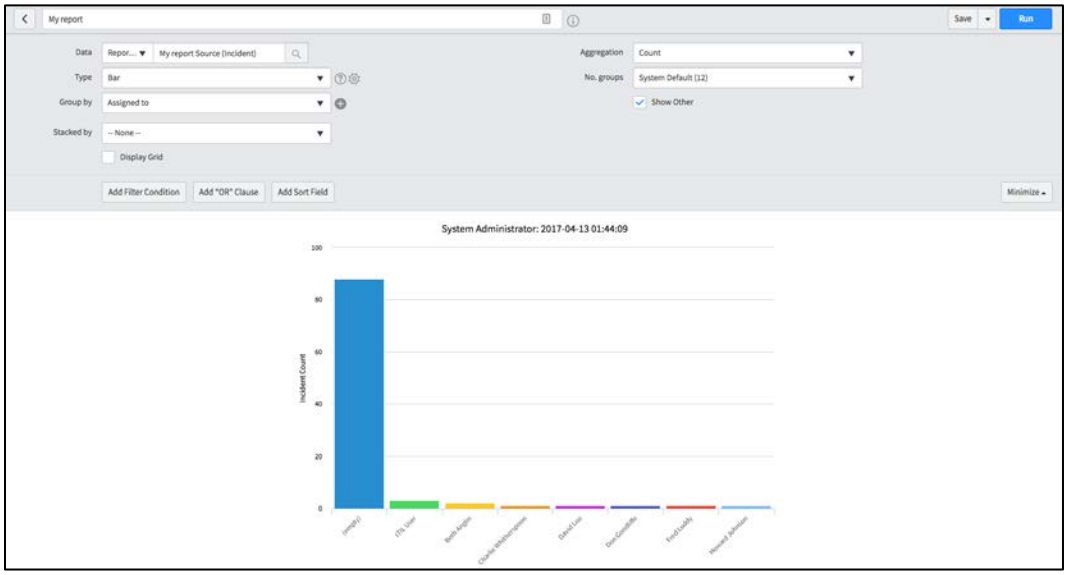
2. In the Data dropdown list, select **Report source**.



3. Select the report source by typing in the field or use the **Search** icon.

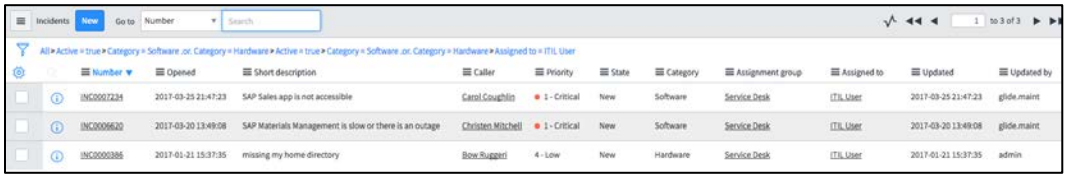


4. Change the other fields like **Type**, **Group by** as you like. Click **Run** or **Save** to see the data.



Lab Success Verification

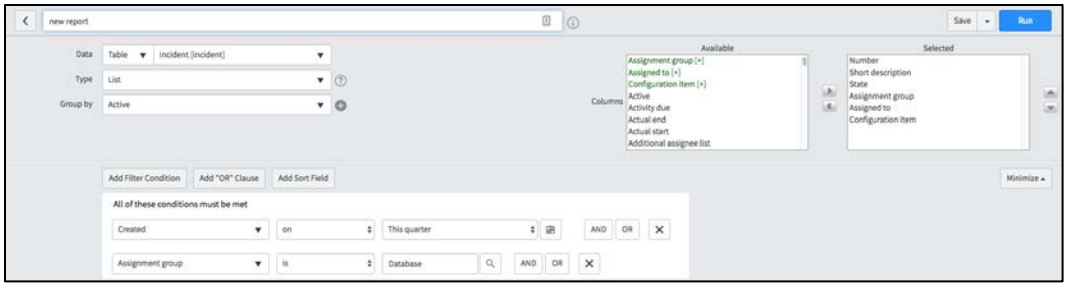
1. **Click** in one of the sections of the chart (in the example in one of the bars) to get the list of records. Check that the filter that is applied contains the conditions you specified in your Report Source. For example, clicking the ITIL user bar we get the list view, below.



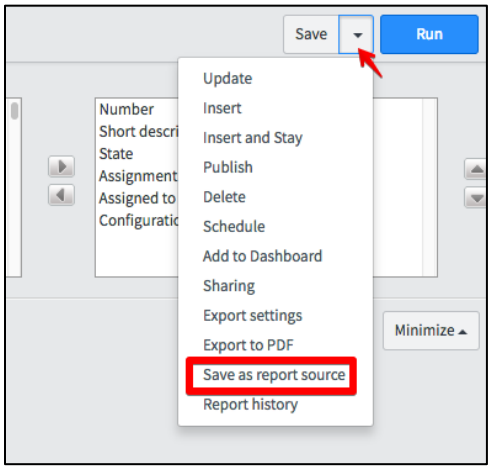
Note: The values and filter you'll get depends of your Report Source.

Create a Report Source from the Report Builder

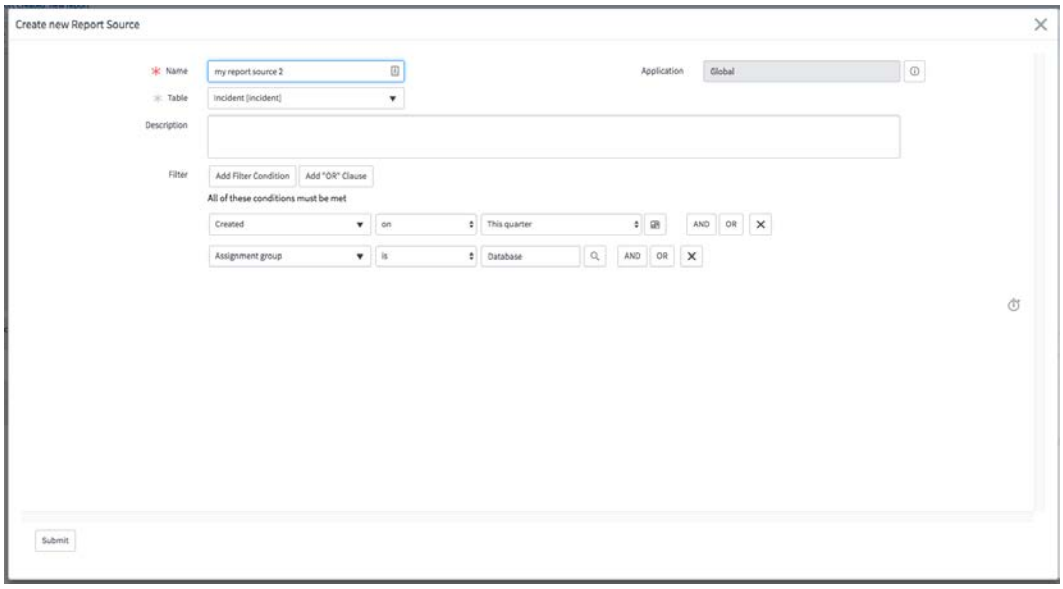
1. Create a new Report, **Reports > Create New.**
2. In the **Data** dropdown list, select **Table**, and select **1 table**.
3. **Fill** the other fields to create a valid report, specially **add** conditions on the report, for example:



4. **Save** the report.
5. Click **Save as report source** in the Save options dropdown menu.



6. In the popup, enter the name (and update if you want the filter conditions). Click **Submit** to create a Report Source.



Lab Success Verification

1. Search the created report source in the list and open it to check that the values.

Lab Goal

Lab 2
Reports performance

Story:

We have a global PA dashboard that contains very useful information. After a while our users start complaining to us regarding the performance of the dashboard. It's slow! What happens next? Our customers start exporting data and end up with trying to make decisions based on incomplete data.

What can we do? Complain to Service Now customer service? That is the easiest option but sometimes not the right one. We as Reporting Administrators should be able to identify and fix the issue.

This lab explores how to check report performance, identify the slowest reports and troubleshoot the issue.

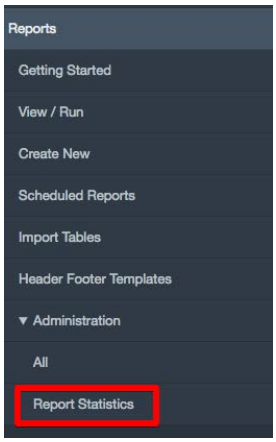
The goals of this lab are to:

- Identify slow reports
- Analyze issues that make reports slow

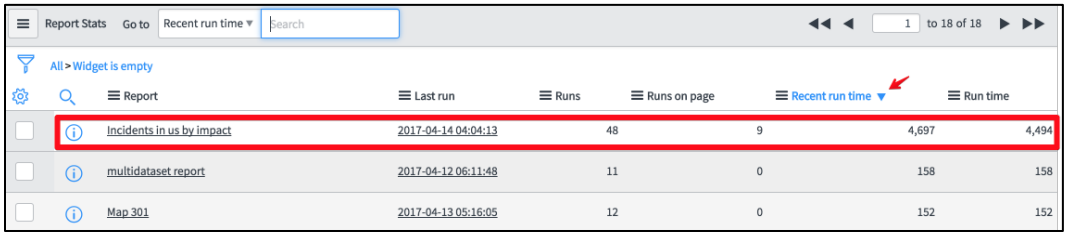
Identify Slow Reports

1. Navigate to the unique instance URL provided to you and log on with **Report Admin** credentials.

2. Navigate to **Reports > Administration -> Statistics.**



3. Sort **z->a** platform list results by **Recent run time**. You can see the reports that take more time to execute on top of the list.



Analyze

1. Open the report **Incidents in us by impact**.

2. Identify report fields that could provoke slow performance (usually group by and stack by are the fields to check) and take note of them.

   Note: A report using group by and or stacked by are more database expensive (to group fields the database server needs to read all data in a table).
   Other possible issues could include the fields in the conditions.

3. Check if the table or database view contains an index for the group by and stack by fields (usually only System Admin users can get that information and for the lab presenters will show you which indexes are on that table).

Lab Success Verification

1. The success of the lab is to understand which fields could affect the performance of the report, and those are incident.closed_code and cmn_location.country do not have any index.

Lab Goal

Lab 3
Report on a Database View

This lab explores how to report on DB Views. The following exercises explain how to create a database view, how to report on it and how to understand basic points about performance that can affect a database view report.

The goals of this lab are to:

- Understand what is a database view and how to create it
- Report on that Database View
- Understanding performance of a report using a Database View

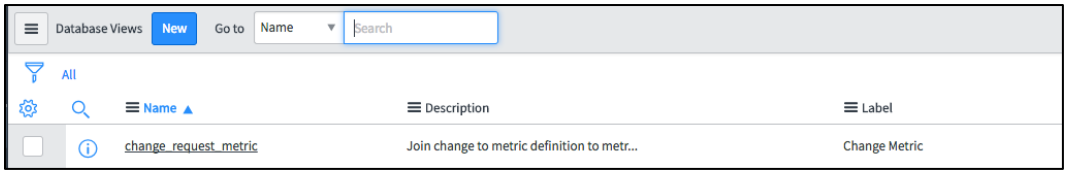
Create a New Database View

1. Navigate to the unique instance URL provided to you and log on with admin credentials.

2. Navigate to **System Definition->Database Views**. You move to a platform list with all the existing Database Views in the system. (Check which users has the proper roles).



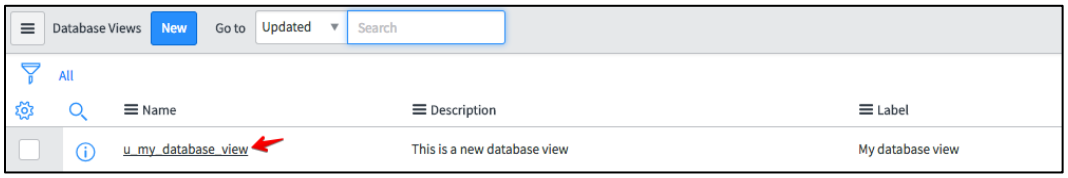
3. Click **New.**



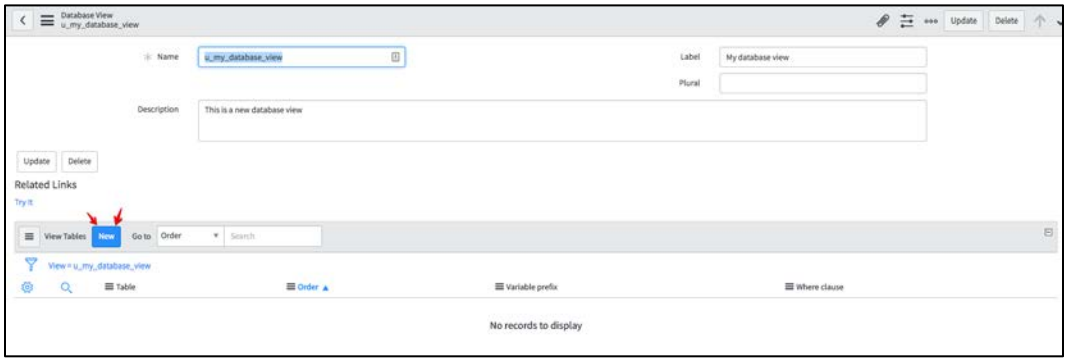
4. Fill the **Database View** name with a value (see image). You can fill other fields in the form if you like. Click **Submit** to save it.



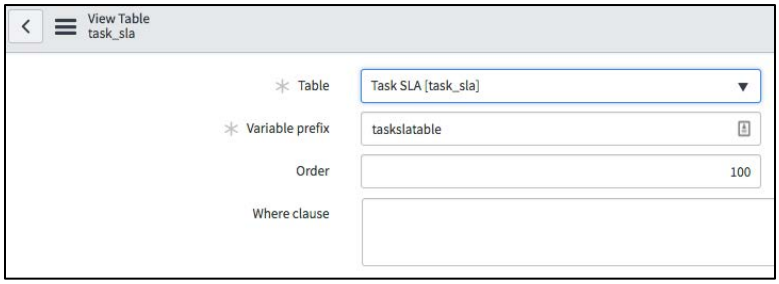
5. Open **u_my_database_view**.



6. Add a view table, clicking **New** in the related list.



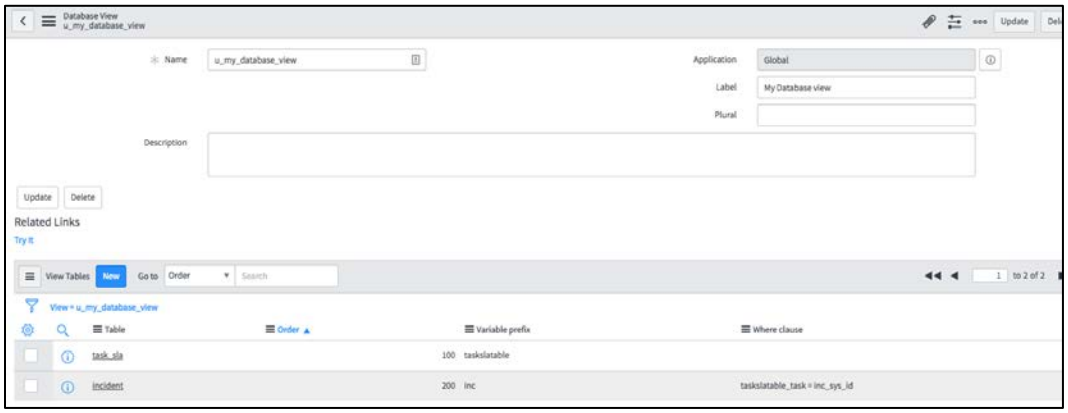
7. Select a **Table** and add a Variable prefix and click **Submit** (it is not necessary to add Where clause as this is the main table of the view).



8. Create a new Table in the database view (same step than 6 and 7), but this add a **where** clause. To do it, you need to know the prefix of the other table to be able to create a valid where condition, for example:

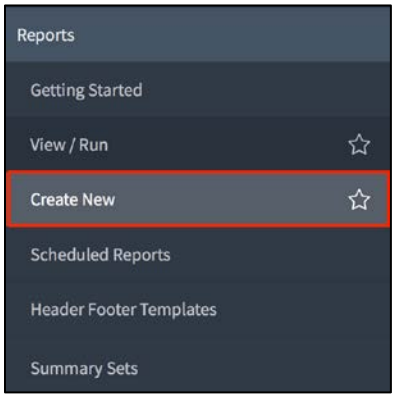


9. The result of this is this database view.

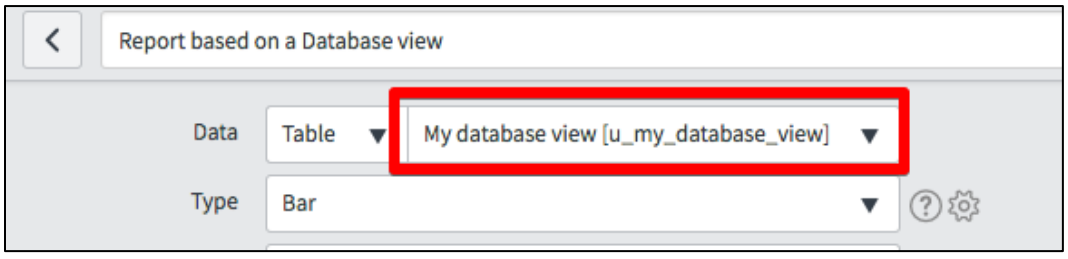


Create a Report Using a Database View

1. Navigate to **Reports > Create New**.



2. Select the **Database View** in Table.



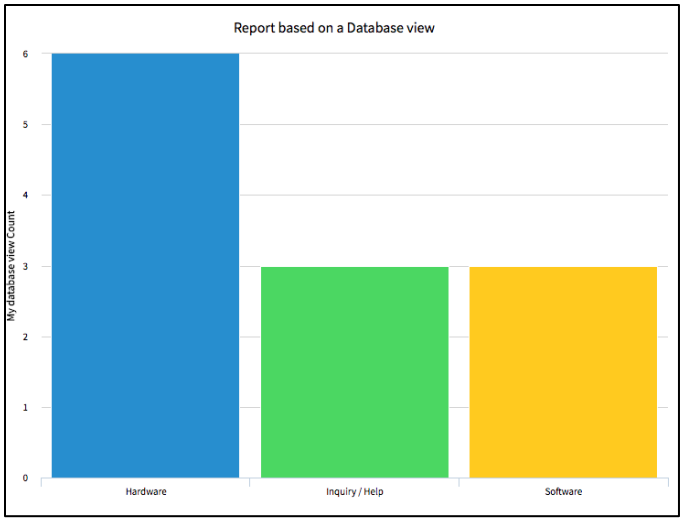
3. Select the **type** of the report.

4. Fill all mandatory fields if necessary (it depends of the type).

5. Click **Save**.

Lab Success Verification

1. The report has been successfully created and it should contain some data (see example).



Lab Goal

Lab 4
Multiple Datasets

This lab explores how to create reports using Multiple Data sets and the properties the admin can change.

The goals of this lab are to:

- Create a multiple dataset report
- Change default dataset properties

Note: Multiple data sets require **Performance Analytics Premium**.

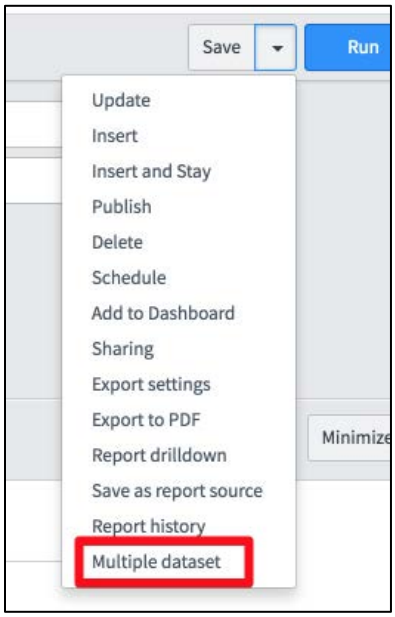
Note: The following report types support multiple data series: **bar**, **horizontal bar**, **line**, **column**, **area**, **spline**.

Note: Max number of datasets in a chart by default is **4**.

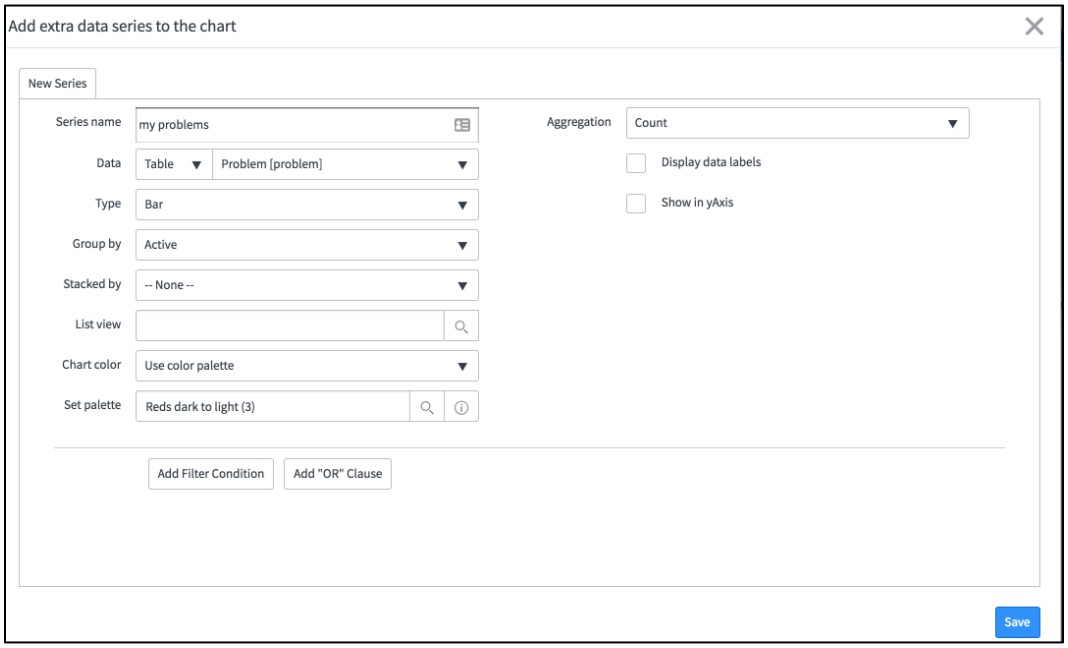
Create a Multiple Dataset Report

1. Navigate to the unique instance URL provided to you and log on with admin credentials.
2. Navigate to **Reports > Create New**.
3. Fill report **Name** and select a **Table** (for example Change request table).
4. Select a type that supports multiple datasets (for example, **Bar).**
5. Select a **group by** (for example, **Active**).
6. Click **Save**, to save the report (the bar report displays).

7. Click to menu option **Multiple Dataset.**



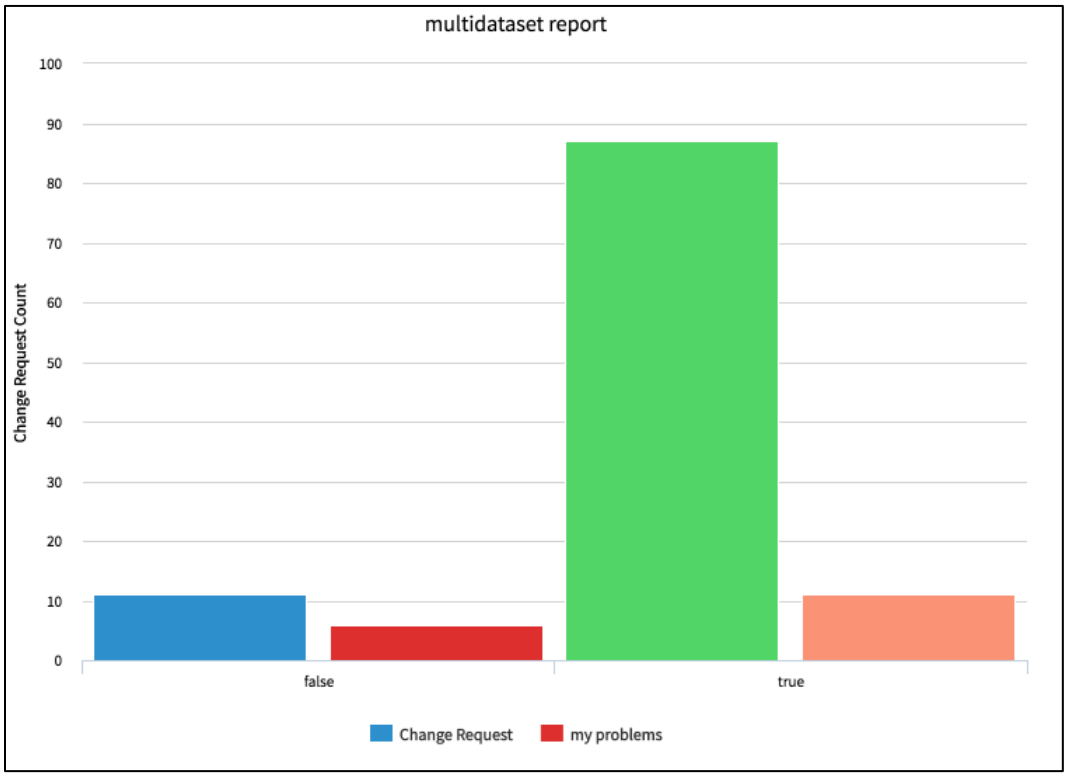
8. Fill fields in the popup list for the new **Dataset** (for example, Problem table) and choose a different palette (**Set palette** field) if you want to be able to identify this new dataset easily in the chart.



9. Save the dataset clicking **Save** button (the report displays including the 2nd dataset).

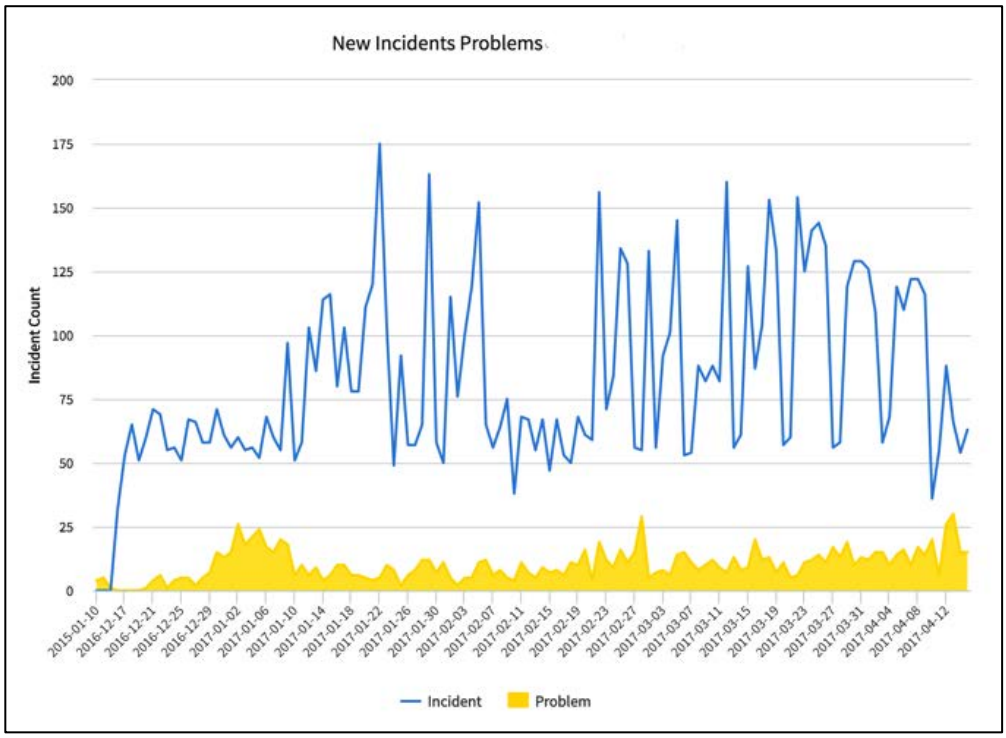
Lab Success Verification

1. The multi dataset report has been successfully created and it should contain both datasets.



Lab Challenge

1. Create a multi dataset chart showing new Incidents & Problems that looks like the example.



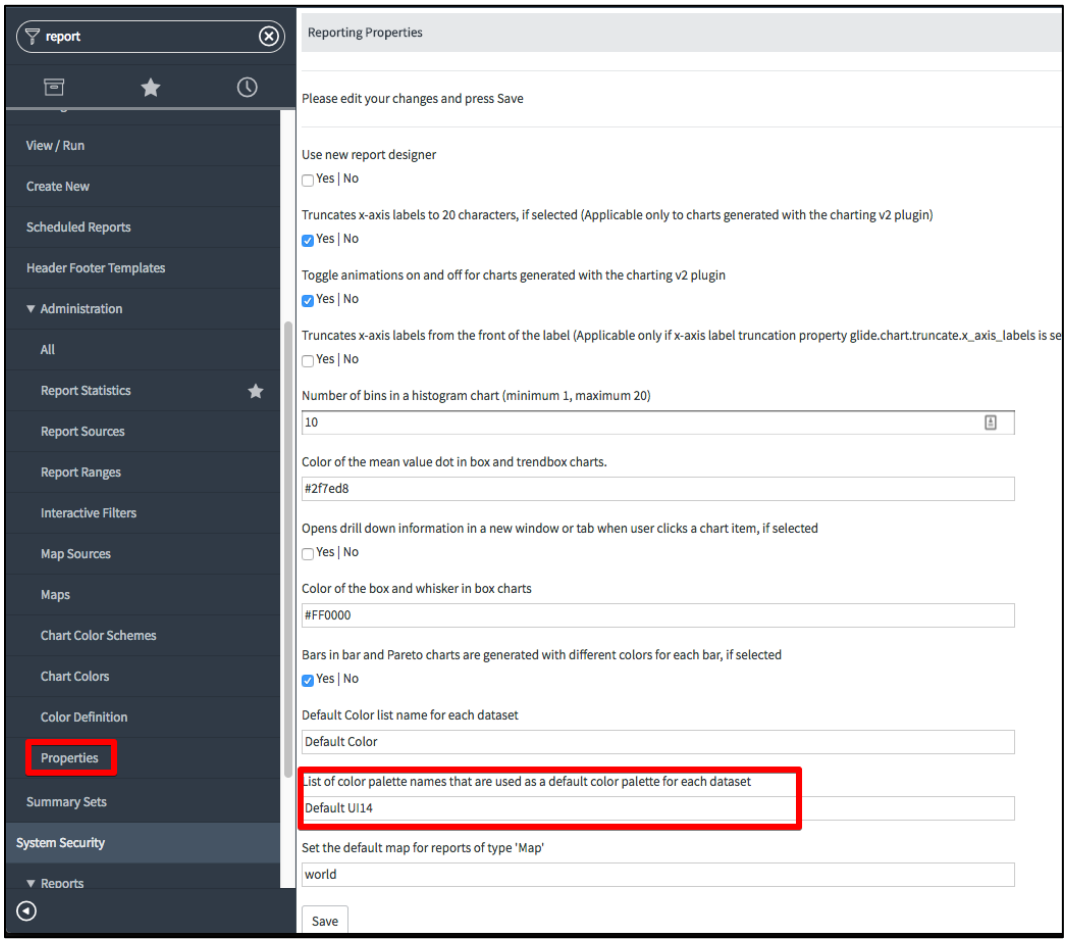
Hint: 1st series is a Line and 2nd series is an Area (using gold color)

Change Default Properties

Change Default Palette

1. Navigate to the unique instance URL provided to you and log on with admin credentials.

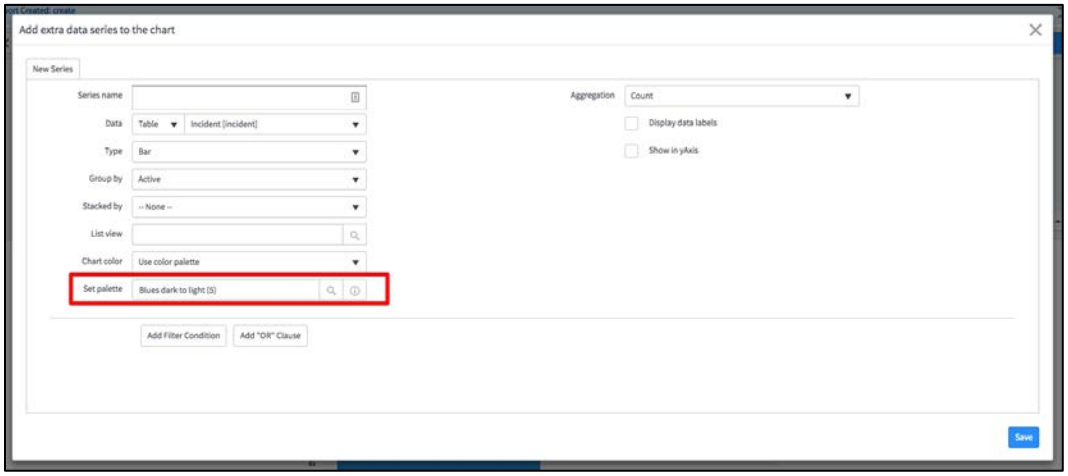
2. Navigate to **Reports -> Administrator-> Properties.**



3. Change the **List of color palettes names** property with value:
   Default **UI14**, **Blues dark to light (5)**
   Click **Save.**

4. Create a new **Bar** Multi dataset report with **Incident** and **Problem** tables.

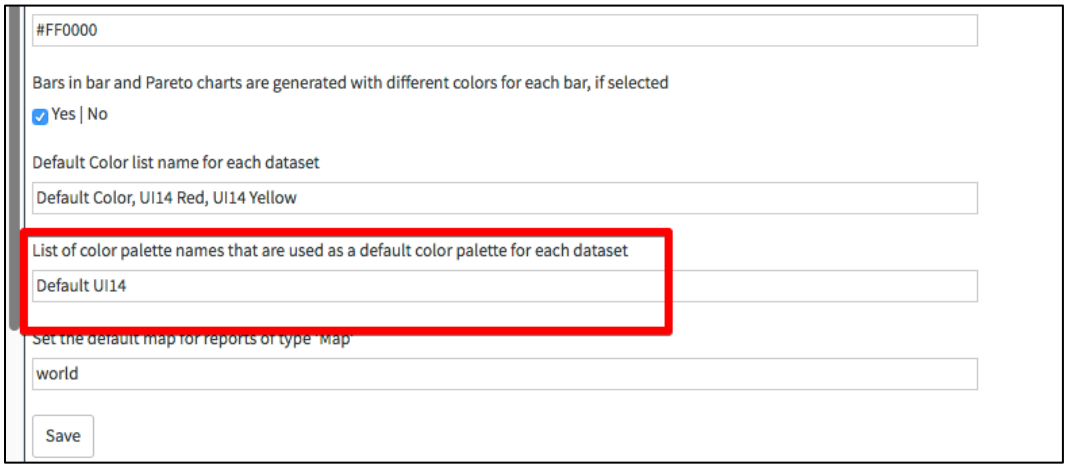
5. When you are creating the 2nd dataset (problem), the default palette that shows in the popup list should be **Blues dark to light (5)**.



Change Default Color

1. Navigate to the unique instance URL provided to you and log on with admin credentials.

2. Go to **Reports -> Administrator-> Properties.**



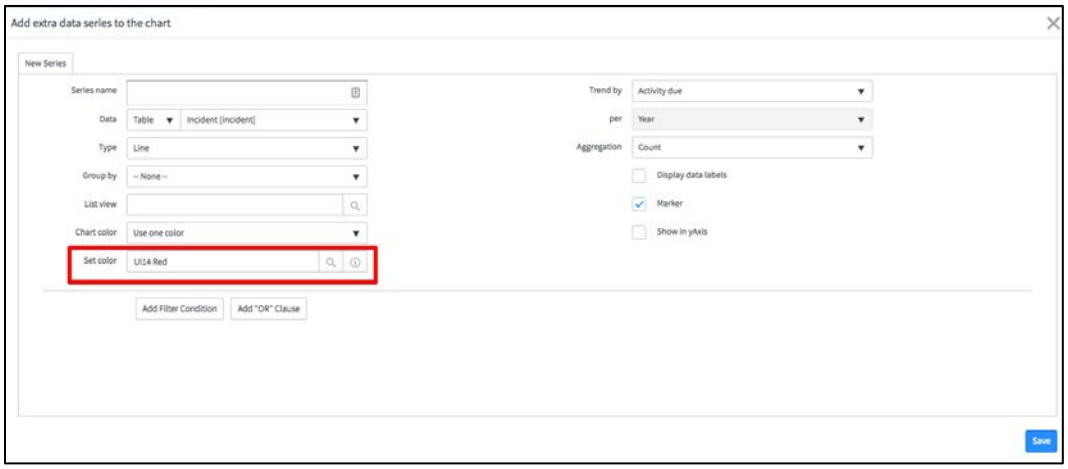
3. Change the **Default Color List Name of each dataset** with value:

   Default Color, **UI14 Red**, **UI14 Yellow**
   Click **Save.**

4. Create a new **Line** Multi dataset report with Incident and Problem tables.

Lab Success Verification

1. When you create the 2nd dataset (problem), the default Color (set **Color** field) that shows in the popup list is **UI14 Red**.



Lab Goal

Lab 5
Interactive Filters

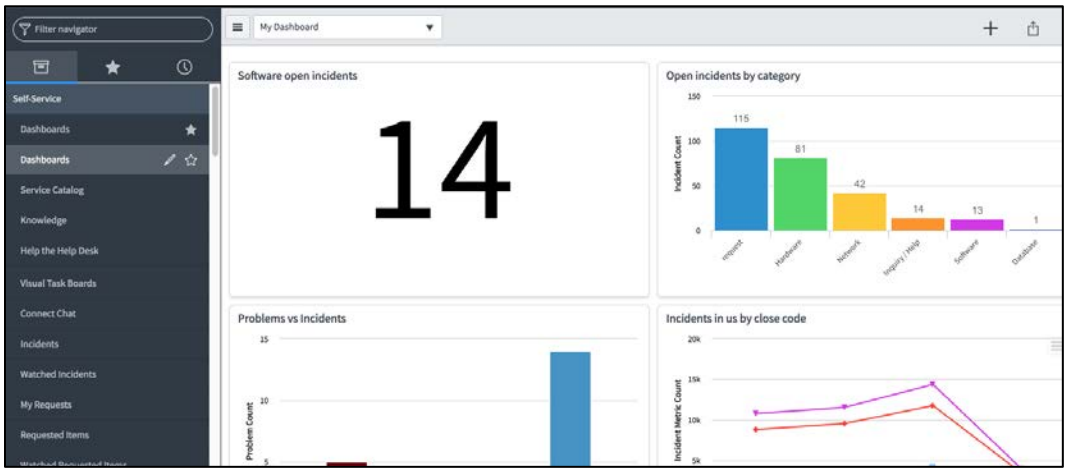
This lab explores how to add interactive filters and how a Report Administrator can create them.

- Add an existing interactive filter to a Dashboard
- Create an interactive filter

Add an Interactive Filter to a Dashboard

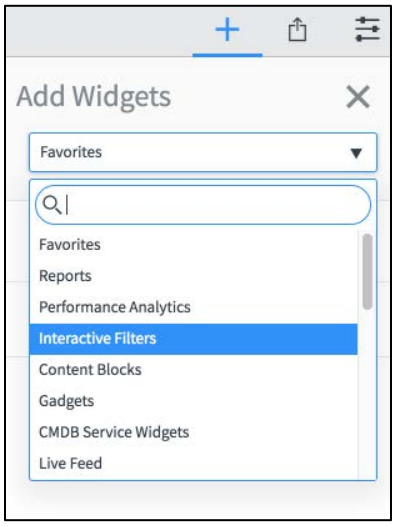
1. Navigate to the unique instance URL provided to you and log on with report admin credentials.

2. Open **My Dashboard** in **Self-Service ->Dashboards**

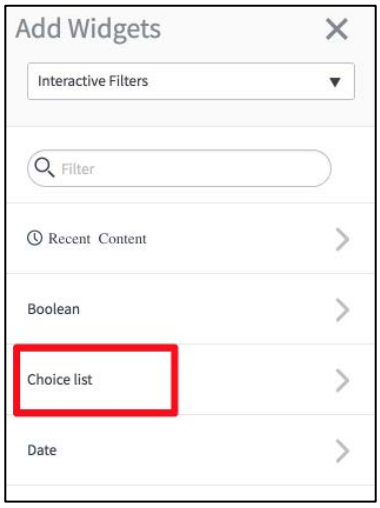


3. Click ⊞ to edit this dashboard.

4. In the dropdown list, select **Interactive Filters**.

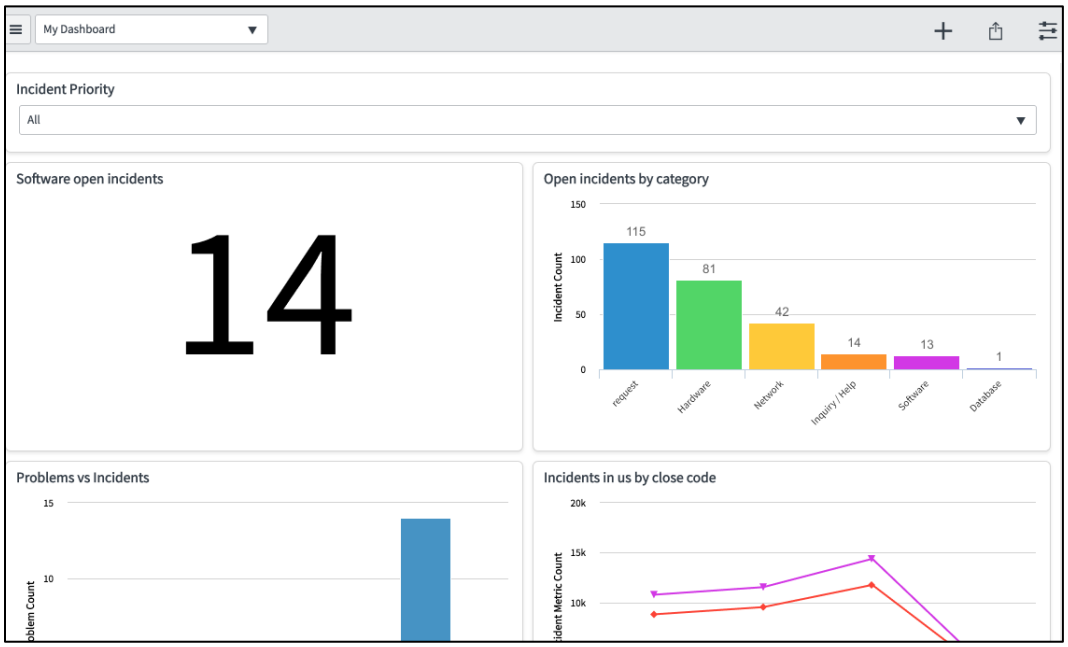


5. Select **Choice List** type of filter.



6. Select **Incident Priority – Single** filter and click **Add**.

7. Resize the widgets in the Dashboard if you want (remember to click ⊞ to edit the dashboard). For example, it could look like:

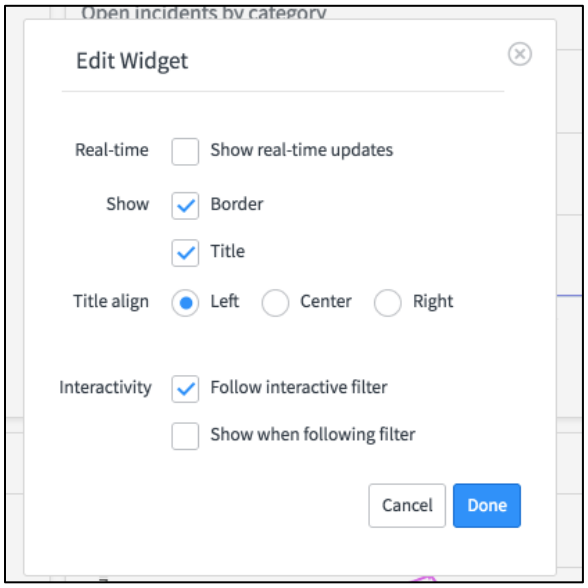


8. Try to change the Incident Priority widget with some priority… nothing happens. This is because you have not specified which widgets are going to follow the filter.

9. Click ⊞ to edit the dashboard.

10. Put the mouse cursor on the widget title (some icons will appear). Click to **cogwheel** button to edit properties of the widget in Software open incidents widget. A popup opens.

11. Mark **Follow interactive filter** check box and click **Done**.



12. Close the **edit mode** dashboard clicking  to make the left bar hide.

Lab Success Verification

1. Select a value in **Incident Priority** widget and the **Software Open Incident** value must be refreshed with a new value.



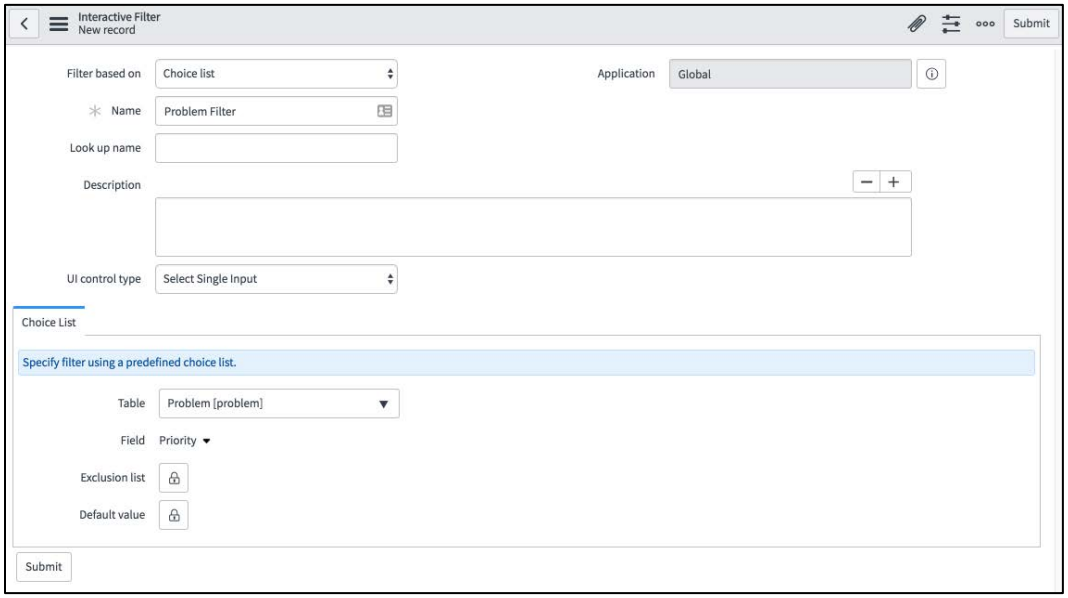
Create a New Interactive Filter

1. Navigate to the unique instance URL provided to you and log on with the provided credentials.

2. Open **Reports -> Administration -> Interactive Filters.**

3. Click **New** to create a new Interactive Filter.

4. Fill the values to create a filter on Problem table, field Priority (see below), and click **Submit**.

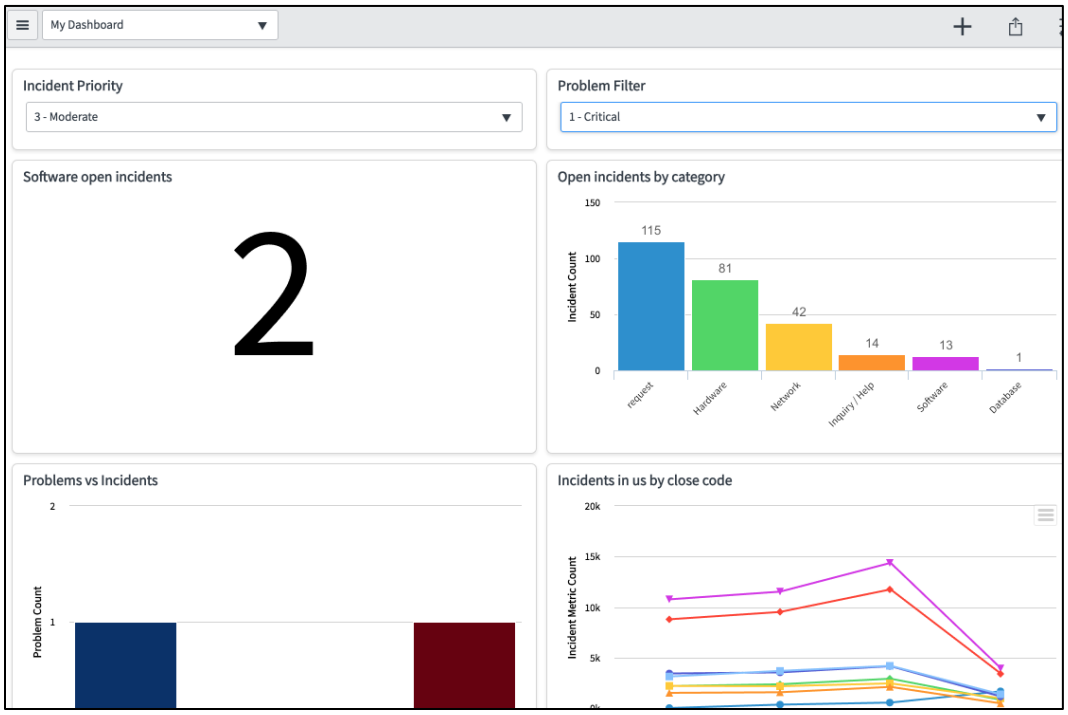


5. Add the new Interactive Filter to the Dashboard as in previous steps.

6. Make the widget **Problems vs Incidents** to follow the filter.

Lab Success Verification

1. Select a value in Problem filter. **Problems vs Incidents** widget refreshes with new data that includes the value of the filter.



Lab Goal

Lab 6
Set Up Dashboards

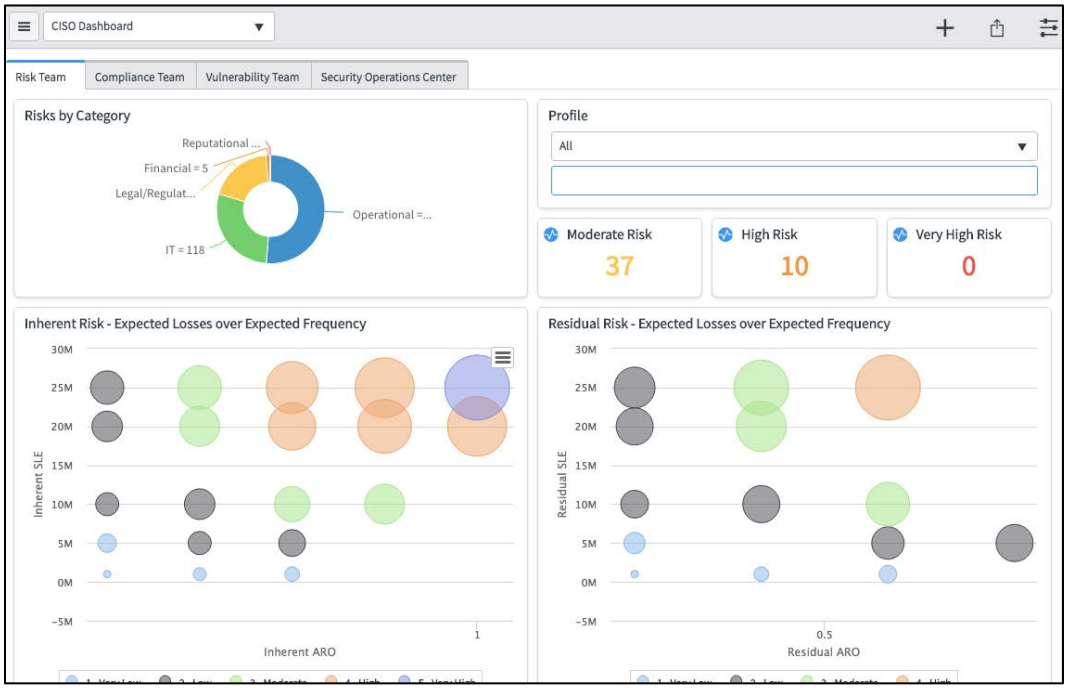
Through the remainder of this lab, you create and modify new reports, and buildout a dashboard. Use a Performance Analytics (PA) dashboard vs a traditional homepage. In future releases, the PA dashboard style will become the standard for any new content. Plus, it is more robust, performs better, and is easier to configure.

- Create a new Dashboard
- Add a tab (or two)

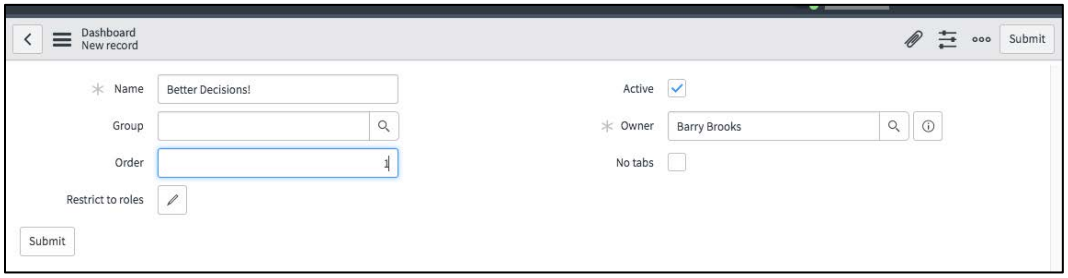
Create a New Dashboard

1. Navigate to the unique instance URL provided to you and log on with the provided credentials.

2. Navigate to **Performance Analytics->Dashboards**. You move to the last dashboard you used. Select the **hamburger** icon to the left of the dashboard name and select **New Dashboard.**



3. Create and save this new Dashboard. Use the screenshot as a guide, but name this dashboard whatever you like.



Lab Success Verification

1. You should now have a blank canvas.



The three icons on the upper right allow you to **add widgets**, **share** and **configure** (format) **the dashboard**. If you want to have multiple tabs, select the **configure icon** and add a tab. Select the tab to change its name. Also, selecting **configuration icon** twice toggles the configuration mode.

Lab Goal

Lab 7
Create a Metric

Sometimes you need a value to be calculated, directly in the record. A Metric is a function that allows to create an event that stores data that can be used later. Examples of an **ootb** metrics include **assigned time**, **duration** of a state, **number of reassignments**, etc. this lab covers the following tasks:

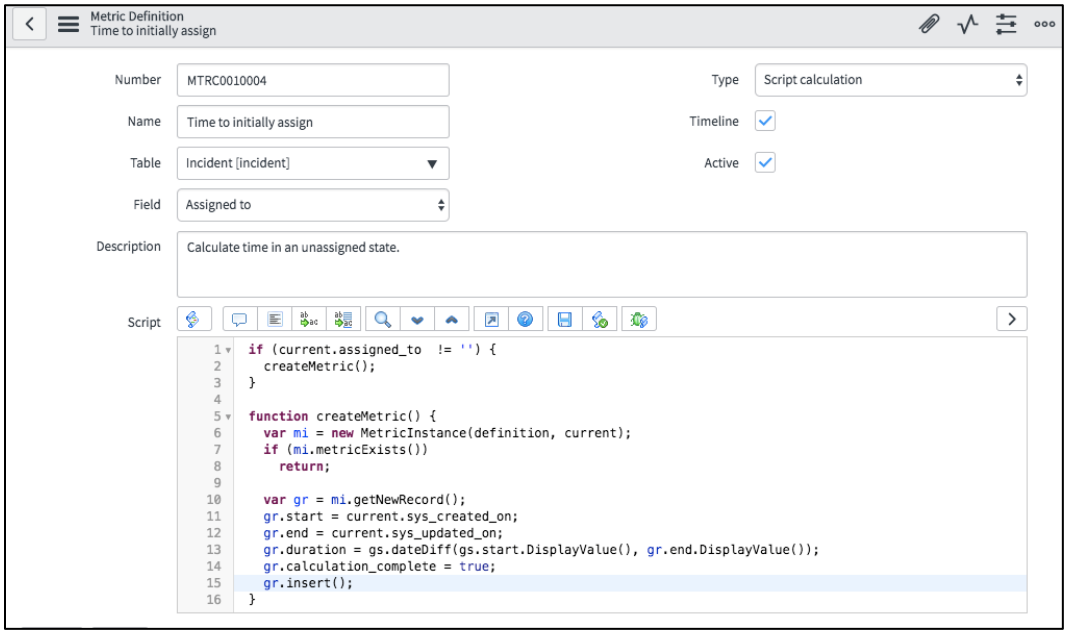
- Measure **Initial time to assign a new incident**
- Define a Metric to capture data
- Create a report and publish to a dashboard

Create Metric

1. Navigate to the unique instance URL provided to you and log on with the provided credentials.

2. Navigate to **Metrics->Definition** and select the metric, **First Call Resolution**.

3. Create and **save** new Metric. Use the example and script provided below.

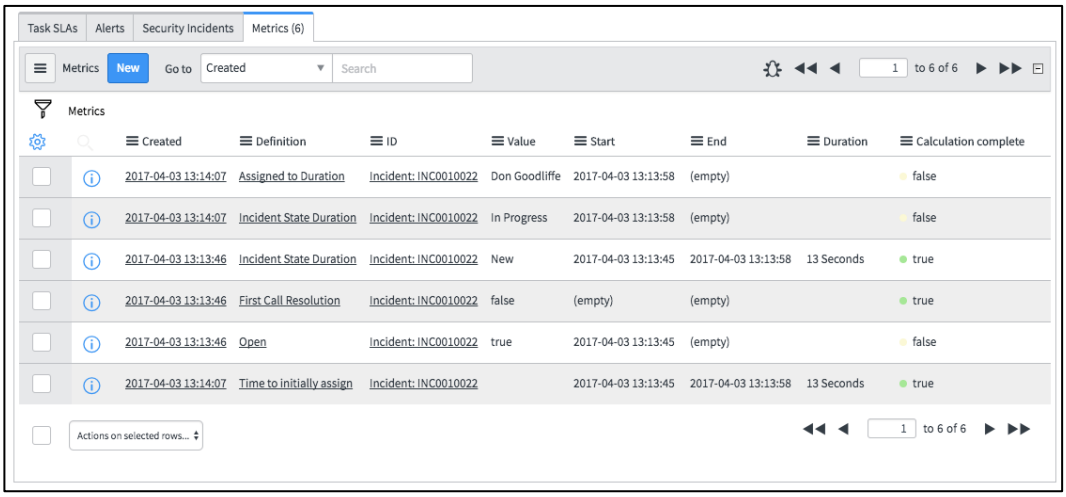


```
if (current.assigned_to != '') {
    createMetric();
}

function createMetric() {
    var mi = new MetricInstance(definition, current);
    if (mi.metricExists())
        return;

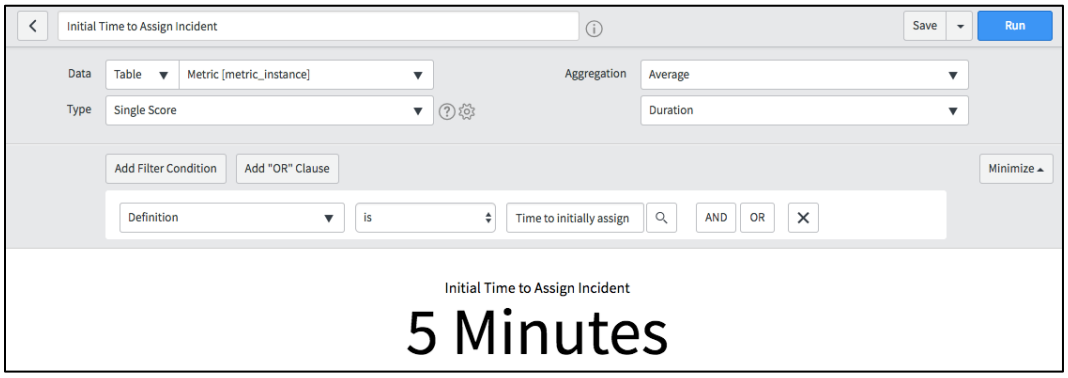
    var gr = mi.getNewRecord();
    gr.start = current.sys_created_on;
    gr.end = current.sys_updated_on;
    gr.duration = gs.dateDiff(gr.start.getDisplayValue(),   gr.end.getDisplayValue());
    gr.calculation_complete = true;
    gr.insert();
}
```

4. Test your new Metric by creating a new Incident without assigning it to anyone. Save the record and then assign the record and save the record again. You should see your new Metric appear in the list. The value should be the timeframe between your two record saves.



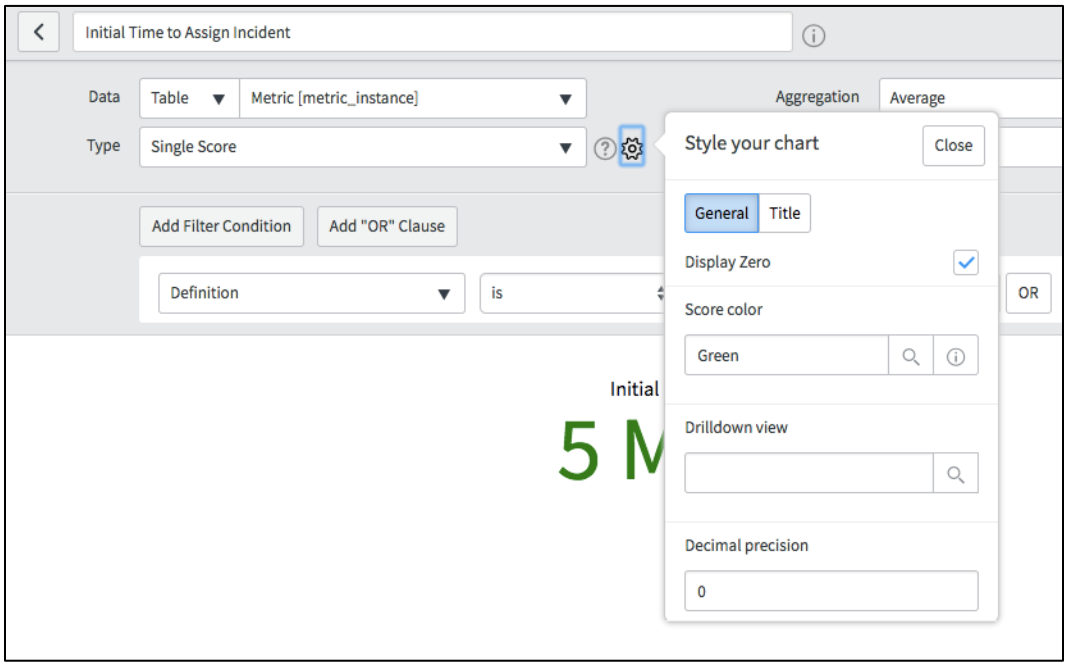
Build Report

1. Navigate to **Reports->Create New**. Create a new report using the example below as a guide. I created a single score widget, but you can use a trend type. There will not be enough data in your instance for a trend.



2. **Save** the report and select **Run** to check your work. You should see an average score for all the data you have in your instance.

3. Select the **modify** button to the right of **Type** and see if there are any configuration changes you want to make. Try changing color schemes or resizing the report. Select through the tabs to see how to change the **Title** and **Legend**.

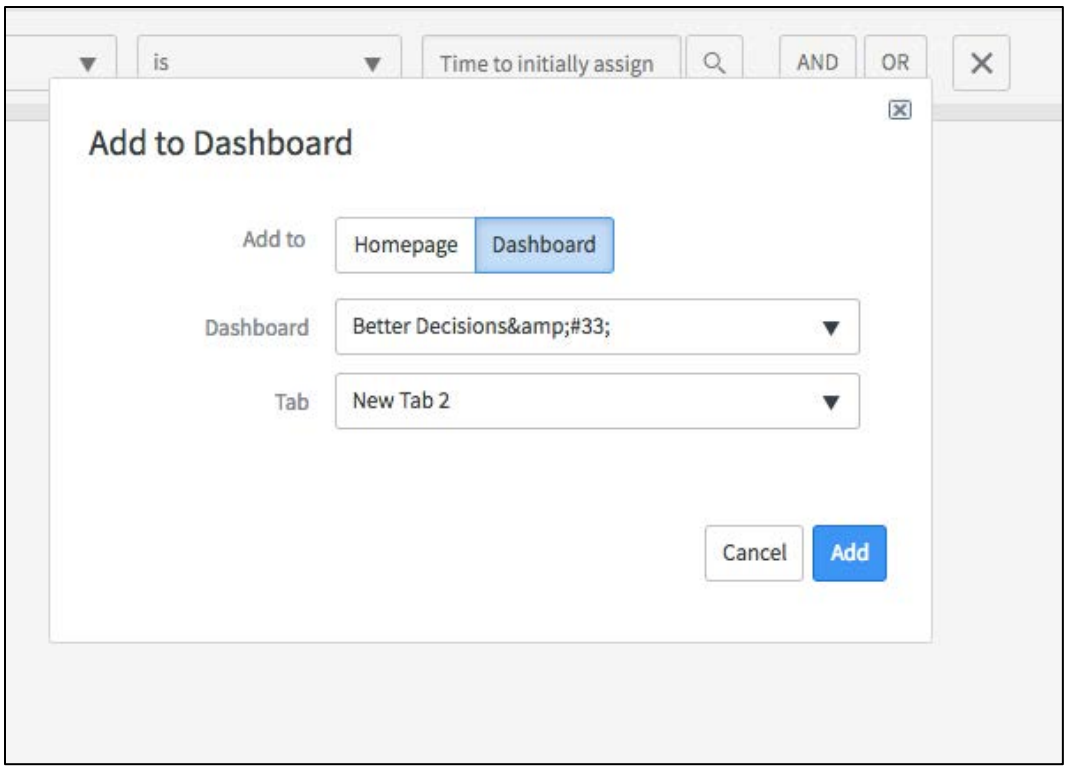


4. **Save** this report and select the dropdown menu to the right of the **Save** button. Here you have options to publish, add to a homepage or select the drilldown list. This is the next layer under this report and can be configured to show more targeted data.

5. In this dropdown menu, select **Report drilldown**. Create a new drilldown report using whatever report type you like. **Save** when you are satisfied.

Add to Dashboard

1. You should be back at the report UI and have your new map loaded. If not, pull it up and select **Add to Dashboard** from the save dropdown menu. Add this new report to the dashboard created earlier by selecting **Dashboards** and navigating to the correct dashboard.



Lab Success Verification

1. Your screen should look like the example. Open the **configuration** icon and resize the widget. Dynamically resizing widgets is available via the admin plugin called **Responsive Canvas**.



Lab Goal

Lab 8
Create Map Reports

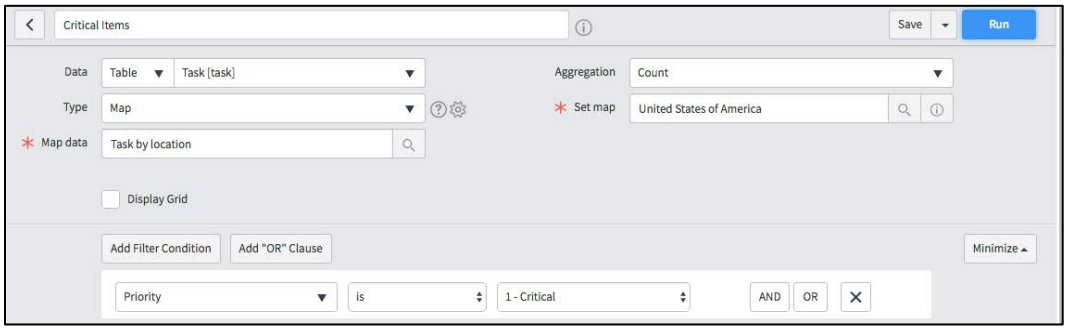
Occasionally, it makes sense to report via a map. This type of report can be used for any data that has a native location. This lab explains how to:

- Create a new map report
- Troubleshoot wrong data in a map
- Create new map source
- Map property

Create a New Map Report

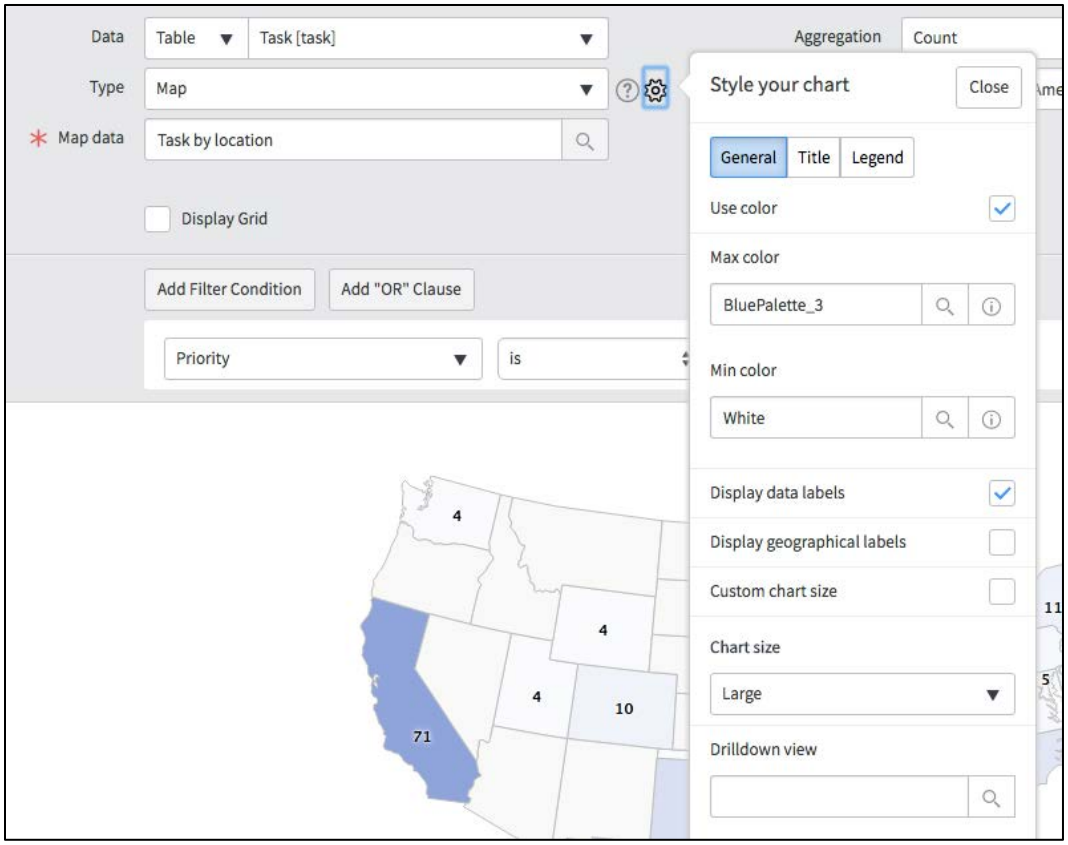
1. Navigate to the unique instance URL provided to you and log on with the admin credentials.

2. Navigate to **Reports->Create New**. Create a new report using the examples below. The **table**, **type**, **map data** and **map set** are part of the **ootb** solution.



3. **Save** the report and select **Run** to check your work. You should see a map of the US with any **Critical Incident**, **Problem**, or **Change** along with any other **task** you have in the instance.

4. Select the **modify** button to the right of **Type** and play see if there's any configuration changes you want to make. Map reports has 2 new styling options, to show data labels or to display geographical labels. Try changing those and other ones like chart size. Select through the tabs to see how to change the **Title** and **Legend**.



5. **Save** this report and select the dropdown menu to the right of the **Save** button. Here you have options to publish, add to a homepage, or select the drill-down list. This is the next layer under this report and can be configured to show more targeted data.

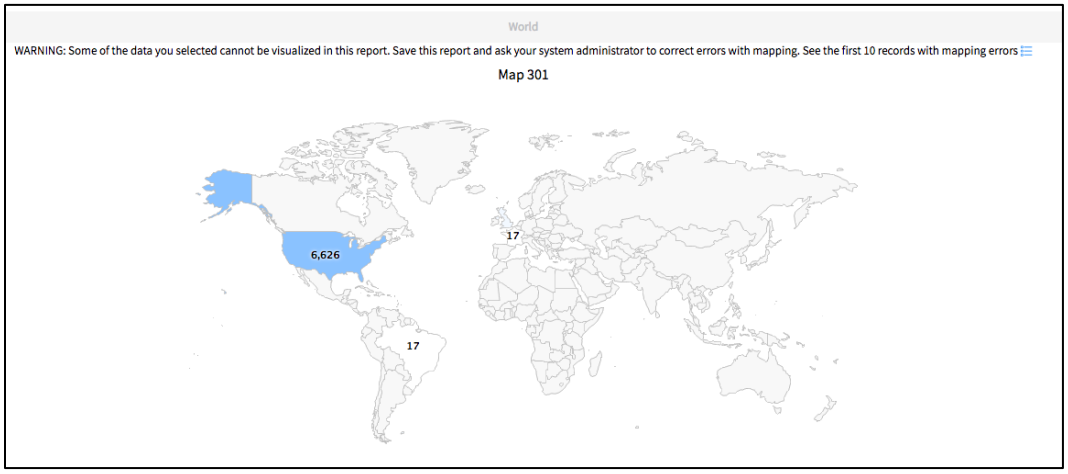
6. **Publish** this report out to your newly created dashboard.

Lab Success Verification

1. You should have a map report with plotted data (the results can vary depending of filter conditions you applied, etc.) on your dashboard. Dynamically resizing widgets is available via an admin plugin, **Responsive Canvas**.

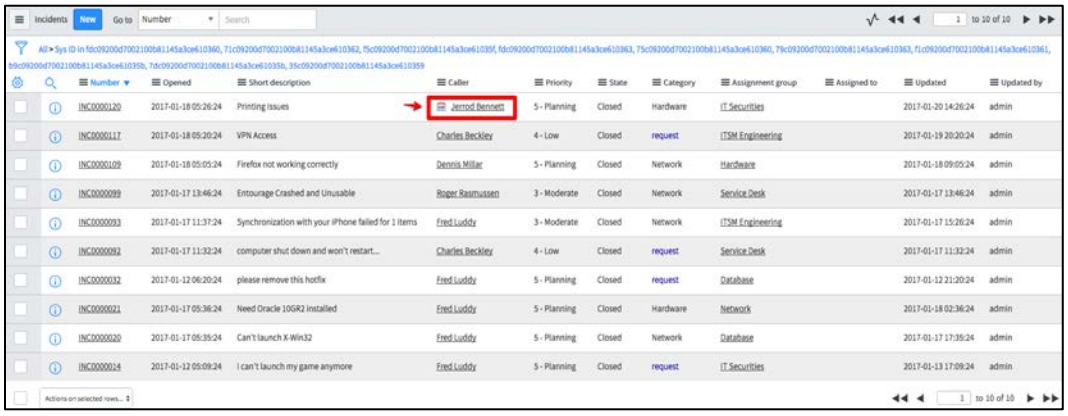
Troubleshoot Wrong Data in a Map

1. **Open** report **Map 301**. There is some warning message in the map. Let's troubleshoot that.

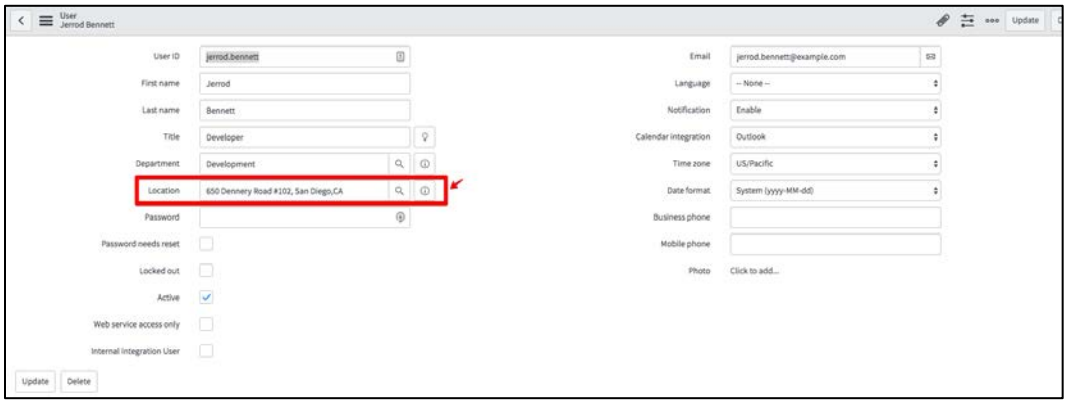


2. Note the **Map** data value in the report (Incident by caller location) and then click on the hamburger link .

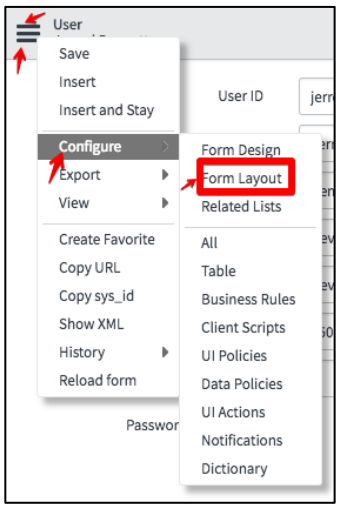
3. It shows a list with some of the wrong values that you cannot plot in a map. Why ? Usually it is because data is bad and must be fixed. Open 1 of the callers.



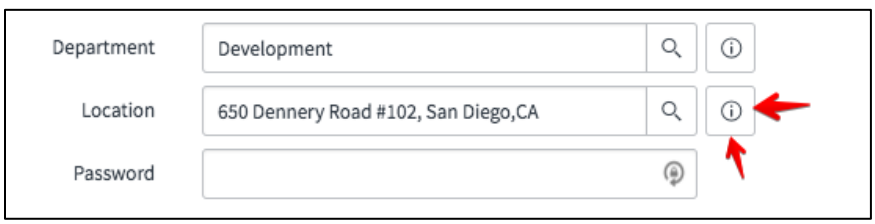
4. Open 1 of the callers clicking on the Caller's **name**. That opens the caller's form.



5. Add the **Location** field not present (if it appears, go to step 6). To add a field, you must be system admin. Click the **hamburger** icon, **Configure**, **Form Layout**.
More info: https://docs.servicenow.com/bundle/istanbul-servicenow-platform/page/administer/form-administration/task/t_ConfigureAForm.html).



6. **Open** the location entry clicking at the **info** icon.



7. **Check** the values in the form if you see anything wrong.

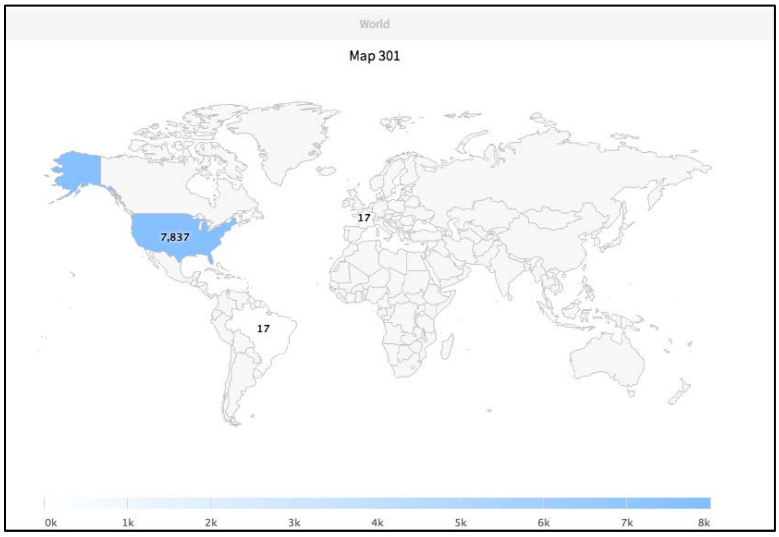


8. The wrong value is the **Country**. Change the Country value to **USA** and click **Update**.

9. Open the report **Map 301** again.

Lab Success Verification

1. You should get the map without any warning.



Create New Map Source

1. **Open Map Sources** under **Reports -> Administration -> Map Sources**.

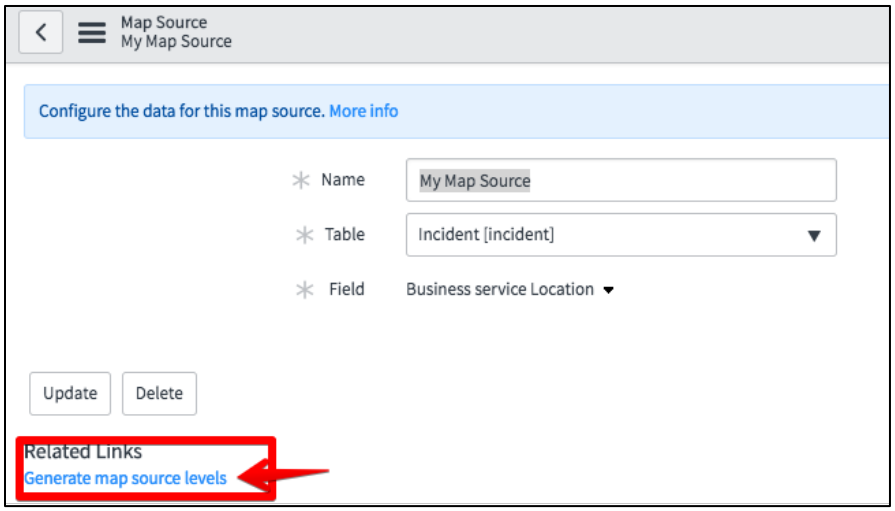
2. Click **New** button to create a new Record.

3. Enter a **Name** for the Map Source, select Table **Incident**, and **Field = Business service -> Location**.

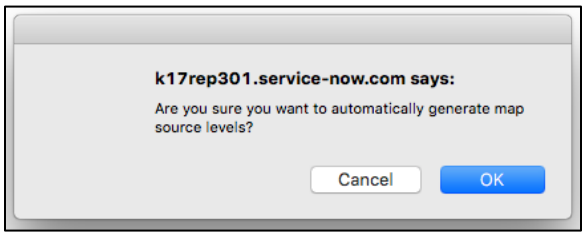
4. Click **Submit** to save it.

5. Open from the list the created map source.

6. The field is a reference field to platform Location table. You can use some help to create levels. Click at the Related Links **Generate map source levels.**



7. Click **OK**.

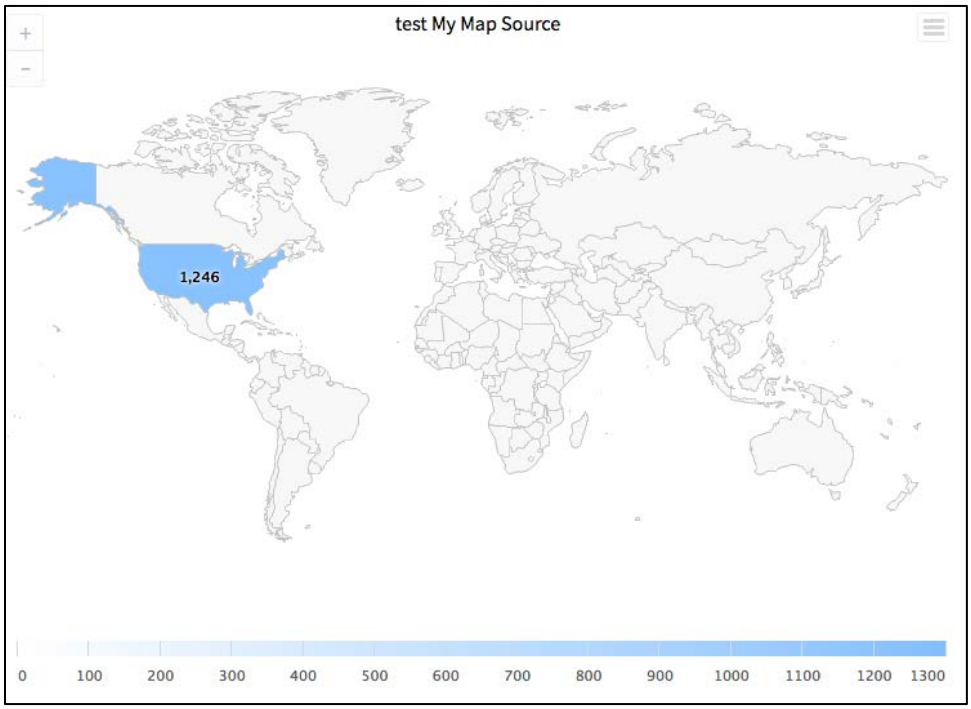


8. All 3 levels have been created automatically.



Lab Success Verification

1. Create a **Map report** (table Incident) using My Map Source. The map should look like the example.



Map Property

1. Navigate to **Reports->Administration->Properties**.

2. In the **Set the default map for reports of type Map** property, you can change the value to a valid Map, for example change the value to: **US.**

Lab Success Verification

1. Create a Map report (table Incident) and the Default Map should be **United States of America**.



Lab Goal

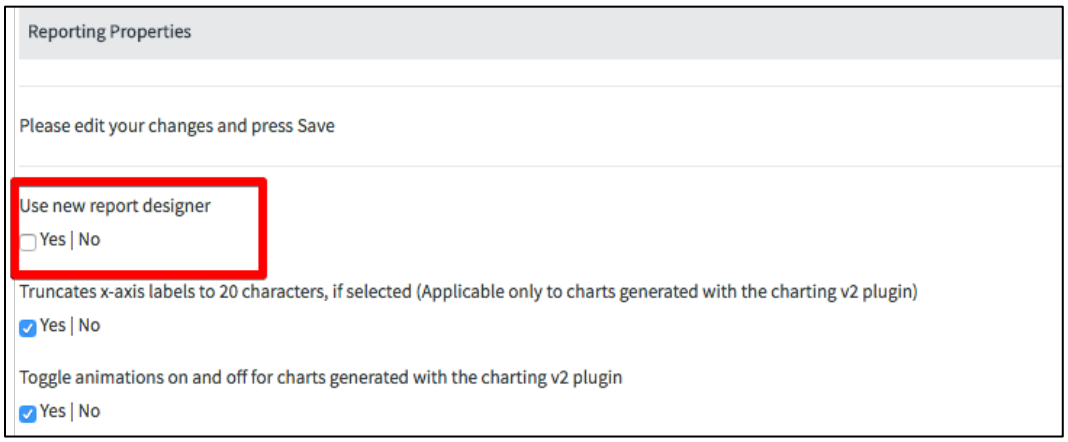
The objective of the lab is to know how to enable New Report Designer.

- Enable Report Designer

Lab 9
Enable New Report Designer

More Formatting Instructions

1. Go to **Report -> Administration -> Properties**.
2. Enable **Use new report Designer** and click **Save**.



Lab Success Verification

1. Create a new Report. The new Report Designer should be visible.

