

# IBM Cloud Pak for Business Automation

## Demos and Labs - Fall 2021

Operational Intelligence

IBM Business Automation Insights

*Build Business Performance Center Dashboard*

V 1.0

Paul Pacholski

[pacholsk@ca.ibm.com](mailto:pacholsk@ca.ibm.com)

## NOTICES

This information was developed for products and services offered in the USA.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive, MD-NC119  
Armonk, NY 10504-1785  
United States of America

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

## TRADEMARKS

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at [www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml).

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

IT Infrastructure Library is a Registered Trade Mark of AXELOS Limited.

ITIL is a Registered Trade Mark of AXELOS Limited.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linear Tape-Open, LTO, the LTO Logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

© Copyright International Business Machines Corporation 2020.

This document may not be reproduced in whole or in part without the prior written permission of IBM.

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

## Table of Contents

<b>1 Lab Introduction .....</b>	<b>4</b>
1.1 Introduction to IBM Business Automation Insights .....	4
1.2 Lab Overview .....	4
1.3 Lab Setup Instructions .....	6
<b>2 Exercise: Create Client Onboarding Workflow Dashboard .....</b>	<b>8</b>
2.1 Introduction .....	8
2.2 Exercise Instructions.....	8
2.2.1 Create a Dashboard .....	8
2.2.2 Create “Average Revenue from Service Fees for Approved Clients” Chart .....	9
2.2.3 Create “Approvals by Industry” Chart .....	14
2.2.4 Create “Services Subscription by Industry with Drilldowns” Chart.....	16
2.2.5 Create “Highest Service Fee by Industry Sector” Chart .....	19
2.2.6 Create “Approval Count of High-Risk Cases” Chart .....	21
2.2.7 Create “Average Approval Confidence by Industry Sector and Revenue” Chart.....	24
2.2.8 Create “Activity Duration Distribution in Case Completion” Chart .....	27
2.2.9 Create “Completed Cases per Day” Chart .....	28
2.2.10 Create “Approvals by Industry Heatmap” Chart.....	35
2.2.11 Create “Client Onboarding Data” Chart .....	36
2.2.12 Create a Configure Goal .....	40
2.2.13 Change Dashboard Layout .....	42
2.2.14 Explore Advanced Dashboard Features.....	45
2.3 Summary.....	46

# 1 Lab Introduction

In the labs, you will learn how to build and use Business Performance Center dashboard to provide insights into a Client Onboarding solution for line of business users.

This lab will consist of one Exercise:

1. Create Mortgage Solution Dashboard

## 1.1 Introduction to IBM Business Automation Insights

IBM Business Automation Insights enables capture of events generated by the operational systems that are implemented with the IBM Business Automation products. Captured events are aggregated into business relevant KPIs, and presented them in dashboards for lines of business to have a real-time view on their business operations.

More technical information about BAI: <https://ibm.box.com/v/IBM-BAI-Tech-Intro>

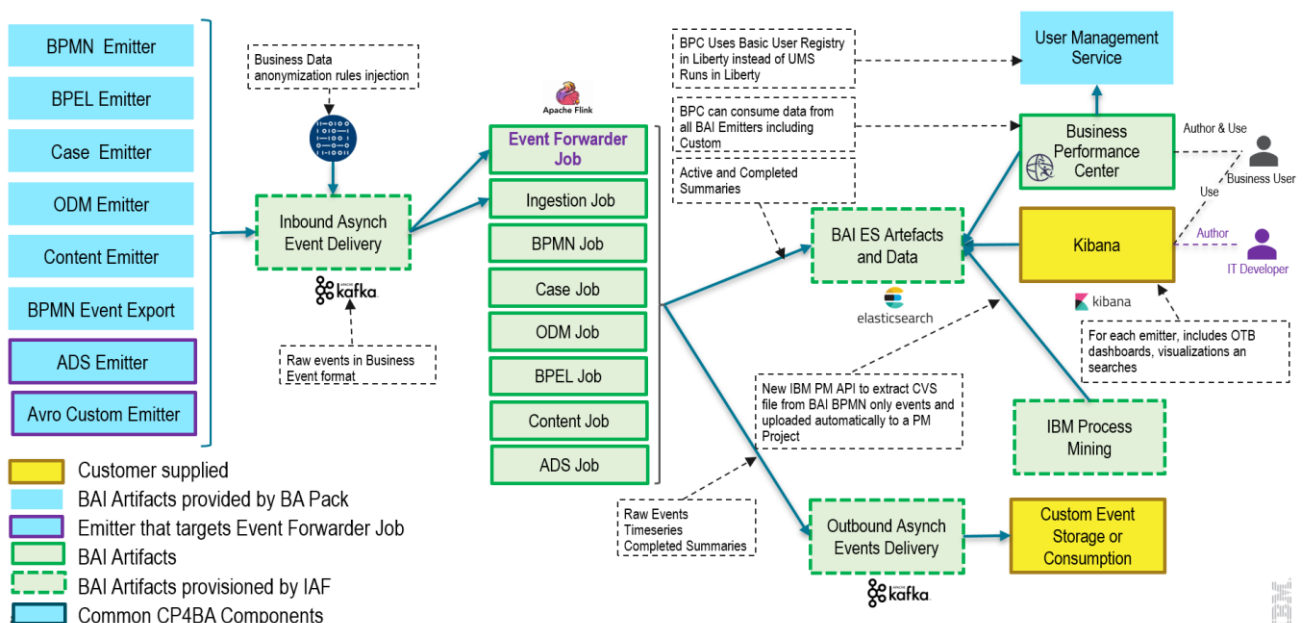


Figure 1. IBM Business Automation Insights 20.0.1 Architecture

Business Performance Center (BPC), shown in Figure 1 above, is the no-code business monitoring application native to IBM Cloud Pak for Business Automation. Using BPC business users (with no IT assistance) can:

- design and share dashboards in minutes that capture business data in near real time and provide awareness of important business activities and processes.
- prepare, track, and design visualizations of *metrics, key performance indicators (KPIs)*, and other measurements of business performance in customizable dashboards.

More information about BPC: <https://ibm.box.com/v/BusinessPerformanceCenter>

## 1.2 Lab Overview

The solution used during the labs is *Client Onboarding Workflow* automation which is implemented as a Case with several BPMN Process that implement Case Activities. The automation contains a single Case Type

*Client Onboarding Requests* which contains activities which need to be performed, data, documents and conditions driving the processing.

[Automations](#) / [Client Onboarding](#) / Case Type

## Client Onboarding Request

Case Type Properties Views Case Folders Stages Rules **Activities**

All activities ⓘ 🔒 View

**Required activities**

**Initialize Request**  
File selected documents to the Case folder and handle pending  
Precondition: Case Start  
Set: <None>

**Notification**  
Notify the client and client rep that the review has been  
Precondition: Stage started: Notification  
Set: <None>

**Perform Scoreboarding**  
Scoreboard the client (Classifies them into a segment and assess  
Precondition: Stage started: Scoreboarding  
Set: <None>

**Update Backend Systems**  
Update backend systems with client information  
Precondition: Stage started: Backend Systems Up...  
Set: <None>

**Optional activities**

**Review Client Documents**  
Renew any new documents coming in from the client  
Precondition: Documents: Any document  
Property ...  
Set: <None>

All five Case Activities above are implemented by BPMN Processes (shown blow) in automatically generated Process App (Client Onboarding)

IBM Automation

Business automations /

**Client Onboarding**

Process App Settings (Read-only)

Client Onboarding

**Processes**

User interface

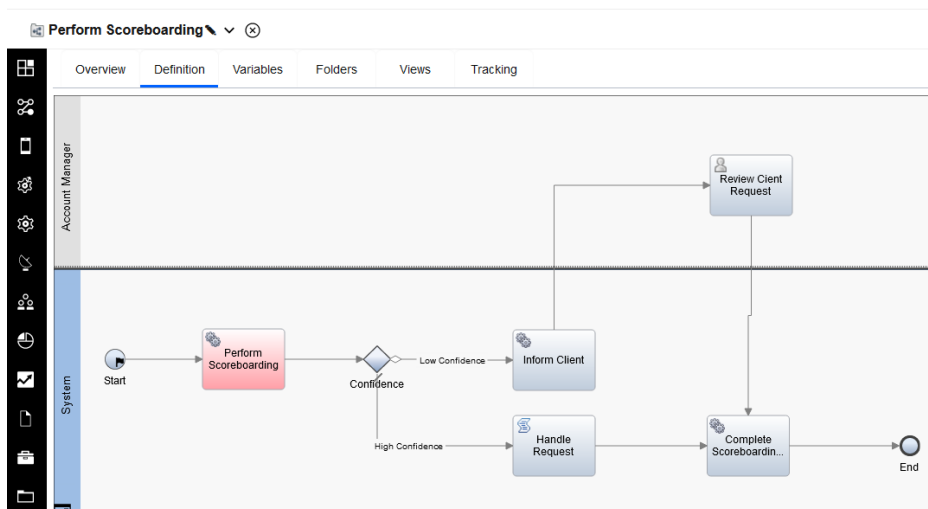
Exposed Automation Services

Type Processes 6

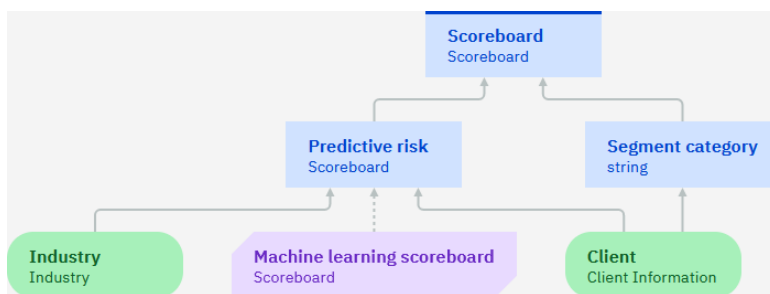
Process

- Initialize Request
- New Client Onboarding Request
- Notification
- Perform Scoreboarding
- Review Client Documents
- Update Backend Systems

The *Perform Scoreboarding* Activity (shown in light red below) is of particularly interest. It uses Automation Services to invoke Scoreboard decision implemented using Automation Decision Services.



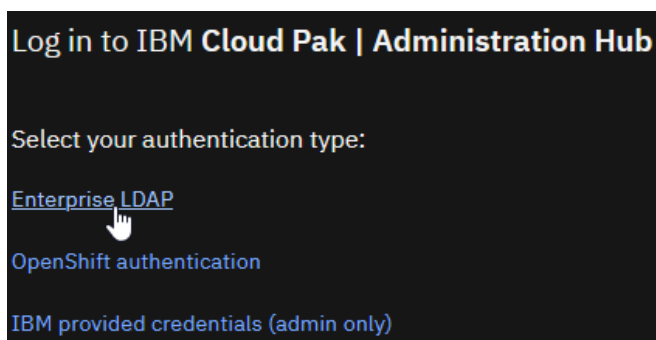
The Scoreboard ADS Decision determines if a client is risky using a ML-based predictive model and classifies the client into a segment.



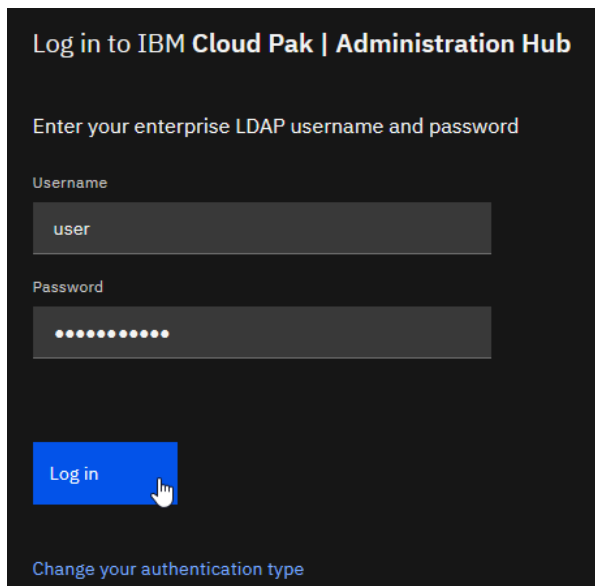
When authoring one of the Charts you will be using data generated by the above decision.

## 1.3 Lab Setup Instructions

- \_1. If you are performing this lab as a part of an IBM event, access the document that lists the available systems and URLs along with login instructions. For this lab, you will need to access **IBM Business Performance Center**.
- \_2. Paste the Business Performance Center URL to your web browser.
- \_3. Select **Enterprise LDAP** login option



\_4. Enter the supplied to you *Username* and *Password* and then click **Log in**



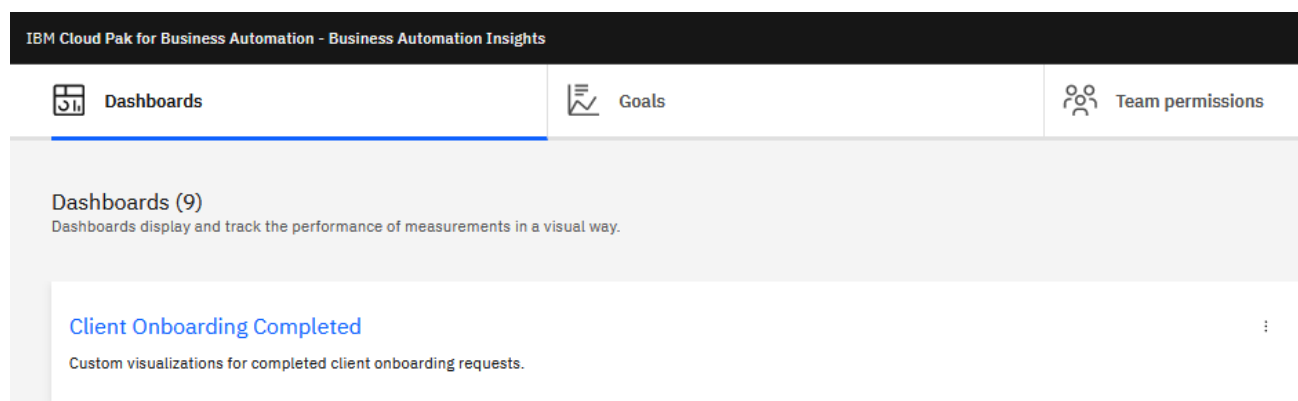
The screenshot shows the login interface for IBM Cloud Pak Administration Hub. The title is "Log in to IBM Cloud Pak | Administration Hub". Below the title, it says "Enter your enterprise LDAP username and password". There are two input fields: "Username" with the text "user" and "Password" with masked characters. A blue "Log in" button is positioned below the password field, with a mouse cursor hovering over it. At the bottom, there is a link that says "Change your authentication type".

## 2 Exercise: Create Client Onboarding Workflow Dashboard

### 2.1 Introduction

In this lab exercise you will use BPC to create a business dashboard that will enable a business user to get a real time business insight into *Client Onboarding Workflow*.

In addition to built-in dashboards, a reference version of the dashboard you will be building in the lab exercise (called **Client Onboarding Completed**) has already been built for you.



If you like, you can refer to it when building your own version of the dashboard.

Note that BAI events were already generated for you. But, since you are using a live shared environment with your and other users working on Client Onboarding cases, you may see new events arriving as you are authoring your dashboard. Consequently some of the screen shots in the lab instructions may be exactly as captured in the lab instructions.

### 2.2 Exercise Instructions

In this lab exercise you will author and configure the following BPC artifacts:

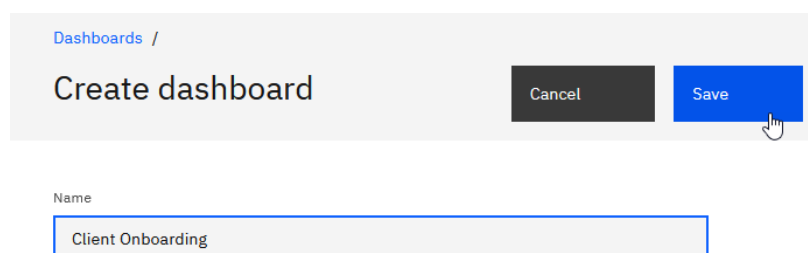
- Client Onboarding **Dashboard**
- **Charts** used in the Client Onboarding dashboard
- A Chart **Alert**
- A **Goal** to group related Charts

#### 2.2.1 Create a Dashboard

\_1. Click Create +



\_2. For *Name* enter **Client Onboarding** and click **Save**

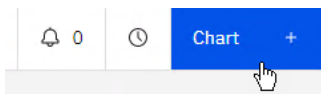




## 2.2.2 Create “Average Revenue from Service Fees for Approved Clients” Chart

This gauge chart will be showing the average revenue from service fees for clients that were approved.

\_1. Click Chart +




\_2. Enter the following and then click **Create**

Item	Value
Name	Average Revenue from Service Fees for Approved Clients
Select measurement	KPI

Client Onboarding ×

Create chart

Name

Average Revenue from Service Fees for Approved Clients 

Description (optional)


Select measurement

Metric


90%


A performance indicator based on data items, constants, and other metrics that helps you

Period metric




A representation of metric values measured over time.

KPI 



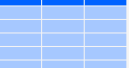
A type of metric that shows the degree to which business objectives are on track.

Period KPI




A representation of KPI values measured over time so that you can spot historical trends.

Data



A set of data items presented in a table.

Cancel

Create 

### 2.2.2.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding ▼

This will select events from Client Onboarding Workflow.

\_2. In *Aggregation*, for *Function* select **Average** and for *Data item* select **CO\_ServicesFee (data) – (long)**

#### Aggregation

Function

Average ▼

Data item

CO\_ServicesFee (data) - (long) ▼

If you are wondering how this Case Property got into BAI, take a look at these comments...

**CO** in CO\_ServciesFee is Client Onboarding Solution prefix.

## Client Onboarding

Overview

Properties

Roles

In-baskets



**ServicesFee** in CO\_ServciesFee is the name of the of the Client Onboarding Case properties

## Client Onboarding

Overview

Properties

Roles

In-baskets

Documents

Business Objects

Pages

Case Types

Property Definitions ⓘ

OK All ✓

Manage Choice Lists 📄

Services Fee

Integer



Fee being chaged for the services requested

Services Requested

String



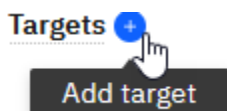
The services requested by the client

For BAI Case Emitter to add this property to the emitted events we need to configure Client Onboarding Audit Configuration

A screenshot of the IBM Business Automation Workflow Case administration interface. The 'Manage Audit Configuration' tab is active. Below the navigation buttons (Back, Next, Save, Apply, Cancel), there is a section 'Add properties to audit' with 'Add' and 'Remove' buttons. A table lists the configured audit properties:

Object Type	Object Name	Property Name	Property Symbolic Name
Case	Client Onboarding Request	Services Fee	CO_ServicesFee
Case	Client Onboarding Request	Services Requested	CO_ServicesRequested

\_3. Click Add target +



\_4. For *Value* enter **80000**

Targets 

Label

Value

New target

80,000



\_5.

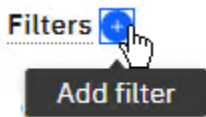
### 2.2.2.2 Define Filter Data

When selecting Monitoring source you specified **Workflow (Case) – Client Onboarding** . This setting allows you to work with the instances of Client Onboarding Workflow. Filters allow you to select specific data you want to display in your Chart.

\_1. Select **Filters** tab



\_2. Click **Filter +** button.



\_3. Select the following values from the dropdown list:

Item	Value
Data item	CO_ApprovalStatus (data) – (keyword)
Operator	=
Value	Approved

Your Filter setting should look exactly like this:

Data item	Operator	Value
CO_ApprovalStatus (data) - (keyword) ▼	= ▼	Approved

### 2.2.2.3 Define Visualization

This setting allows you to customize your Chart display settings.

\_1. Select **Visualization** tab



\_2. Enter the following values:

Item	Value
Min	0
10	10000
Unit	\$

Your Gauge setting should look exactly like this:

#### Gauge settings

Min	Max
0	100,000
Unit	
\$	

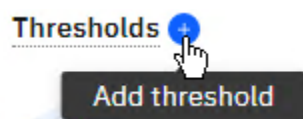
### 2.2.2.4 Define Thresholds

This setting allows you to customize Gage threshold setting.

\_1. Select **Threshold** tab

<input checked="" type="radio"/> Monitoring Select data	<input type="radio"/> Filters Refine selection	<input type="radio"/> Visualization Display data	<input checked="" type="radio"/> Thresholds Label ranges
--	---	---	---

\_2. Click **Thresholds +** button two times.



\_3. For each group select the following values from the dropdown list:


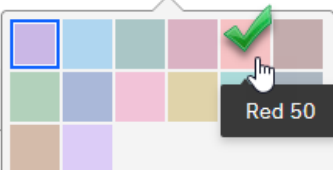
Threshold	Data item	Value
1	Threshold name	Below
	Value	30000
	Range name 1	Poor
	Range name 2	Good
2	Threshold name	Above
	Value	80000
	Range name	Excellent

Your Thresholds setting should look exactly like this:

#### Thresholds +

Threshold name	Value	Range name	Start	End	
Below	30,000	Poor	min	30,000	
		Range name	Start	End	
		Average	30,000	80,000	
Threshold name	Value	Range name	Start	End	
Above	80,000	Excellent	80,000	max	

\_4. Click **Purple Color patch** and then select **Red color patch** from the palette

Start	End	
min	30,000	
Start	End	
30,000	80,000	
Start	End	
80,000	max	Custom #6929c4

\_5. Using the above steps customize the other two colors

Item	Value
Orange	Yellow
Excellent Color	Green

\_6. The color settings should look exactly like this:

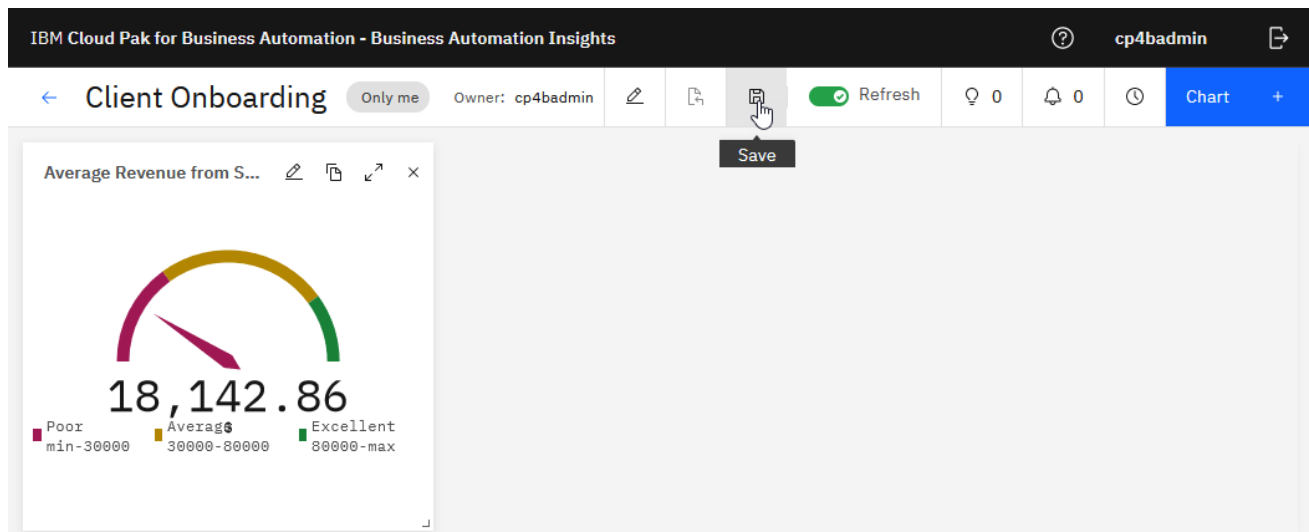


\_7. Click **Done**

?
cp4badmin
→

Cancel
Done

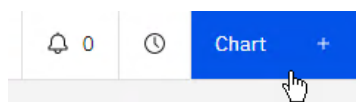
\_8. On the Dashboard Toolbar click **Save** icon to save you work!



### 2.2.3 Create “Approvals by Industry” Chart

This hierarchical pie chart will be showing the state of approvals (Approved, Rejected Under Review) by industry.

\_1. Click **Chart +**



\_2. Enter the following and then click **Create**

Item	Value
Name	Approvals by Industry
Select measurement	Metric

Client Onboarding

Create chart

Name

Approvals by Industry

Description (optional)

Select measurement

Metric

90%

A performance indicator based on data items, constants, and other metrics that helps you monitor your business activities.

Period metric

A representation of metric values measured over time.

KPI

A type of metric that shows the degree to which business objectives are on track.

Period KPI

A representation of KPI values measured over time so that you can spot historical trends.

Data

A set of data items presented in a table.

Cancel

Create

### 2.2.3.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

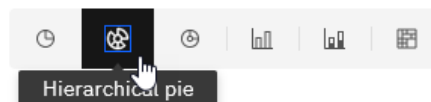
Monitoring source

Workflow (Case) - Client Onboarding

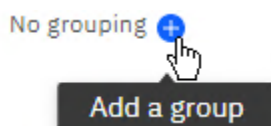
\_2. For chart type select **Hierarchical pie**

#### Metric

Hierarchical pie



\_3. Click Add a group + button twice



\_4. Enter the following keywords for the *Group by* entries:

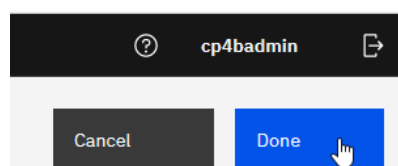
Item	Value
1	CO_ApprovalStatus (data) – (keyword)
2	CO_Industry (data) – (keyword)

Group by +

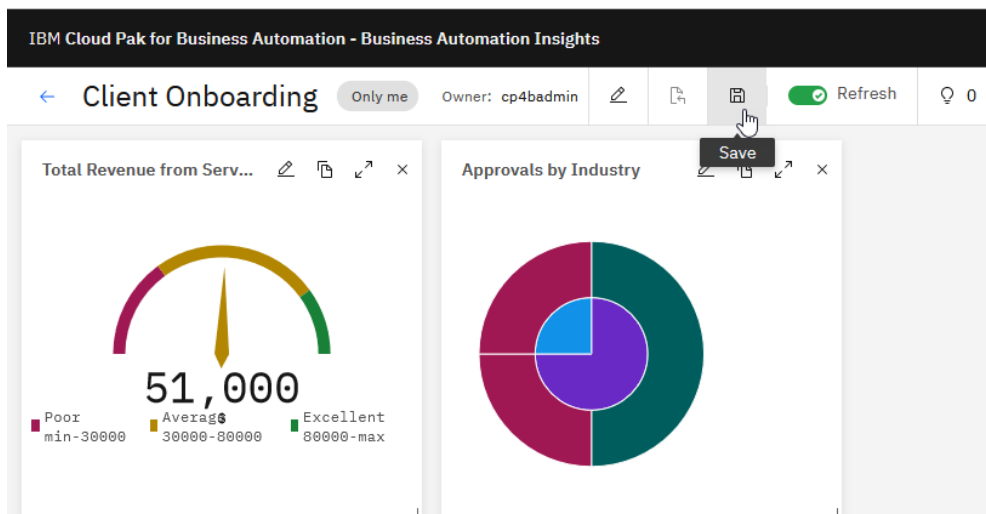
CO\_ApprovalStatus (data) - (keyword)

CO\_Industry (data) - (keyword)

\_5. Click **Done**



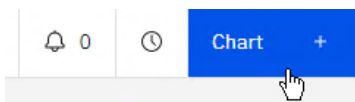
\_6. On the Dashboard Toolbar click **Save** icon to save you work!



## 2.2.4 Create “Services Subscription by Industry with Drilldowns” Chart

This pie chart will be showing the service subscriptions by industry. Additional feature of this chart is ability to drill down by service > industry > country.

\_1. Click **Chart +**



\_2. Enter the following and then click **Create**

Item	Value
Name	Services Subscription by Industry with Drilldowns
Select measurement	Metric

Client Onboarding Create chart

Name

Services Subscription by Industry with Drilldowns

Description (optional)

Select measurement

Metric 90% Period metric KPI Period KPI Data

A performance indicator based on data items, constants, and other metrics that helps you monitor your business activities.

A representation of metric values measured over time.

A type of metric that shows the degree to which business objectives are on track.

A representation of KPI values measured over time so that you can spot historical trends.

A set of data items presented in a table.

Cancel Create



### 2.2.4.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

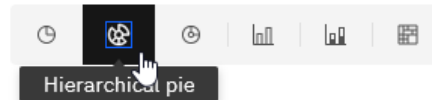
Monitoring source

Workflow (Case) - Client Onboarding

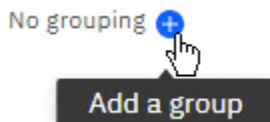
\_2. For chart type select **Hierarchical pie**

#### Metric

Hierarchical pie



\_3. Click Add a group + button three times



\_4. Enter the following keywords for the *Group by* entries:

Item	Value
1	CO_Industry (data) – (keyword)
2	CO_ServiceRequested (data) – (keyword)
3	CO_AddressCountry (data) – (keyword)

Drill down groups should look exactly like his:

#### Group by +

You can drill-down to get the details of each group on the chart.

CO\_Industry (data) - (keyword)

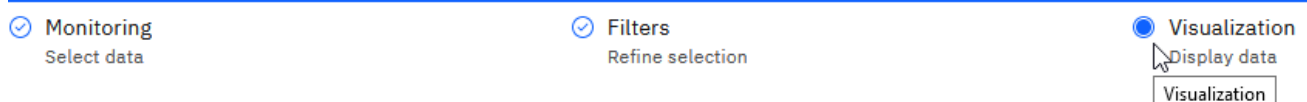
The following groups may be accessed by drilling-down into the chart:

CO\_ServicesRequested (data) - (keyword)

CO\_AddressCountry (data) - (keyword)

### 2.2.4.2 Define Visualization Information

\_1. Click Visualization tab



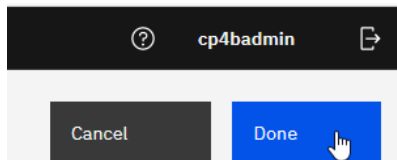
\_2. For *Pie settings* > *unit* enter **Drill-down Legend**

### Pie settings

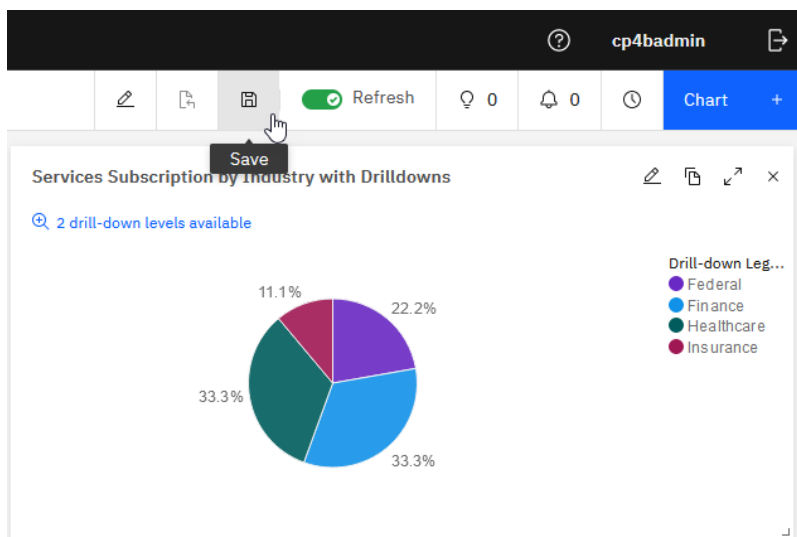
Unit

Drill-down Legend

\_3. Click **Done**

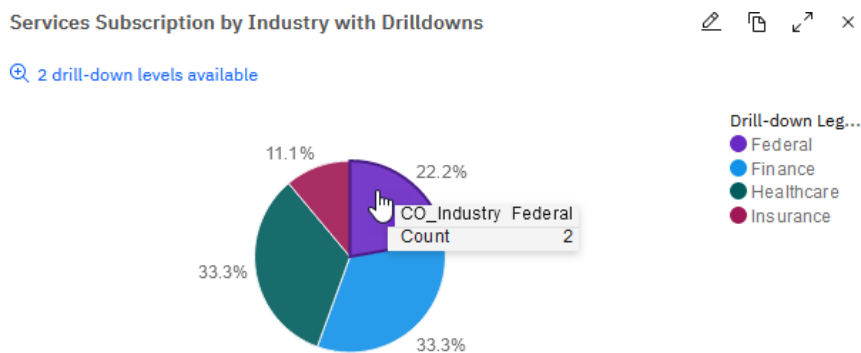


\_4. On the Dashboard Toolbar click Save icon to save you work!

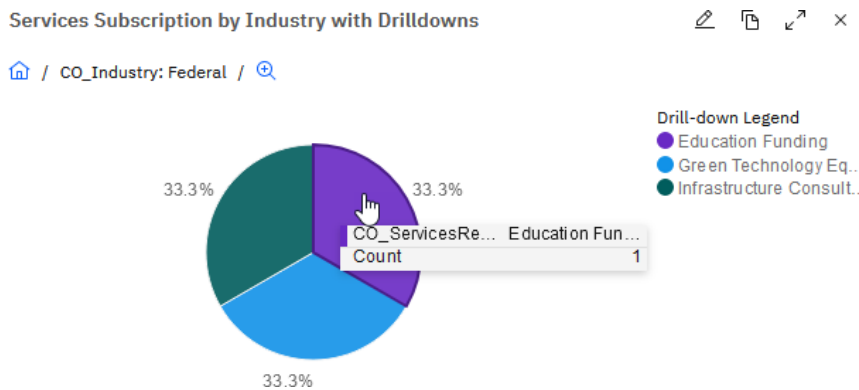


### 2.2.4.3 Explore Drill-down capability

\_1. Select first drill-down level by clicking on **Federal** Industry

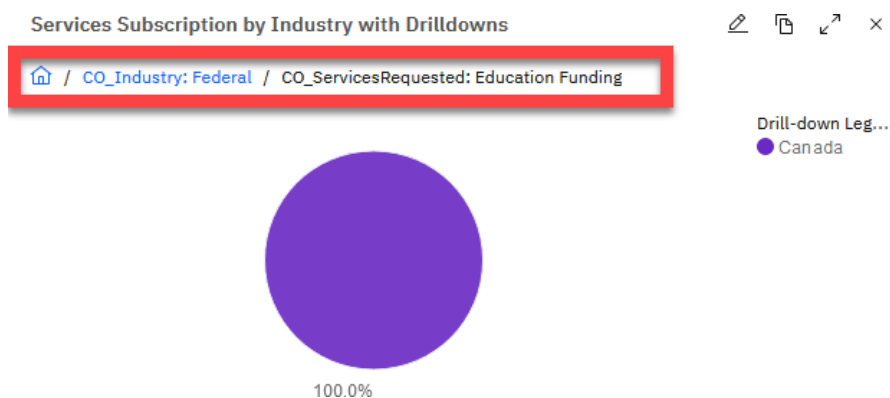


\_2. Select second drill-down level by clicking on **Education Funding** Service

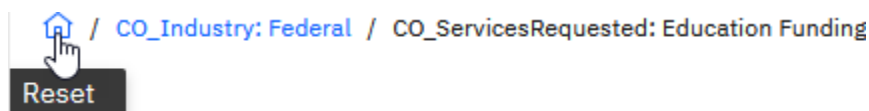


\_3. You should now see all the countries for *Federal > Education Funding* grouping.

\_4. Note the breadcrumbs....



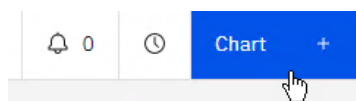
\_5. Click **Reset** to get back to original view



## 2.2.5 Create “Highest Service Fee by Industry Sector” Chart

This bar chart will be showing highest service fee by industry sector.

\_1. Click **Chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following and then click **Create**:

Item	Value
Name	Highest Service Fee by Industry Sector
Select measurement	Metric

### 2.2.5.1 Define Monitoring Information

\_1. For *Monitoring source* select **Workflow (Case) – Client Onboarding**

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. In *Aggregation*, for *Function* select **Max** and for *Data item* select **CO\_ServicesFee(data) – (long)**

#### Aggregation

Function

Max

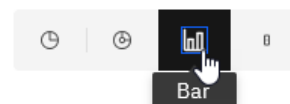
Data item

CO\_ServicesFee (data) - (long)

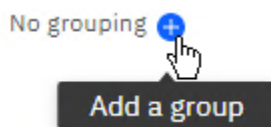
\_3. For chart type select **Bar**

#### Metric

Bar



\_4. Click **Add a group +** button



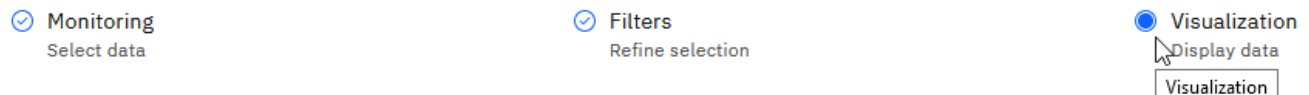
\_5. Enter **CO\_Industry (data) – (keyword)**

#### Group by

CO\_Industry (data) - (keyword)

### 2.2.5.2 Define Visualization Information

\_1. Click Visualization tab



\_2. For Bar settings enter:

Item	Value
X axis label	Industry
Y axis label	Maximum Service Fee [\$]

#### Bar settings

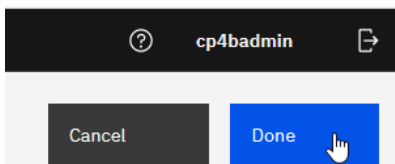
X axis label

Industry

Y axis label

Maximum Service Fee [\$]

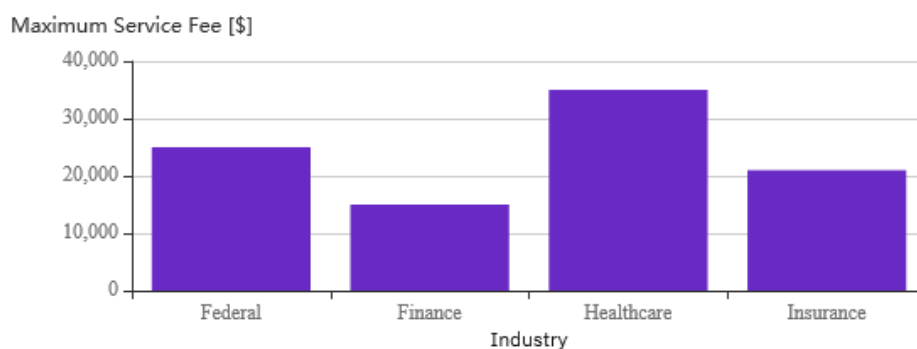
\_3. Click **Done**



\_4. On the Dashboard Toolbar click **Save** icon to save you work!

You chart shgoyuld look similar to this

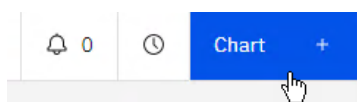
Highest Service Fee by Industry Sector



## 2.2.6 Create “Approval Count of High-Risk Cases” Chart

This bar chart will be showing the approval counts for high-risk cases in a given time period. High-risk cases are identified by the decision service (which uses ML service to score risk level) and serves as a suggestion for approvers. This may be an important metric as it indicates that the ML model decision was overridden by a the approved and there the ML model may have not been accurate and may need re-training.

\_1. Click **Chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following and then click **Create:**

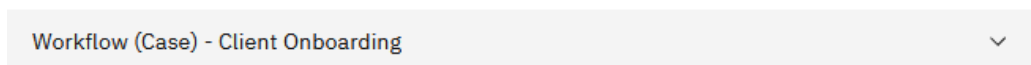
Item	Value
Name	Approval Count of High-Risk Cases
Select measurement	Period metric

### 2.2.6.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source



\_2. On *Interval* change the setting to **Minutes(s)**

#### Interval

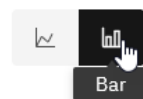
Time interval



\_3. For chart type select **Bar**

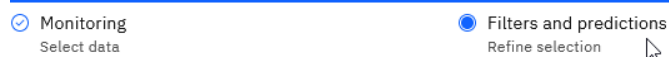
#### Period metric

Bar

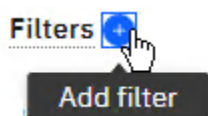


### 2.2.6.2 Define Filters and Predictions

\_1. Select Filters and predictions tab



\_2. Click **Filter +** button **twice** to add two Filters.



\_3. For each group select the following values from the dropdown list:

Group	Data item	Operator	Value
1	CO_HighRisk (data) – (boolean)	=	true
2	CO_ApprovalStatus (data) – (keyword)	=	Approved

Your Filters setting should look exactly like this:

**Filters** +

Data item	Operator	Value
CO_HighRisk (data) - (boolean)	=	true

AND

Data item	Operator	Value
CO_ApprovalStatus (data) - (keyword)	=	Approved

### 2.2.6.3 Define Visualization Information

\_1. Click Visualization tab

☒ Monitoring  
Select data

☒ Filters  
Refine selection

☒ Visualization  
Display data  
Visualization

\_2. For Bar settings enter:

Item	Value
X axis label	Date
Y axis label	Approvals

#### Trend settings

X axis label

Date

Y axis label

Approvals

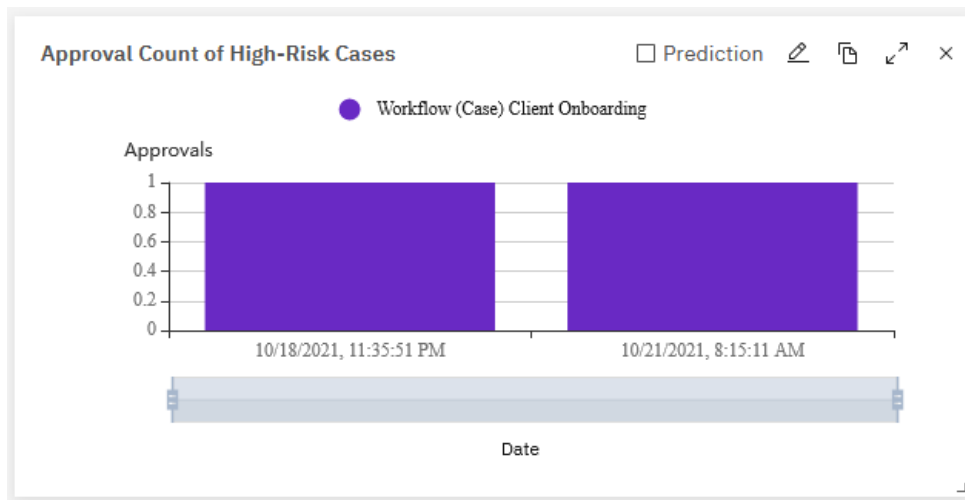
\_3. Click **Done**

cp4badmin

Cancel Done

\_4. On the Dashboard Toolbar click **Save** icon to save you work!

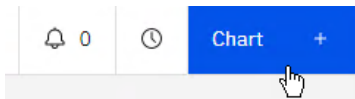
Your chart should look similar to this



## 2.2.7 Create “Average Approval Confidence by Industry Sector and Revenue” Chart

You will be creating Average Approval Confidence by Industry Sector and Revenue bubble chart. The bubble color will indicate the industry. The bubble size will indicate how many cases were handled a given industry. The bubbles will be positioned in a grid with X-Axis being the average revenue and the Y-Axis the average approval confidence level.

\_1. Click **Chart +**



\_2. In *Client Onboarding*- Create chart window, enter the following and then click **Create**:

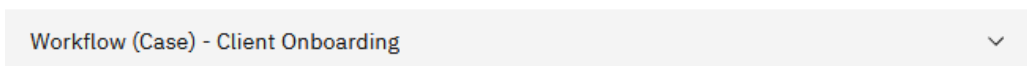
Item	Value
Name	Average Approval Confidence by Industry Sector and Revenue
Select measurement	Metric

### 2.2.7.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source



\_2. Click **Add a group +** button





\_3. Select **CO\_Industry (data) – (keyword)**

CO_Industry (data) - (keyword)	▼
--------------------------------	---

\_4. Click **Aggregation +** button **twice** to add two Aggregations



Note that two Aggregations were added below Count

**Aggregation**

Function	Data item
Count ▼	Select a data item ▼
Sum ▼	CO_AnnualRevenue (data) - (long) ▼
Sum ▼	CO_CompanyAge (data) - (long) ▼

\_5. For the two new Aggregations select the following values from the dropdown list:

Aggregation	Function	Data item
2	Average	CO_AnnualRvenue (data) – (long)
3	Average	CO_RiskConfidence(data) – (float)

\_6. Use the **Down Arrow** on the Count Aggregation to move it to the bottom (make it the last Aggregation).

Function	Data item	↑	↓	🗑️
Count ▼	Select a data item ▼			

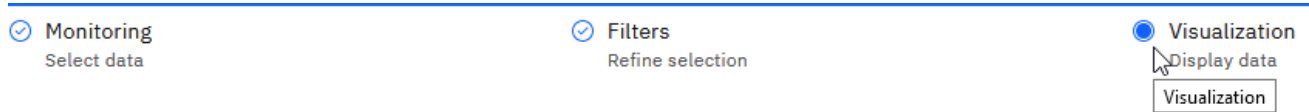
Your Aggregations setting should look exactly like this:

**Aggregation**

Function	Data item	↑	↓	🗑️
Average ▼	CO_AnnualRevenue (data) - (long) ▼			
Average ▼	CO_RiskConfidence (data) - (float) ▼			
Count ▼	Select a data item ▼			

## 2.2.7.2 Define Visualization Information

\_1. Click **Visualization** tab



\_2. For Bubble settings enter:

Item	Value
X axis label	Average Company Revenue
Y axis label	Average Approval Confidence Level

### Trend settings

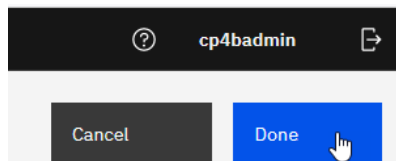
X axis label

Date

Y axis label

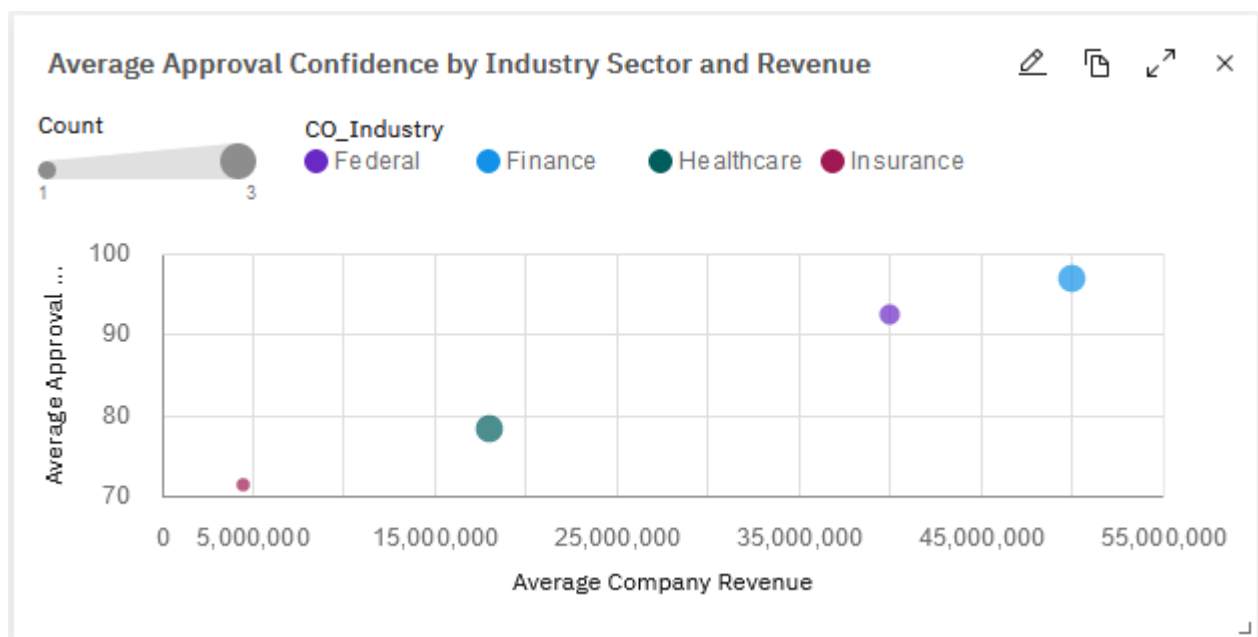
Approvals

\_3. Click **Done**



\_4. On the Dashboard Toolbar click **Save** icon to save you work!

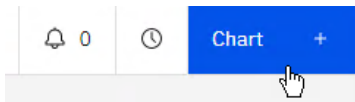
You chart shgoyuld look similar to this



## 2.2.8 Create “Activity Duration Distribution in Case Completion” Chart

This doughnut chart will be showing the average distribution of time among all activities required to complete a case.

\_1. Click **Chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following and then click **Create**:

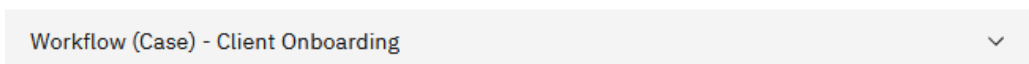
Item	Value
Name	Activity Duration Distribution in Case Completion
Select measurement	Metric

### 2.2.8.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

**Monitoring context**

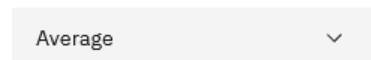
Monitoring source



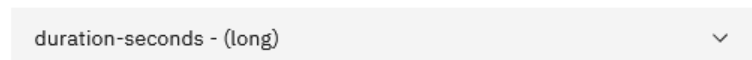
\_2. Change the Aggregation values by setting *Function* to **Average** and *Data item* to **duration-seconds – (long)**

**Aggregation +**

Function

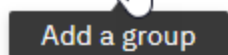


Data item



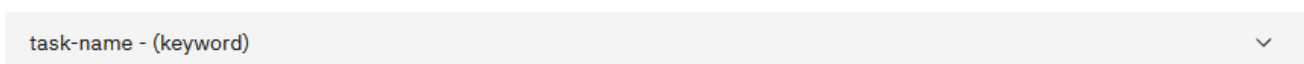
\_3. Click **Add a group +** button

**Group by +**



\_5. Select task-name – (keyword)

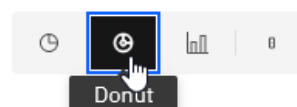
**Group by +**



\_6. Set visualization type to **Donut**

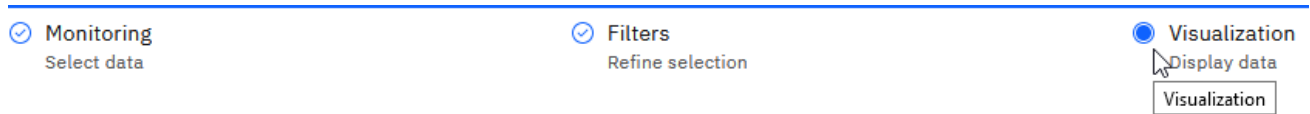
**Metric**

Donut



### 2.2.8.2 Define Visualization Information

\_1. Click **Visualization** tab



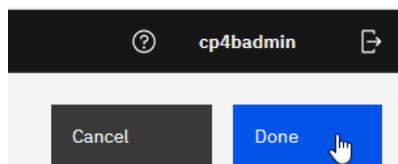
\_2. For *Donut settings* set *Unit* to **Activity**

#### Donut settings

Unit

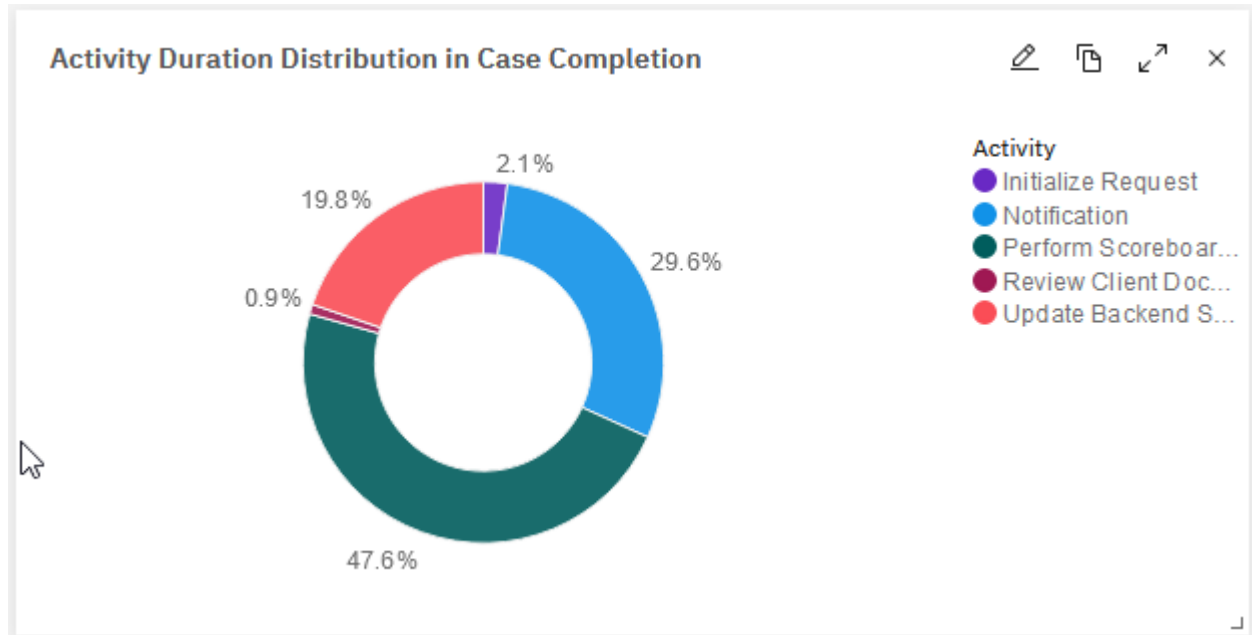
Activity

\_3. Click **Done**



\_4. On the Dashboard Toolbar click **Save** icon to save you work!

Your chart should look similar to this



### 2.2.9 Create “Completed Cases per Day” Chart

This bar chart will be showing the number of cases completed in a time period.

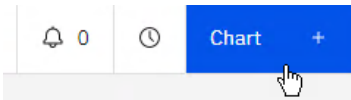
**Note** that the title states “per Day” but given the data set used for this lab the scale set “per Minute”.

This chart will also include two advanced features:

1. Predictions – you will be predict number of cases completed in the future (20 future days into the future). This is a very value tool to enable capacity human resources planning.
2. Alerts – you will be visual indications when number of cases completed falls below 2 in a given time period.

Note that the KPI Predictions are not base on ML. Depending on the data, KPI Prediction use the following algorithms: ARIMA, Seasonal ARIMA, or Exponential Smoothing.

\_1. Click **Chart +**



\_2. In *Client Onboarding-* Create chart window, enter the following and then click **Create**:

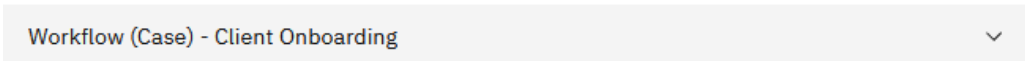
Item	Value
Name	Completed Cases per Day
Select measurement	Period KPI

### 2.2.9.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source



\_2. On *Interval* change the setting to **Minutes(s)**

#### Interval

Time interval



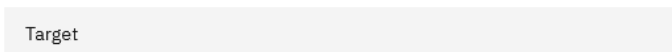
\_3. Click **Targets +** button



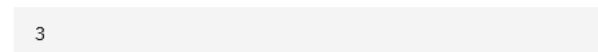
\_4. For *Label* enter **Target** and for *Value* enter **3**

#### Targets +

Label



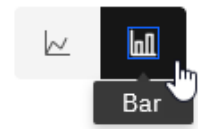
Value



\_5. For visualization select **Bar**

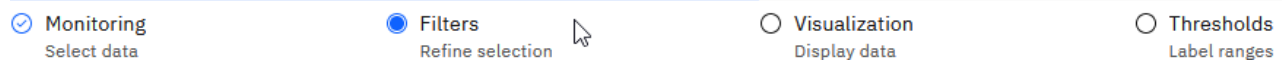
## Period KPI

Bar

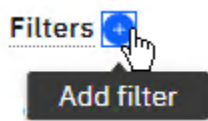


### 2.2.9.2 Define Filters

\_1. Select **Filters** tab



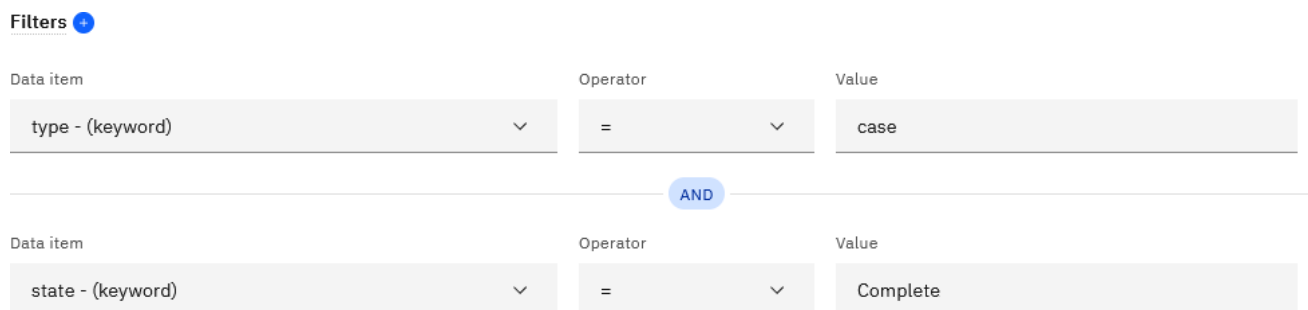
\_2. Click **Filter +** button **twice** to add two Filters



\_3. Select the following values for each Filter:

Filter	Data item	Operator	Value
1	type – (keyword)	=	case
2	state – (keyword)	=	Complete

Your Filter setting should look exactly like this:



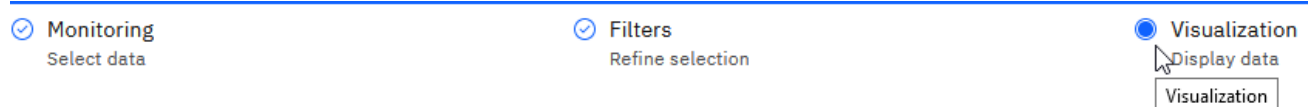
\_4. Enable Predictions

### Prediction

☒ Prediction on

### 2.2.9.3 Define Visualization Information

\_1. Click Visualization tab



\_2. For Trend settings enter:

Item	Value
X axis label	Date
Y axis label	Completed Cases

#### Trend settings

X axis label

Date

Y axis label

Completed Cases

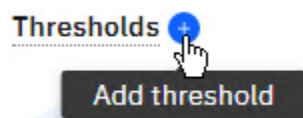
#### 2.2.9.4 Define Thresholds

This setting allows you to customize Gage threshold setting.

\_1. Select **Threshold** tab



\_2. Click **Thresholds +** button **twice** to add two thresholds



\_3. For each group select the following values from the dropdown list:

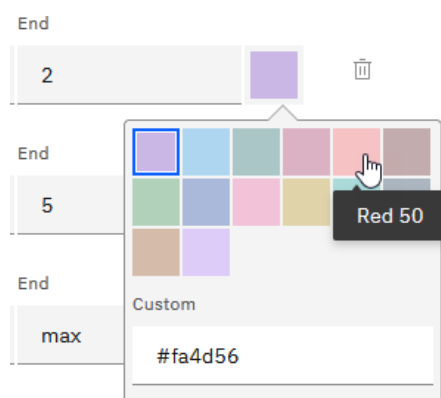
Threshold	Data item	Value
1	Threshold name	Case Completion Rate
	Value	2
	Range name 1	Low
	Range name 2	Normal
2	Threshold name	T2
	Value	5
	Range name	High

Your Thresholds setting should look exactly like this:

#### Thresholds

Threshold name	Value	Range name	Start	End
Case Completion Rate	2	Low	min	2
		Normal	2	5
T2	5	High	5	max

\_4. Click **Purple Color patch** and then select **Red color patch** from the palette

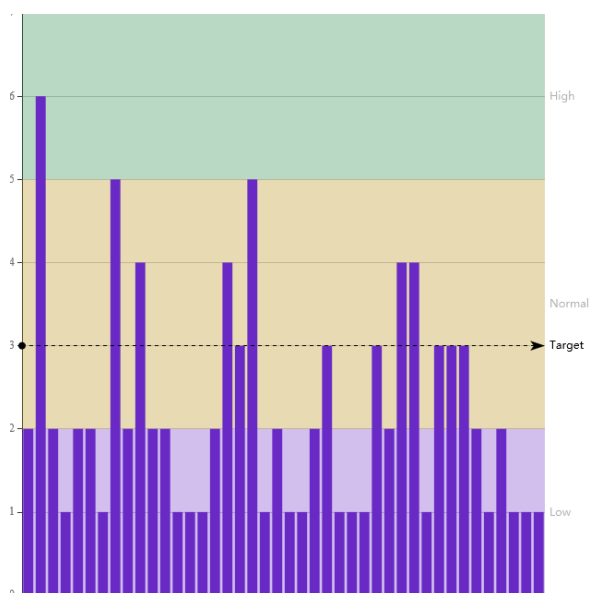




\_5. Using the above steps customize the other two colors

Item	Value
Normal	Yellow
High	Green

\_6. The color settings should look exactly like this:



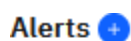
#### 2.2.9.5 Define Alert

This setting allows you to customize Gage threshold setting.

\_1. Click Alerts +



\_2. Make sure threshold **Case Completion Rate** is selected



Case Completion Rate ▼

\_3. Configure the alert using input values shown below

Item	Value
Alert if the value	<b>Drops to or below the threshold</b>
Message	<b>Case completion rate is low.</b>

Alerts +

Case Completion Rate ▼

Alert if the value

drops to or below the threshold ▼

Message

Case completion rate is low. ⌵

Priority

High ▼

\_4. Click **Done**

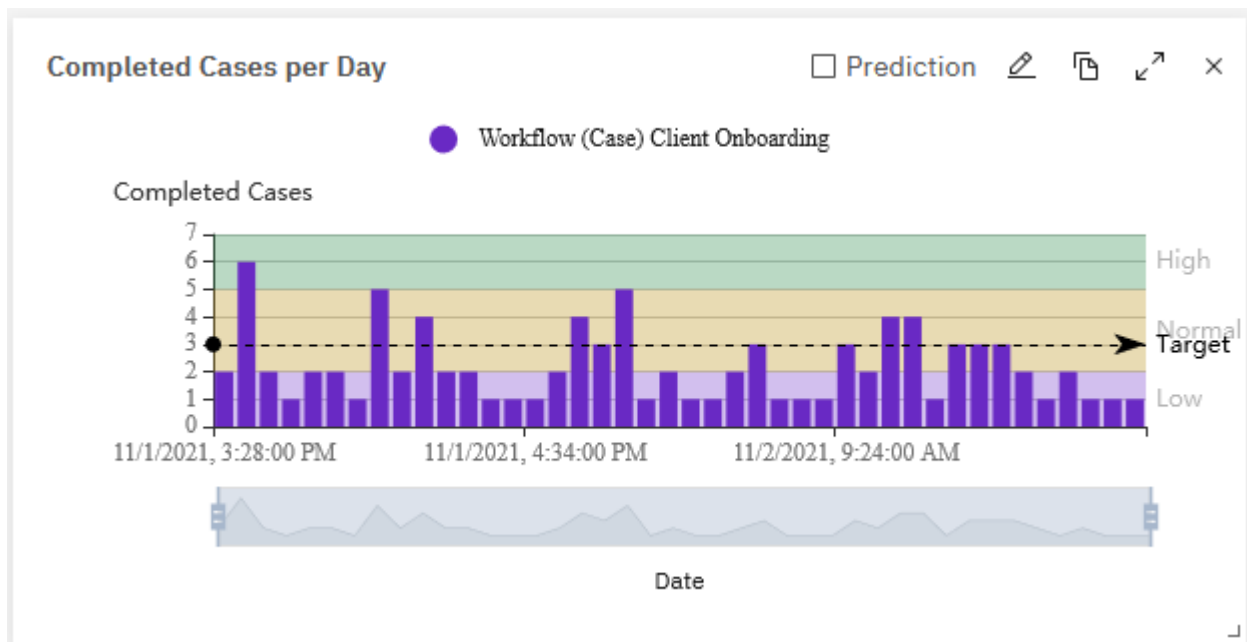
? cp4badmin ➤

Cancel

Done 👉

\_5. On the Dashboard Toolbar click **Save** icon to save you work!

You chart shgoyuld look similar to this

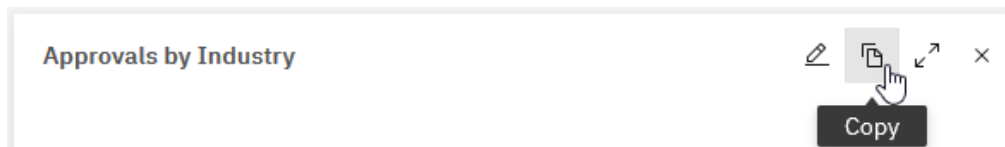


## 2.2.10 Create “Approvals by Industry Heatmap” Chart

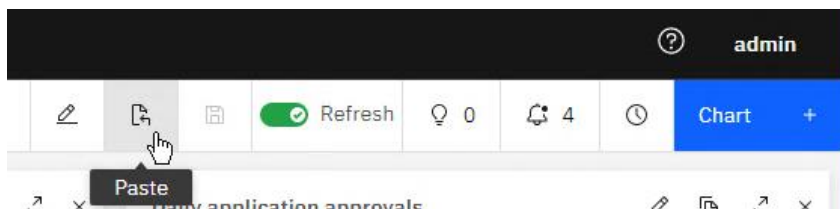
You will be creating Approvals by Industry heatmap chart. The tile color intensity will indicate count (the deeper the color the higher the count). The tiles will be positioned in a grid. The X-Axis will represent the approvals state: approved/rejected/approval pending. The Y-Axis will reflect the industry.

Since this chart is almost identical to the *Approval by Industry* chart, we will use copy-and-paste technique to create this chart from the *Approvals by Industry* chart.

\_1. On the *Approval by Industry* chart click **Copy**



\_2. On the *BPC main toolbar* click **Paste**



\_3. On the copy of *Approval by Industry* chart click **Edit**

\_4. Click Edit configuration



\_5. For *Name* enter **Approvals by Industry Heatmap** and then click **Apply**

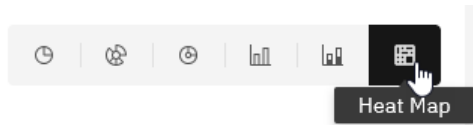
A screenshot of the "Edit chart" configuration form. The form has a title bar that says "Client Onboarding Completed" and "Edit chart". Below the title bar, there is a "Name" field with the text "Approvals by Industry Heatmap" and a green checkmark icon. Below the "Name" field, there is a "Description (optional)" field. Below the "Description" field, there is a "Select measurement" section with five options: "Metric" (selected), "Period metric", "KPI", "Period KPI", and "Data". Each option has a corresponding icon and a brief description. At the bottom of the form, there are two buttons: "Cancel" and "Apply". The "Apply" button is highlighted with a mouse cursor and has a green checkmark icon.

### 2.2.10.1 Define Monitoring Information

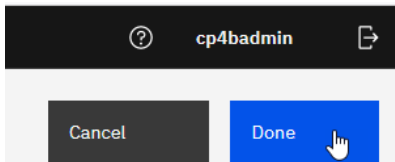
\_1. For visualization select **Bar**

Metric

Heat Map

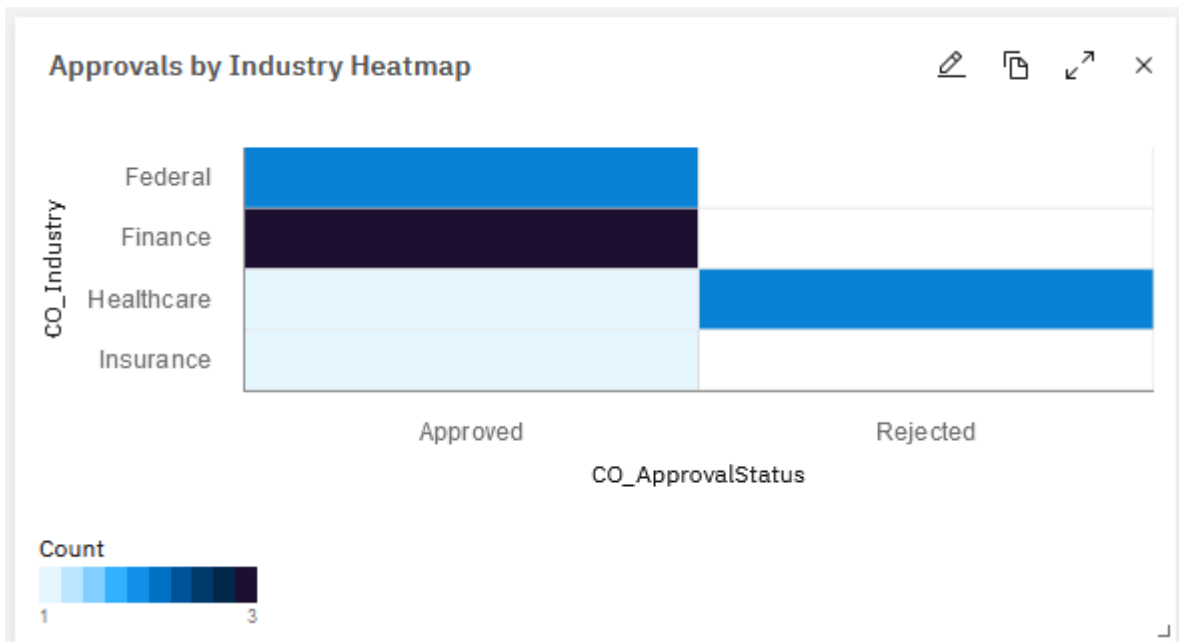


\_2. Click **Done**



\_3. On the Dashboard Toolbar click **Save** icon to save you work!

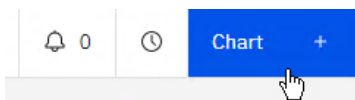
You chart shgoyuld look similar to this



### 2.2.11 Create “Client Onboarding Data” Chart

You will be creating Client Onboarding data chart. The data chart will contain columns representing selected Client Onboarding case properties.

\_1. Click **Chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following and then click **Create**:

Item	Value
Name	Client Onboarding Data

### 2.2.11.1 Define Monitoring Information

\_1. For *Monitoring source* select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

### 2.2.11.2 Define Fitters

\_1. Select **Visualization** tab

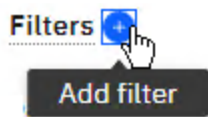
Monitoring  
Select data

Filters  
Refine selection

Visualization  
Display data

Visualization

\_2. Click **Filter +** button **three times** to add three Filters.



\_3. For each group select the following values from the dropdown list:

Group	Data item	Operator	Value
1	category – (keyword)	=	icm
2	type – (keyword)	=	case
3	state – (keyword)	=	Complete

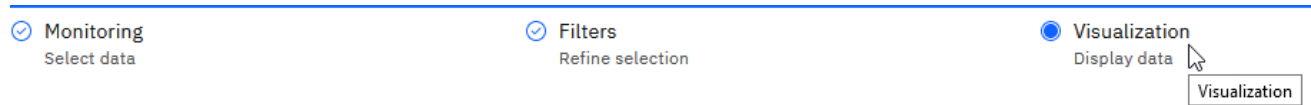
Your Filters setting should look exactly like this:

Filters +

Data item	Operator	Value
category - (keyword)	=	icm
AND		
Data item	Operator	Value
type - (keyword)	=	case
AND		
Data item	Operator	Value
state - (keyword)	=	Complete

### 2.2.11.3 Define Visualization

\_1. Select **Visualization** tab



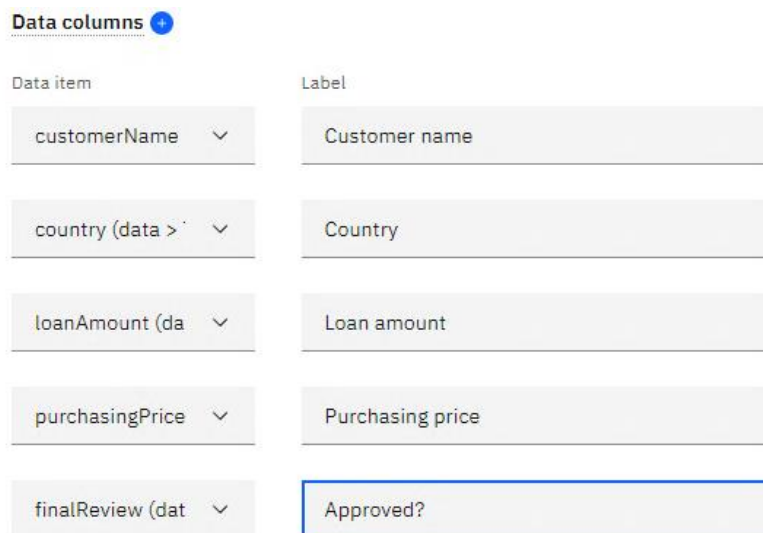
\_2. Click **Data columns +** button **5 times** to add five data columns



\_3. For each group select the following values from the dropdown list:

Data column	Data item	Label
1	CO_ServiceFee (data)	Customer name
2	CO_Industry (data))	Industry
3	CO_AddressCountry (data)	Country
4	CO_ApprovalStatus (data)	Approved?
5	duration-seconds	Duration

Your *Data columns* setting should look exactly like this:



\_4. Click **Service Fee** column to sort the data by Service Fee column.

## Data

5 columns, 12 rows

Service Fee	Industry	Country	Approved?	Duration
-------------	----------	---------	-----------	----------

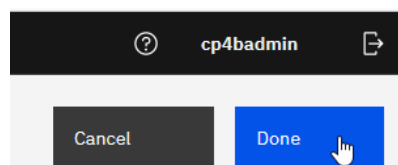
The data in the Data Chart should look similar to this

## Data

5 columns, 12 rows

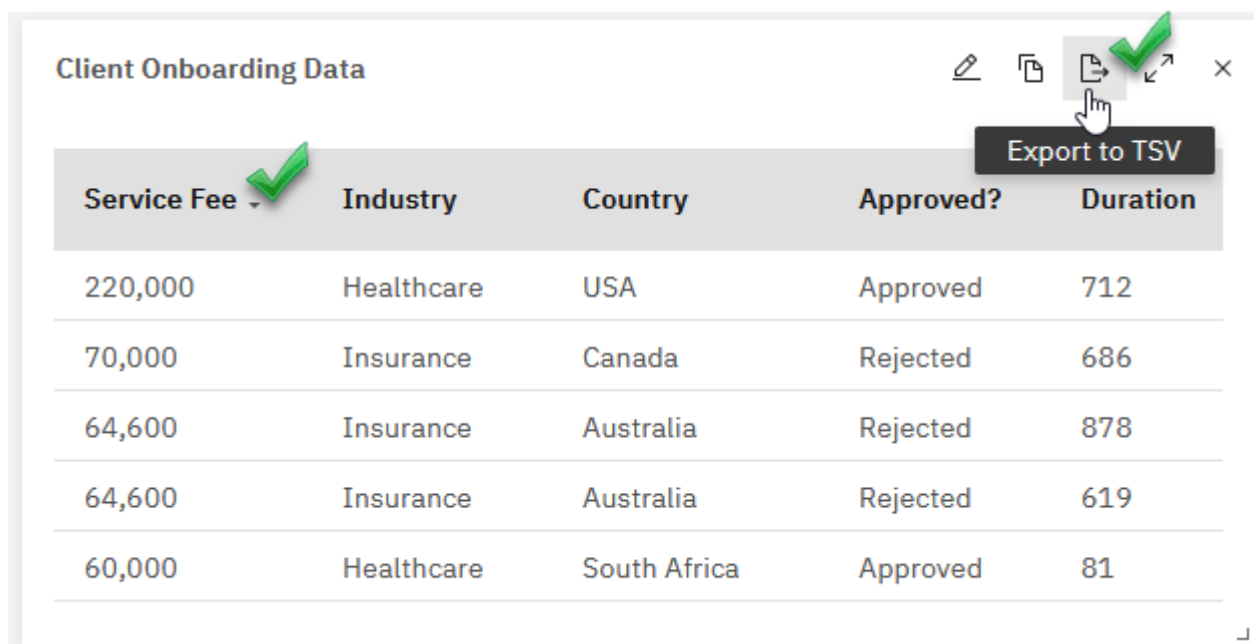
Service Fee	Industry	Country	Approved?	Duration
35,000	Healthcare	United States of America	Rejected	60
25,000	Federal	United States of America	Approved	71
21,000	Healthcare	United States of America	Approved	76
21,000	Healthcare	United States of America	Rejected	84
15,000	Finance	United States of America	Approved	51
15,000	Finance	United States of America	Approved	59
15,000	Federal	Canada	Approved	52
15,000	Finance	United States of America	Approved	59

\_5. Click **Done**



\_6. On the Dashboard Toolbar click **Save** icon to save you work!

The chart should look similar to this



Service Fee	Industry	Country	Approved?	Duration
220,000	Healthcare	USA	Approved	712
70,000	Insurance	Canada	Rejected	686
64,600	Insurance	Australia	Rejected	878
64,600	Insurance	Australia	Rejected	619
60,000	Healthcare	South Africa	Approved	81

Note:

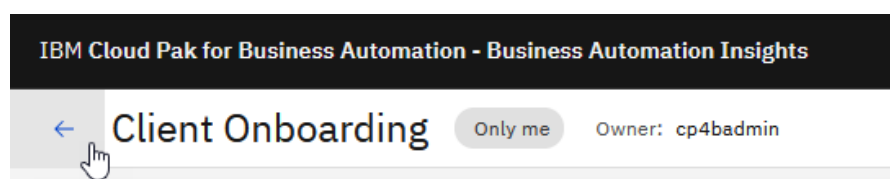
1. If you can sort the data in the chart. For example in the screen shot above the chart is sorted by Service Fee column
2. You can export the data in the chart as a spreadsheet in the TSV format.

## 2.2.12 Create a Configure Goal

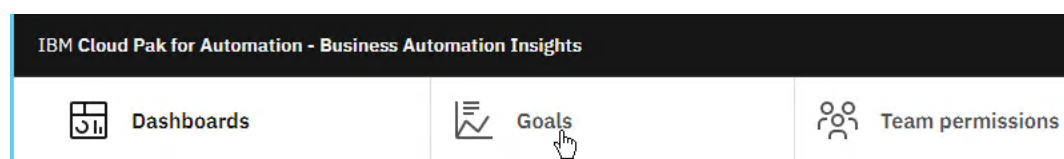
A Goal is a business statement that brings purpose and scope to your dashboards. Goals are used to aggregate charts within a dashboard and to give dashboards a business purpose. A Goal's definition include: the details of a specific objective you want to achieve; the time-frame for achieving an objective; and identifiers (categories and colors) for the goal.

### 2.2.12.1 Create a Goal

\_1. Click the **Arrow** to the left of Client Onboarding dashboard

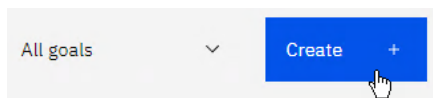


\_2. Click **Goals**





\_3. Click **Create**



\_4. For *Name* enter **Focus Corp's top Client Onboarding KPI**

\_5. For *Description* enter **Focus on the three top KPI identified by senior management team.**

\_6. For *Priority* select **High**

\_7. Click *Goal color* to **Red**

\_8. Your Goal definition should look exactly like this:

#### Details

Name

Focus Corp's top Client Onboarding KPI ✓

Description (optional)

Focus on the three top KPI identified by senior management team. ✓

Goal color



\_9. Click **Save**



#### Goal specification

Goal classification (optional)

Enter category

Priority

☐ Low ☐ Medium ☒ High ✓

Start date

☒ Now

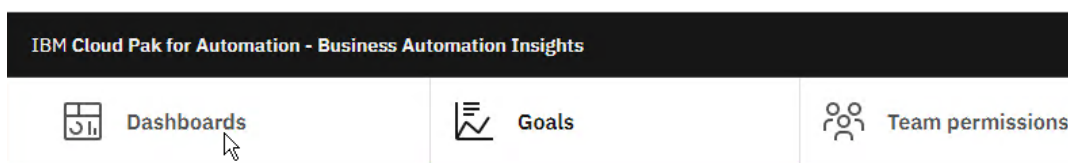
☐ Custom

10/25/2021

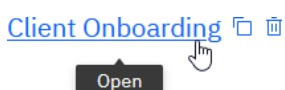


### 2.2.12.2 Set business goal for selected charts

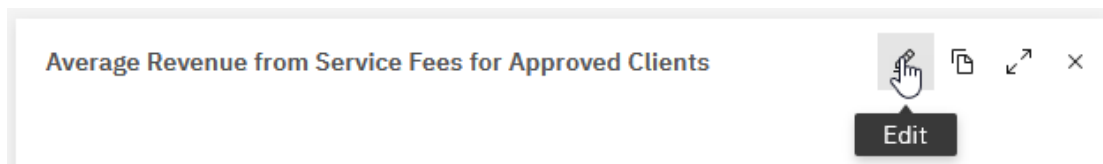
\_1. Click **Dashboards**



\_2. Click Client Onboarding dashboard

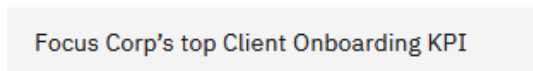


\_3. On Average Revenue from Service Fees for Approved Clients dashboard click **Edit** button

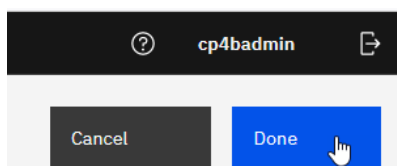


\_4. For Business goal, from the drop-down list select **Focus Corp's top Client Onboarding KPI**

Business goal

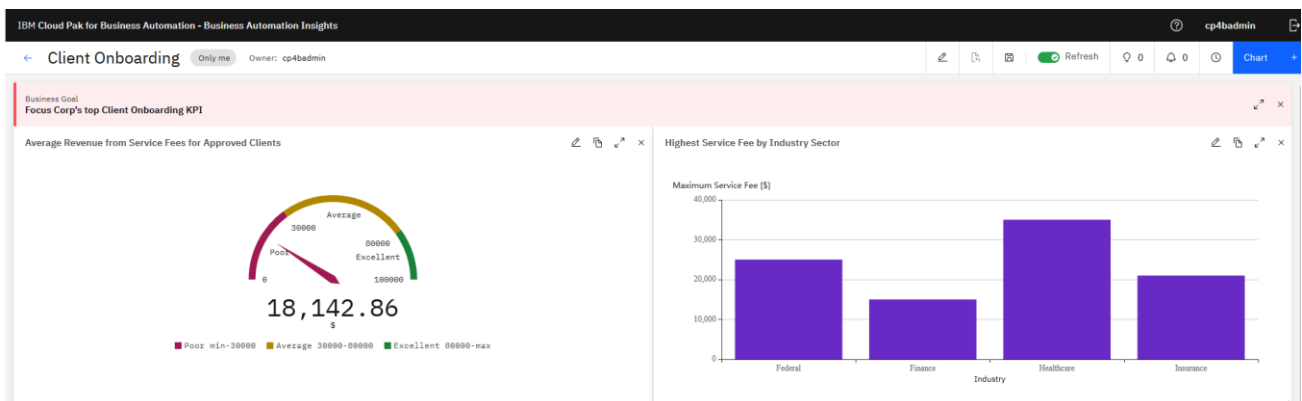


\_5. Click **Done**



\_6. Repeat the above steps to add a *Business Goal* to **Highest Service Fee by Industry Sector**

Your dashboard should now look similar top this:

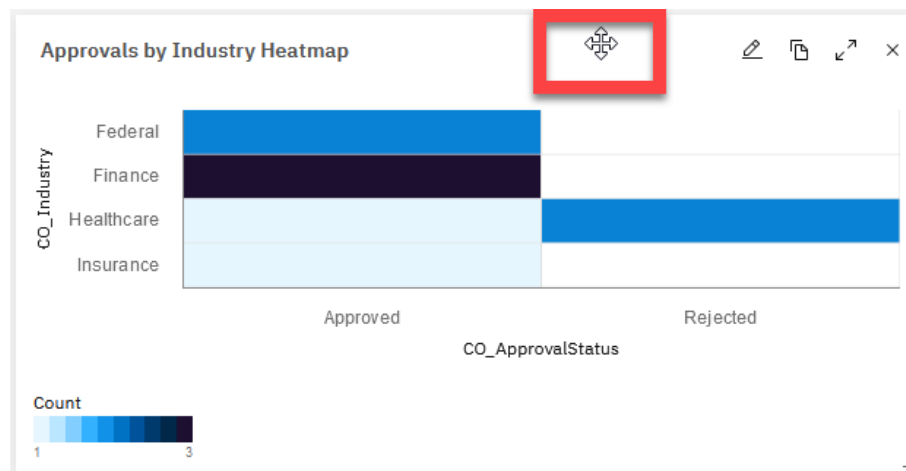


## 2.2.13 Change Dashboard Layout

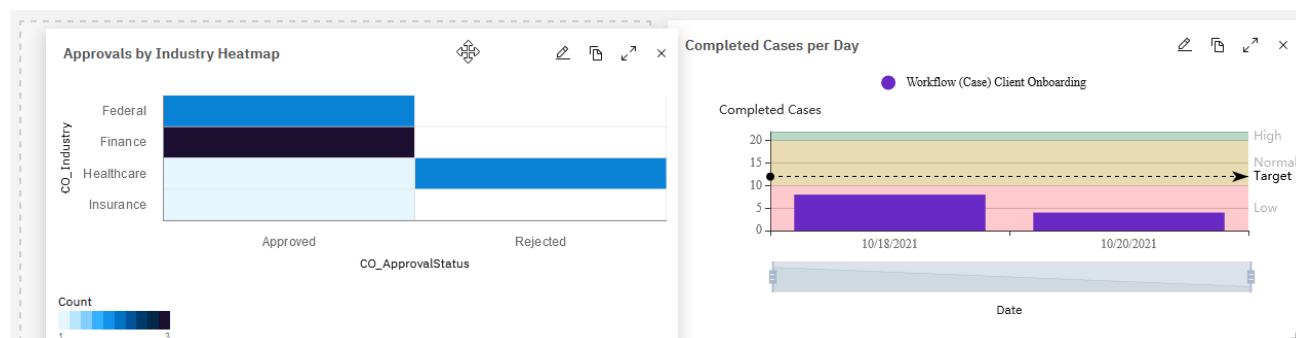
You will now customize your dashboard by moving and changing chart sizes.

### 2.2.13.1 Move Approvals by Industry Heatmap Chart

\_1. Click the **title area** on the *Approvals by Industry Heatmap* chart:

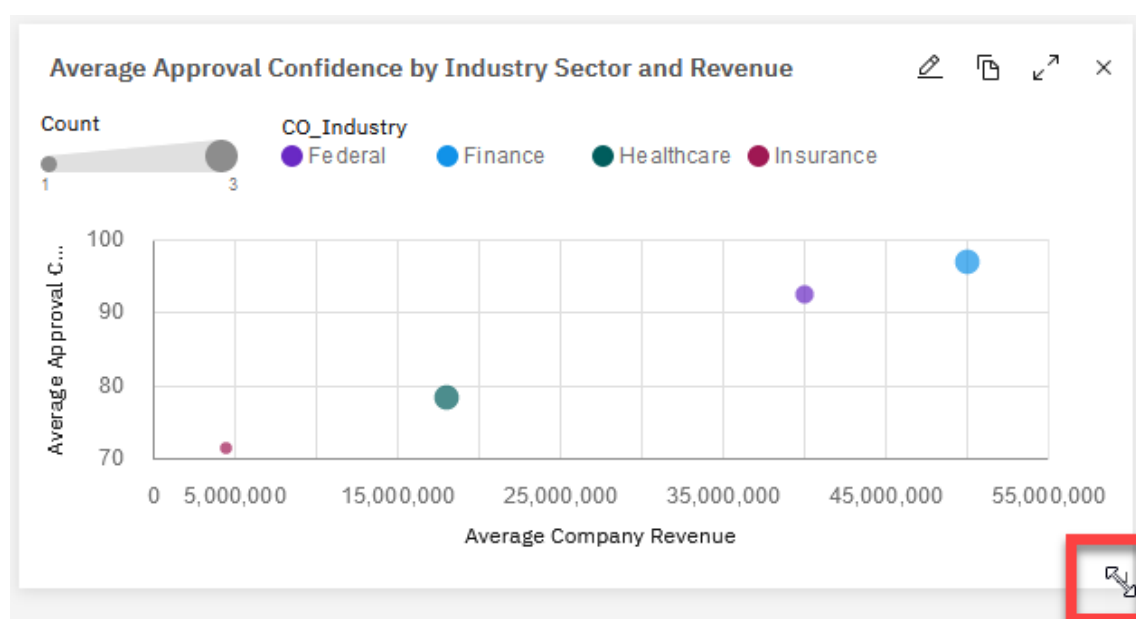


\_2. **Drag** the chart to the empty area to the left of the Completed Cases per Day chart

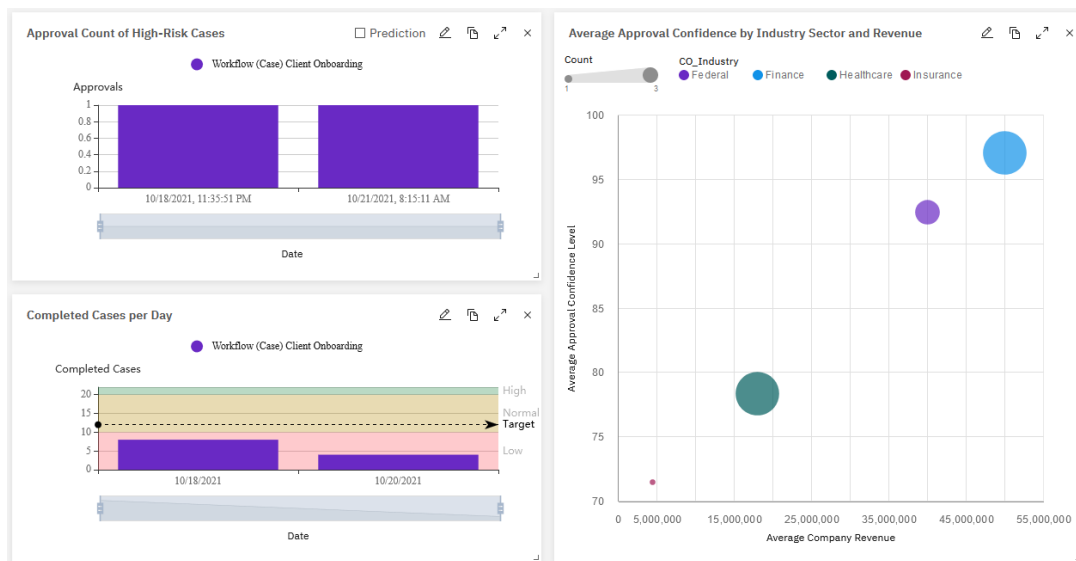


### 2.2.13.2 Expand Chart Average Approval Confidence by Industry Sector and Revenue

\_1. Grab the image expander in the bottom right corner of the **Average Approval Confidence by Industry Sector and Revenue** chart

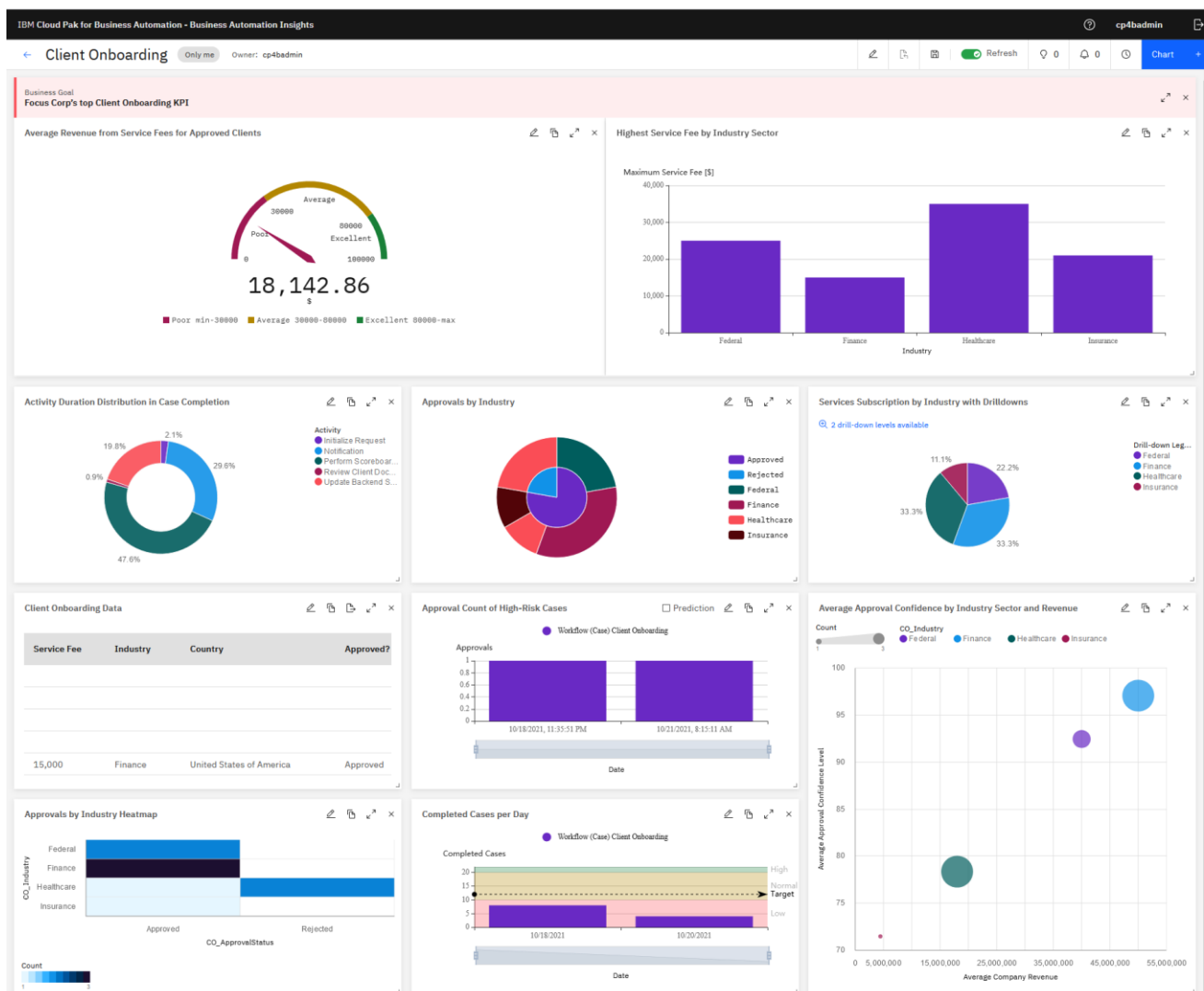


\_2. **Stretch** the chart downwards until it achieves the height of two charts



\_3. On the Dashboard Toolbar click **Save** icon to save you work!

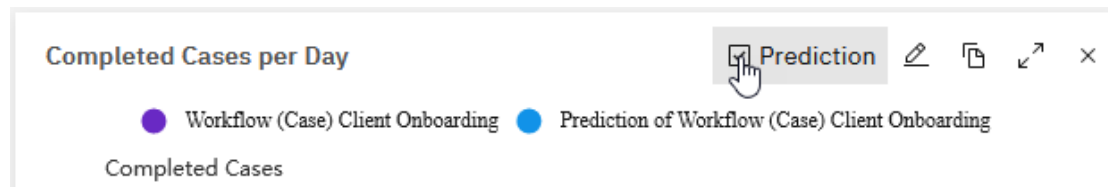
Your final version of the Client Onboarding Dashboard should now look similar to this:



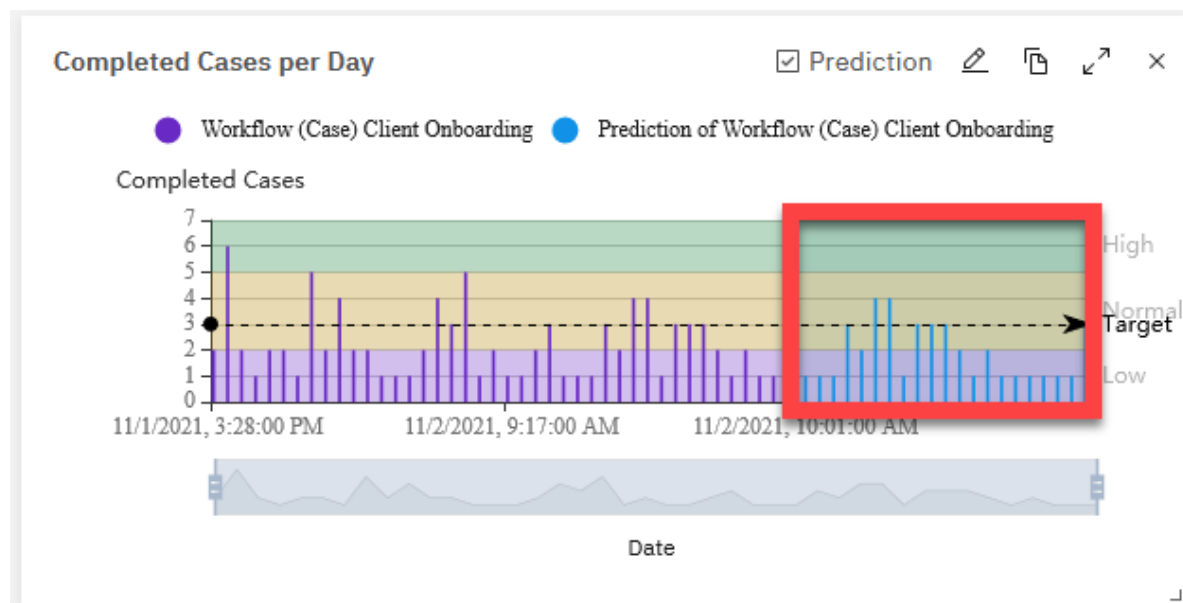
## 2.2.14 Explore Advanced Dashboard Features

### 2.2.14.1 KPI Predictions

\_1. On the *Completed Cases per Day* chart click **Predictions**

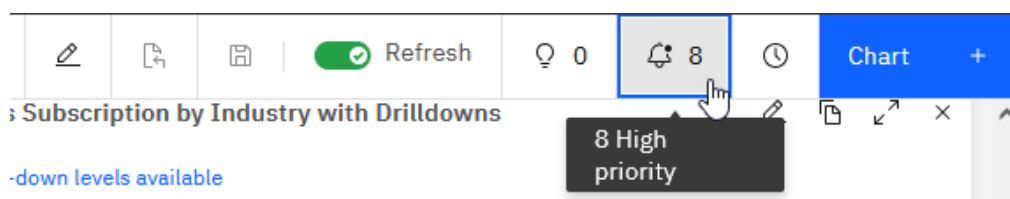


You should now see the predicted case completion rate information

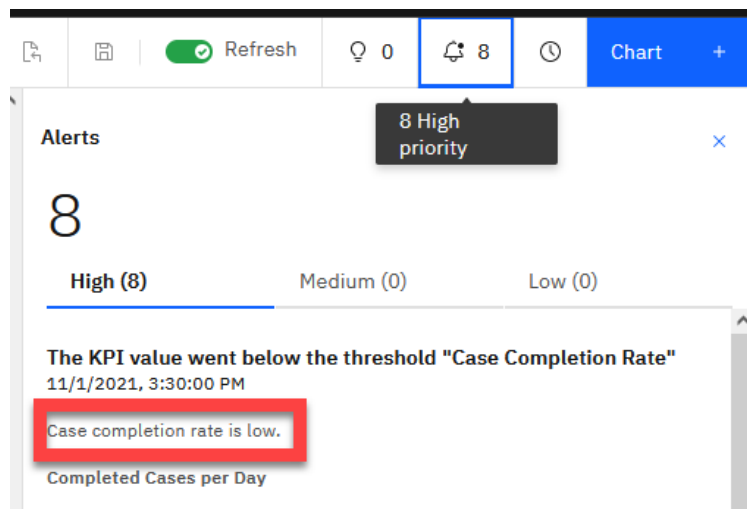


### 2.2.14.2 Dashboard Alerts

\_1. Click **Alert** icon in the toolbar on top of the Dashboard



You should now see all the alerts that were generated whenever the Case Completion Rate just reached or went below the lower threshold (2) you defined in the Completed Cases per Day chart



## 2.3 Summary

In the labs, you will learn how to build and use Business Performance Center dashboard to provide insights into a Client Onboarding solution for line of business users. Specifically you learned how to create and configure the following BPC artifacts: Dashboards, Charts, Chart Alerts, and Goals.