User Guide: Self Service BI Plug-in

Version: 1.0

Revision History

Date	Doc Version	Author	Reviewer	Remarks
28-08-2015	1.0	Reena Divetia, Chudamani Chavda	Kala Ramani	
15-09-2015	1.0	Reena Divetia	Brijesh Shah	

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1. Overview

1.1 Introduction

This document is a user guide, for a Self Service BI Plug-in Component in the Pentaho Marketplace, for the Pentaho Community, global users and developers. It is a module that aims to serve as a dashboard module for business analysts to independently, create reusable simplistic widgets and dashboards, with enriched visualization and information.

The salient features of this plug-in are

- Mobile friendliness and responsive design
- Filtration and widget linking feature
- Easily embeddable feature
- Multi tenant capability
- Web based / Bootstrap based

This plug-in is useful for business users and analysts, who benefit with its enhanced analysis and rich visualization to help them take quick and accurate business decisions.

1.2 Pre-requisites for Environment Set-up

- Pentaho BI server – 5.0.1 to 5.4
- CDA 14.03.07 or higher
- Saiku Analytics – 2.6 or higher

1.3 Technology Platform

- Pentaho BA Community Edition.
- C Tools :
    - CCC (Community Charting Components)
    - CDA (Community Data Access)
    - Angular.js
- JQuery/JavaScript

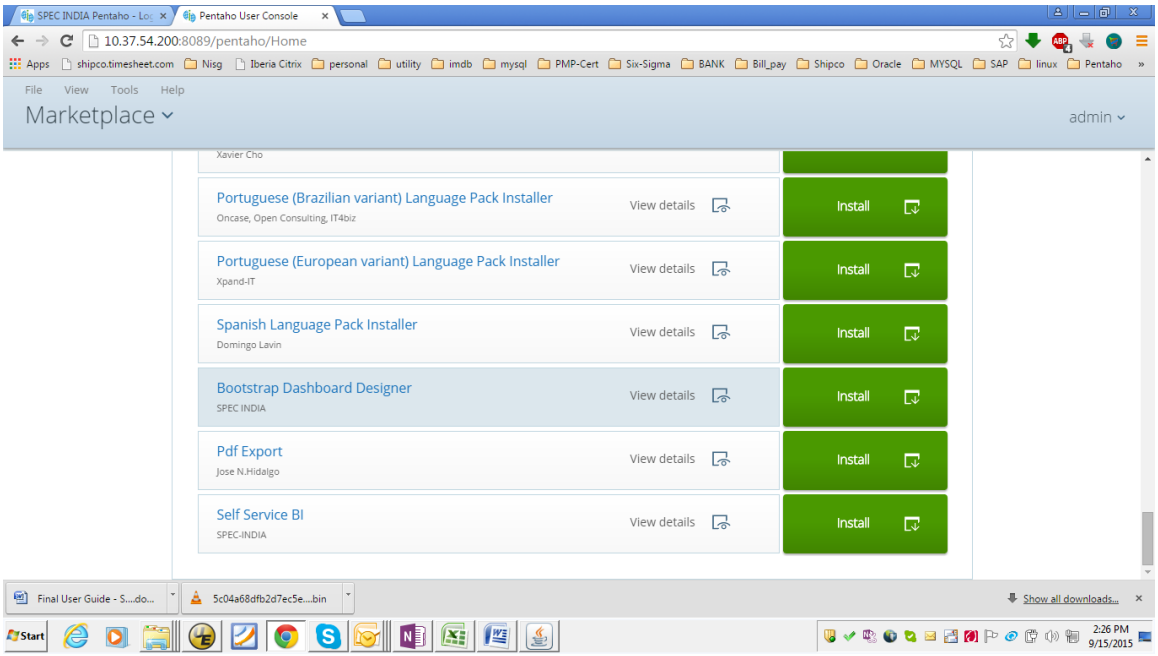
1.4 Download Locations

- Pentaho Market Place
- GitHub

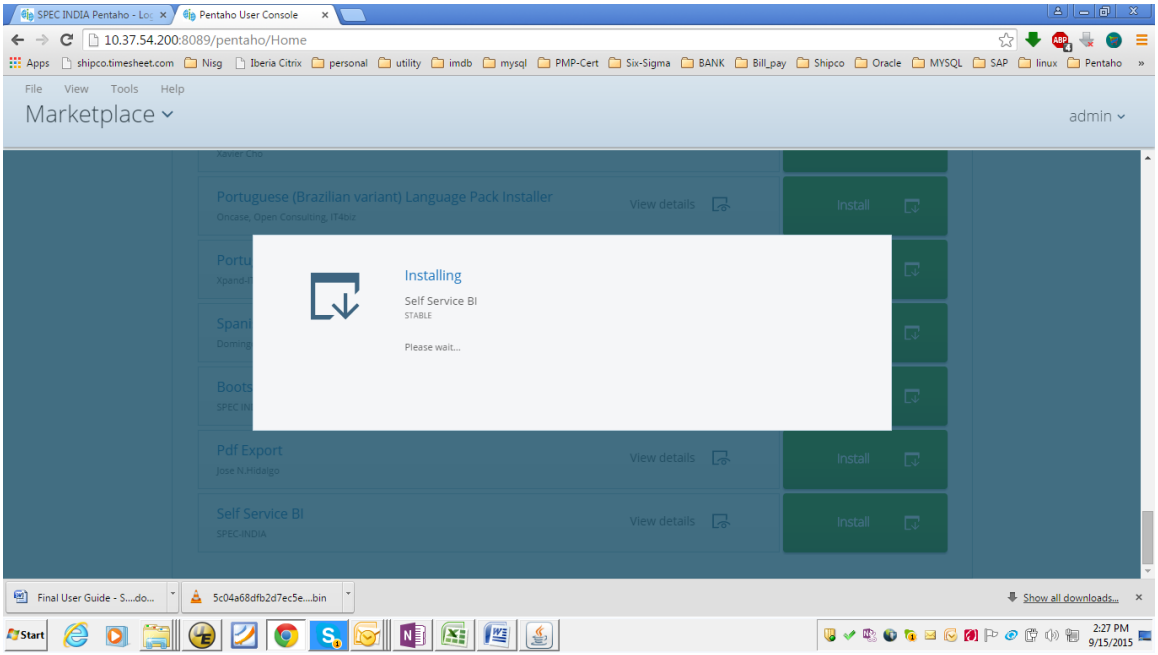
1.5 Installation Steps

- Option 1
  - Login to Pentaho User console with admin login
  - Go to ‘Marketplace’ option from Pentaho’s Home screen

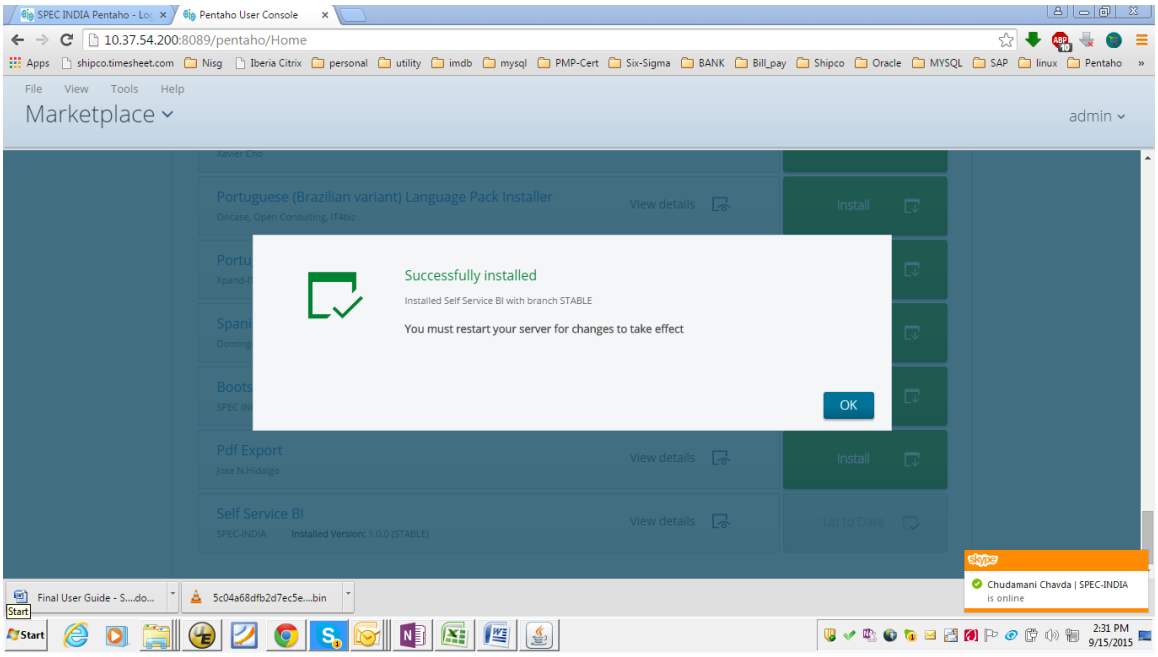
- Search for Self Service BI Plug-in and click on ‘Install’.



- You will get the below message after clicking 'Install'.



- Restart your server for the changes to take effect, after you receive below message on browser.



- Once you restart, you will be able to see Self Service BI menu, from which you can choose your desired option.

Option 2:

- Go to 'Pentaho Marketplace' [http://www.pentaho.com/marketplace/] and search for 'Self Service BI Plug-in'
  OR
  Go to Github
  [https://github.com/SPECUSA/SelfServiceBI/raw/master/SelfServiceBI-1.0.0.zip]

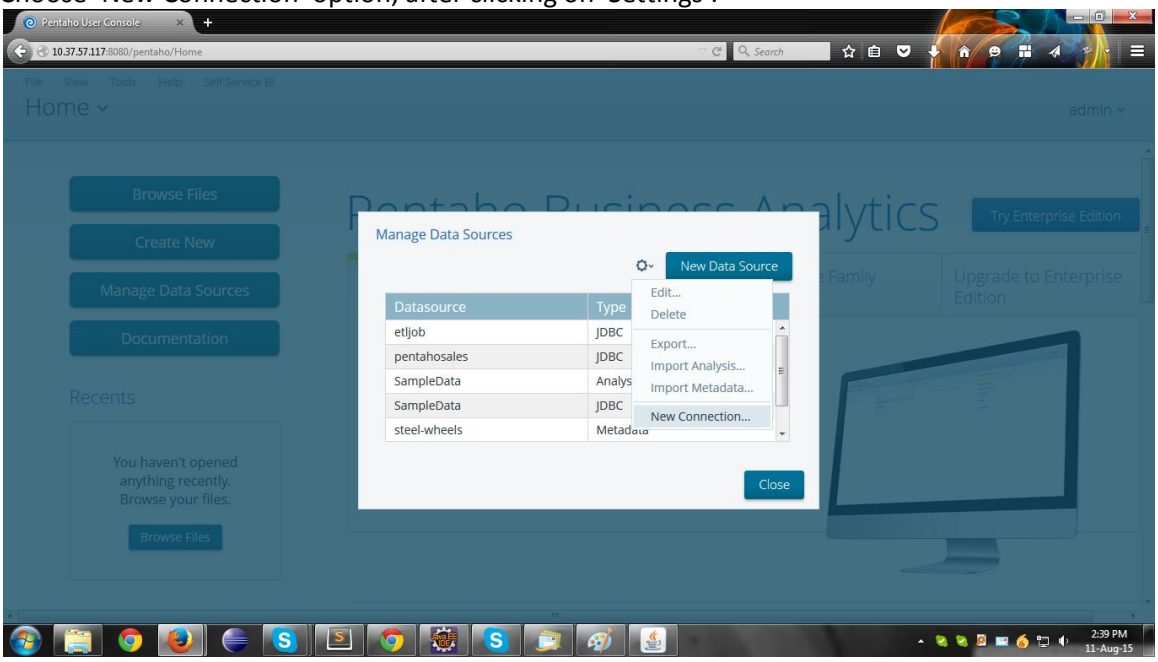
- Unzip and upload into the System directory of Pentaho CE where you have installed Pentaho.
  Path: biserver-ce-5.0.1-stable\biserver-ce\pentaho-solutions\system
- Install the plug-in
- Once it is installed, restart your server to reflect changes
- Once you restart, you will be able to see Self Service BI menu, from which you can choose your desired option.

1.6 Home Page

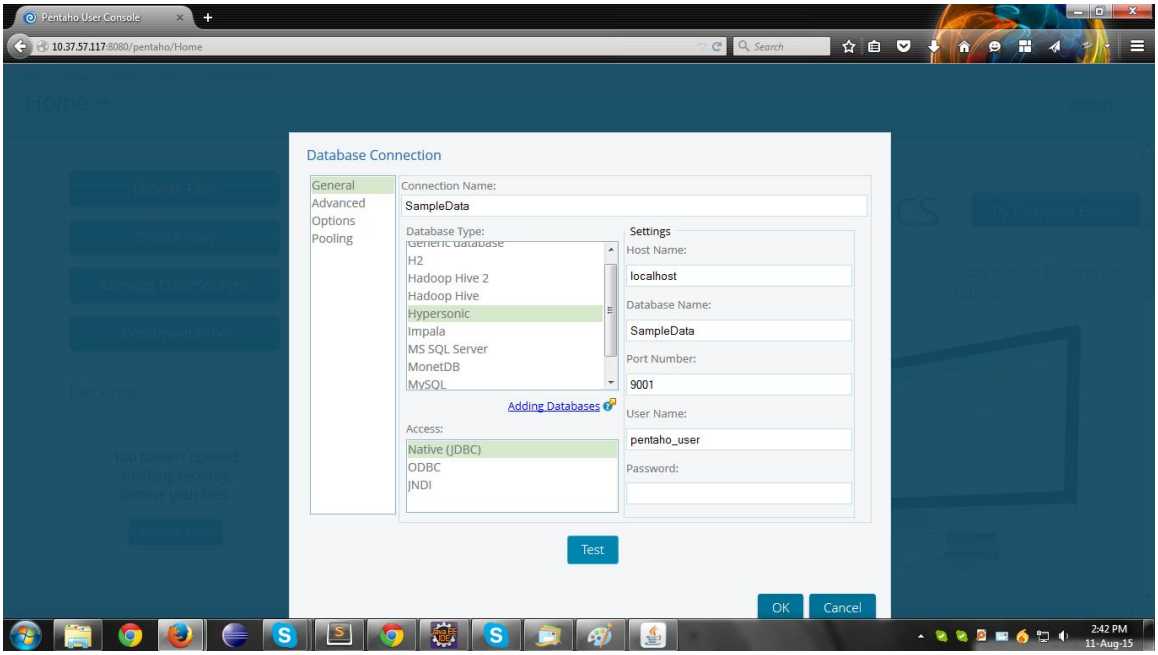
1.7 Pre-requisites for CCC Data Source

In order to use any data source, firstly, you need to create a data connection in Pentaho. Choose 'Manage Data Sources' from the File option.

Choose 'New Connection' option, after clicking on 'Settings'.



Select the relevant Database Type and provide relevant information for connection. Test the connection to see if it is ok. Now you can use this data source connection in SQL JDBC option. It will free you from the tedious job of entering credentials for data source like driver.url in every JDBC data source that you create.



2. Creation of Data Sources

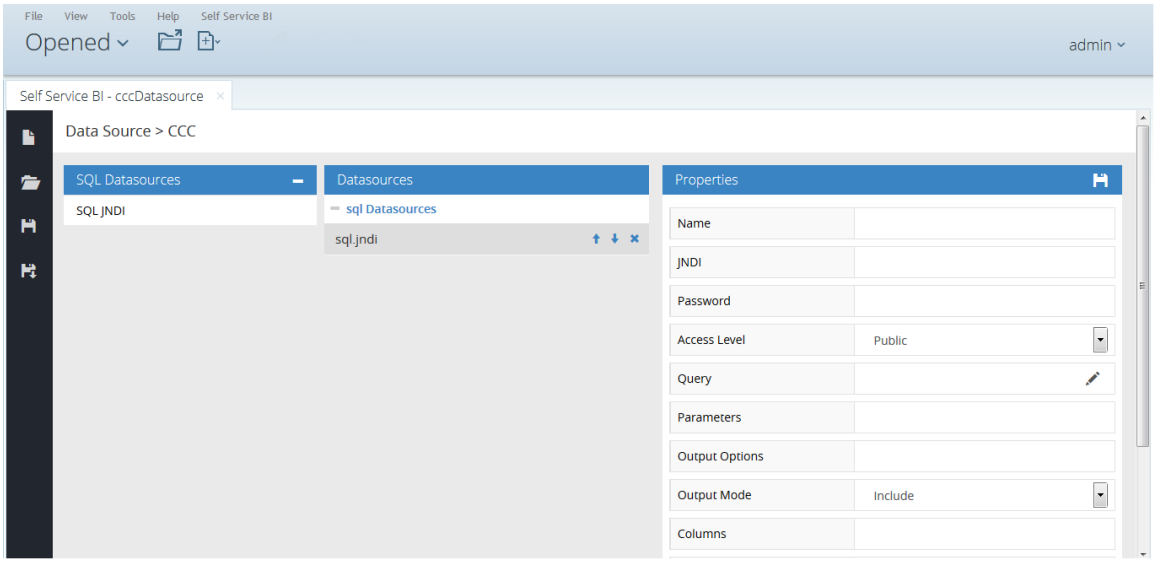
Data sources can be created with two options:

- CCC
- Saiku

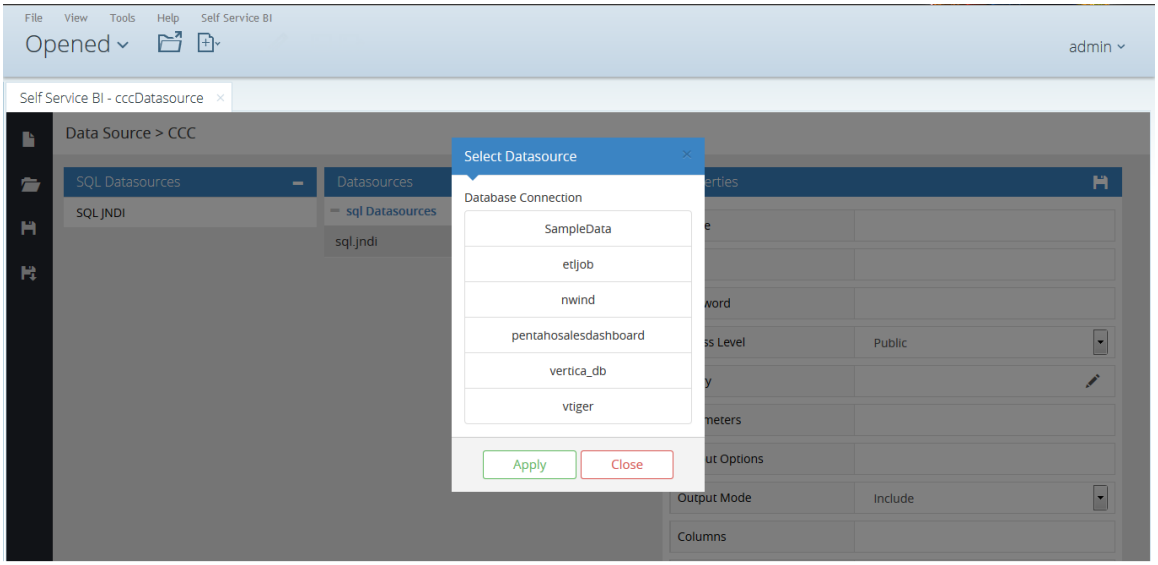
2.1 Steps to Create a new Data Source – CCC

- Select menu ‘Self Service BI’ from menu bar. Select option ‘CCC’ from Data Source option. This will create charts from the CDA data source and the charting library will be CCC.

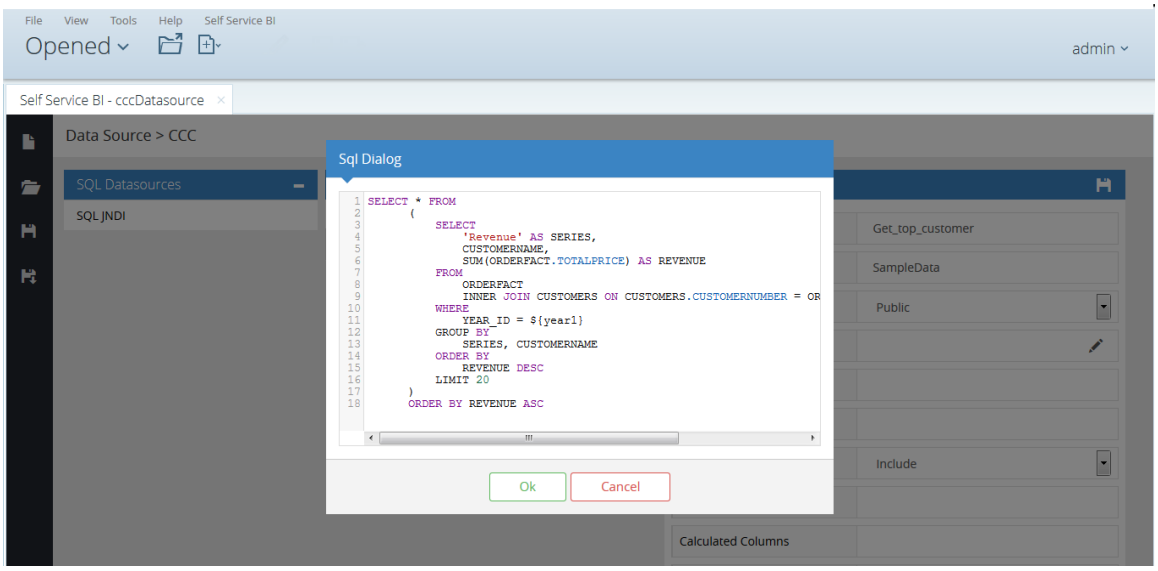
- It will open a new tab, which will show SQL JNDI as the data source.



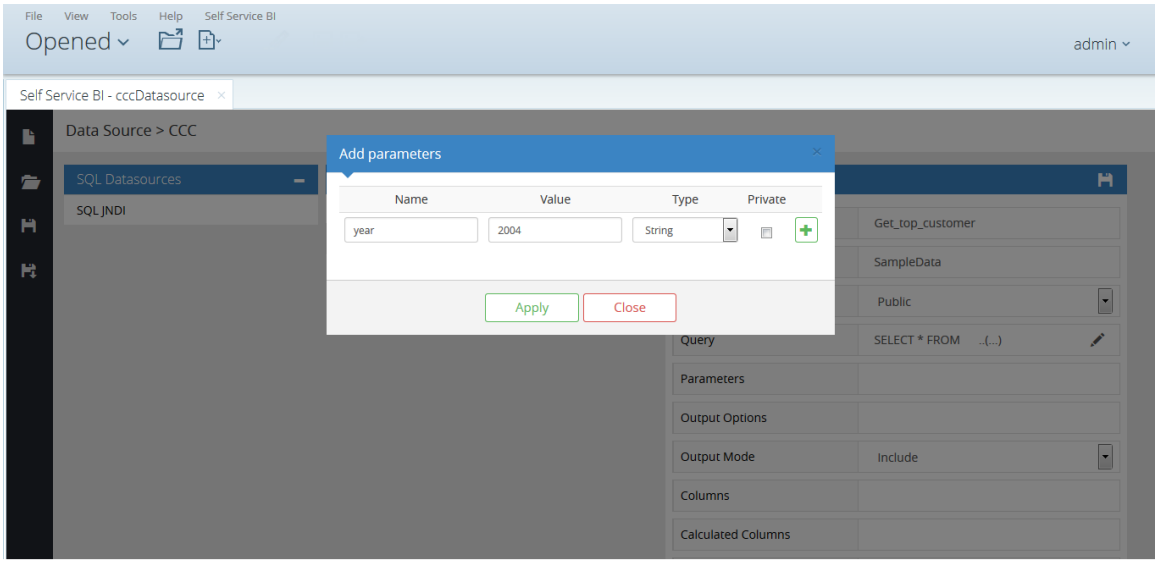
- Select an existing connection.



- The Query property allows you to write the query.



- The parameters which can be passed in the query can be specified adding parameters. To save each data source property, there is a 'Save' option on right side on the header of the 'Properties' panel for each data source.

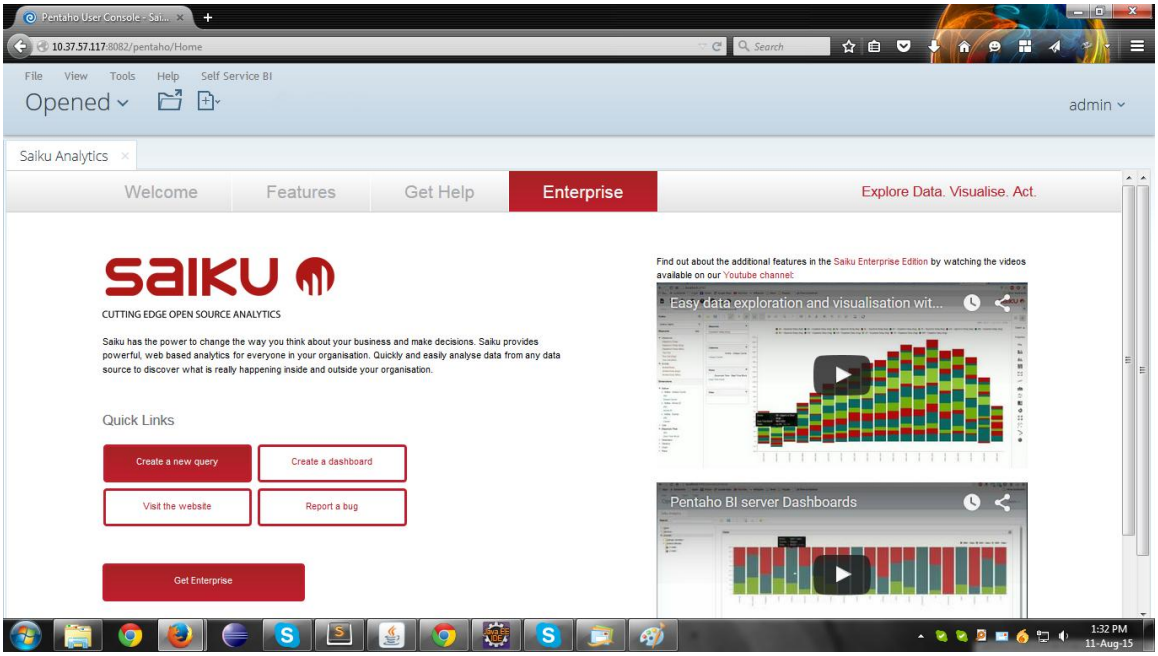


2.2 Steps to Create a new Data Source – Saiku

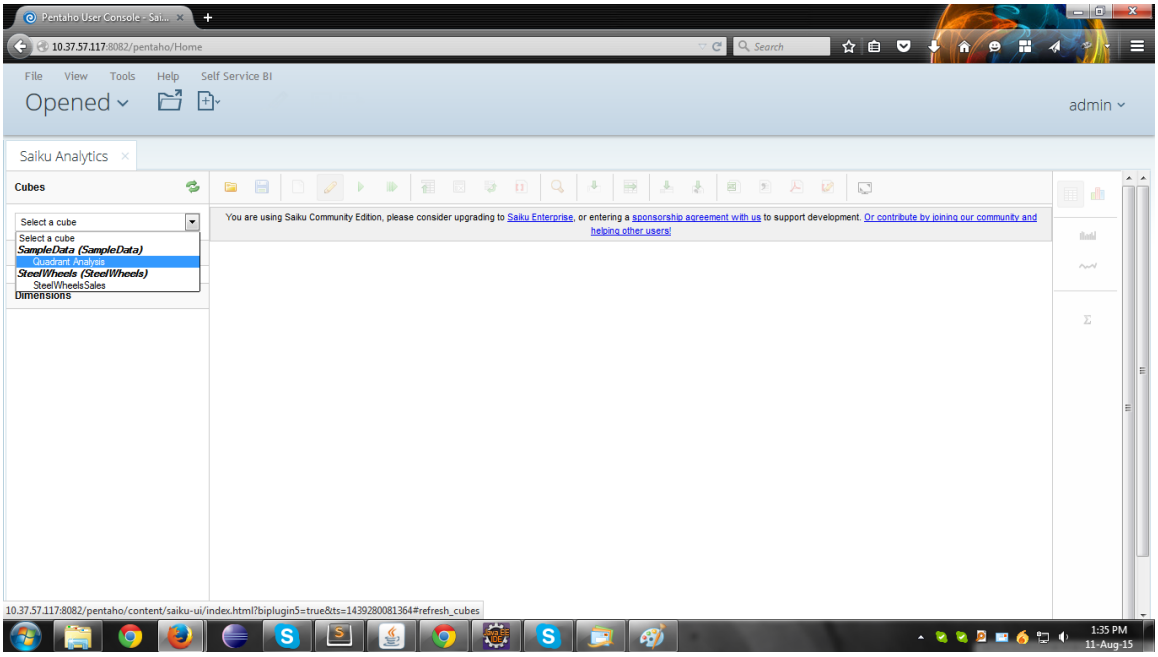
As a prerequisite, this part assumes that a cube is already created with Pentaho schema workbench and deployed on the Pentaho server.

- Select ‘Self Service BI’ from menu bar. Select option ‘Saiku’ from Data Source option. This will open a new tab.

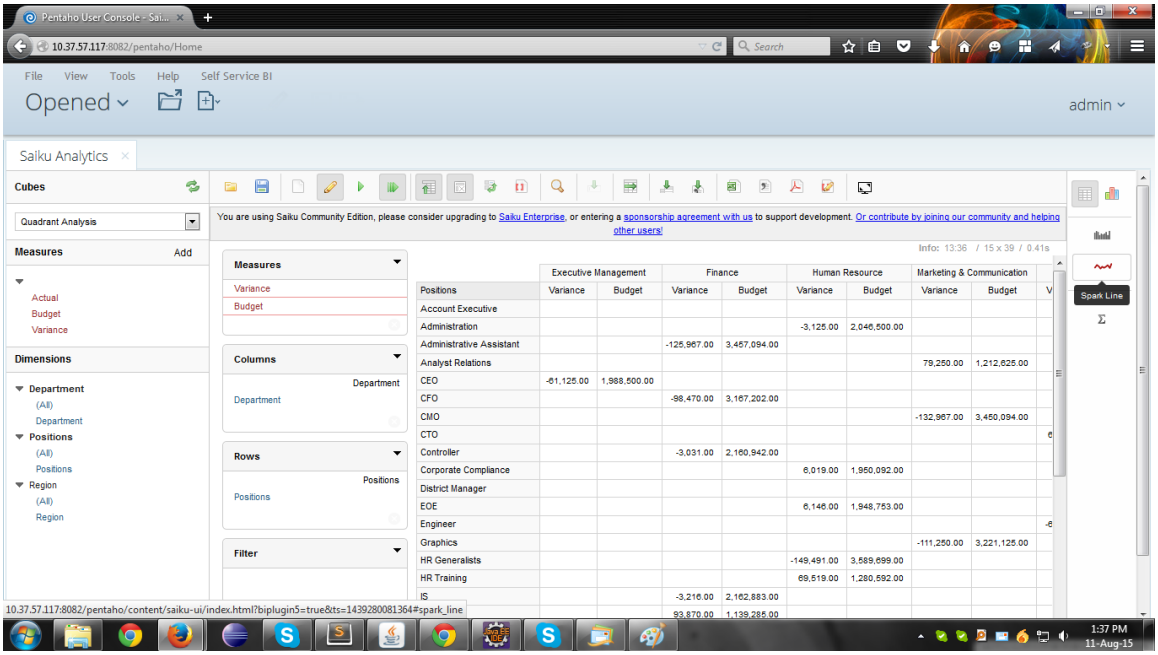
- Select option ‘Create a new query’ and it will redirect you to create Saiku Data Source.



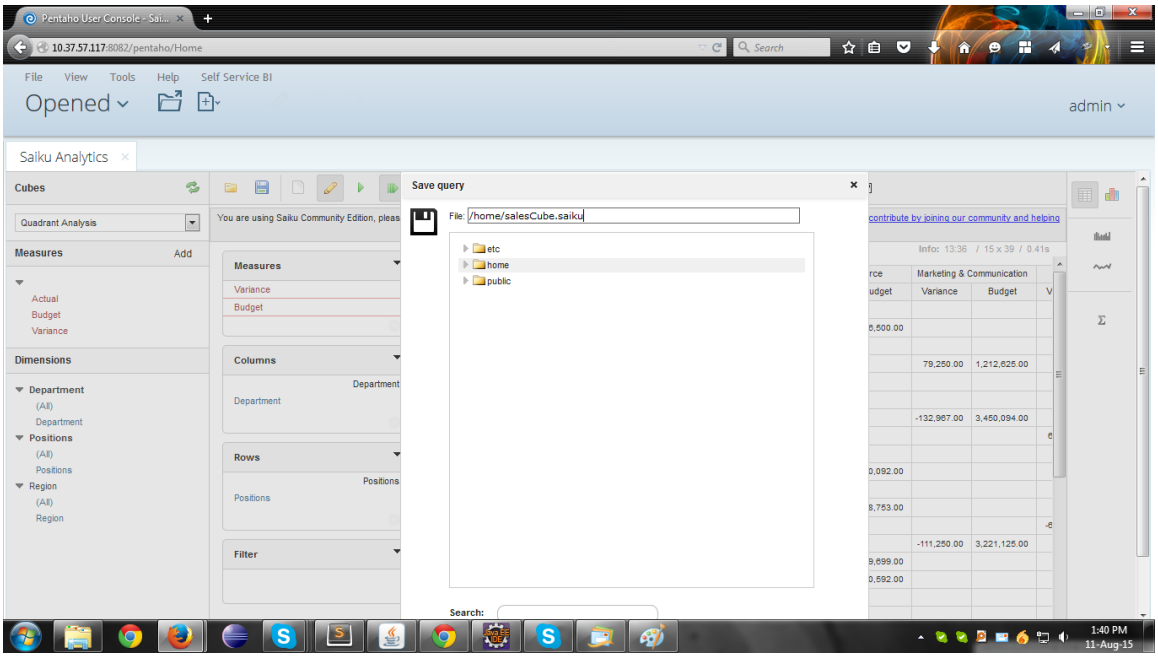
- Now Select the cube



- Add measures from ‘Measures’ option and columns and rows from ‘Dimension’ panel to generate ‘Data Cube’ as per your choice.



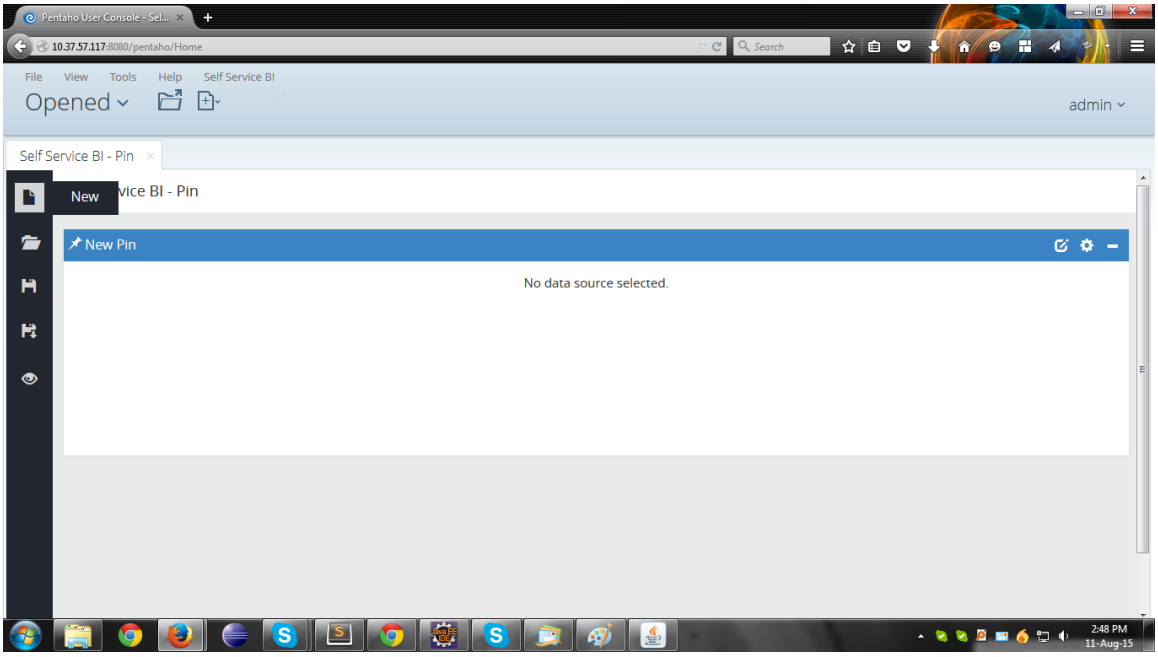
- Now save this Data Cube by selecting ‘Save’ option.



3. PIN

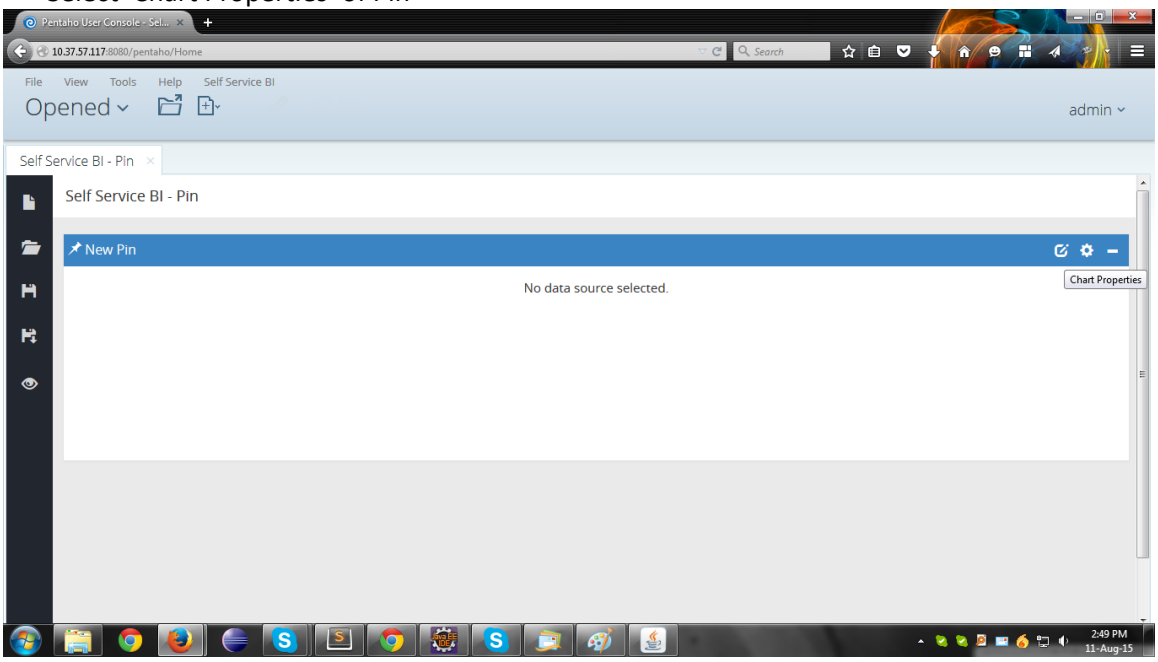
Pin is a single widget, which can be integrated with a single or multiple dashboards, as needed. If a Pin is associated with only one Pin board, it can directly be created in the Pin board. From menu bar, click on 'Self Service BI' and select option 'Pin'.

3.1 New / Open / Save Pin

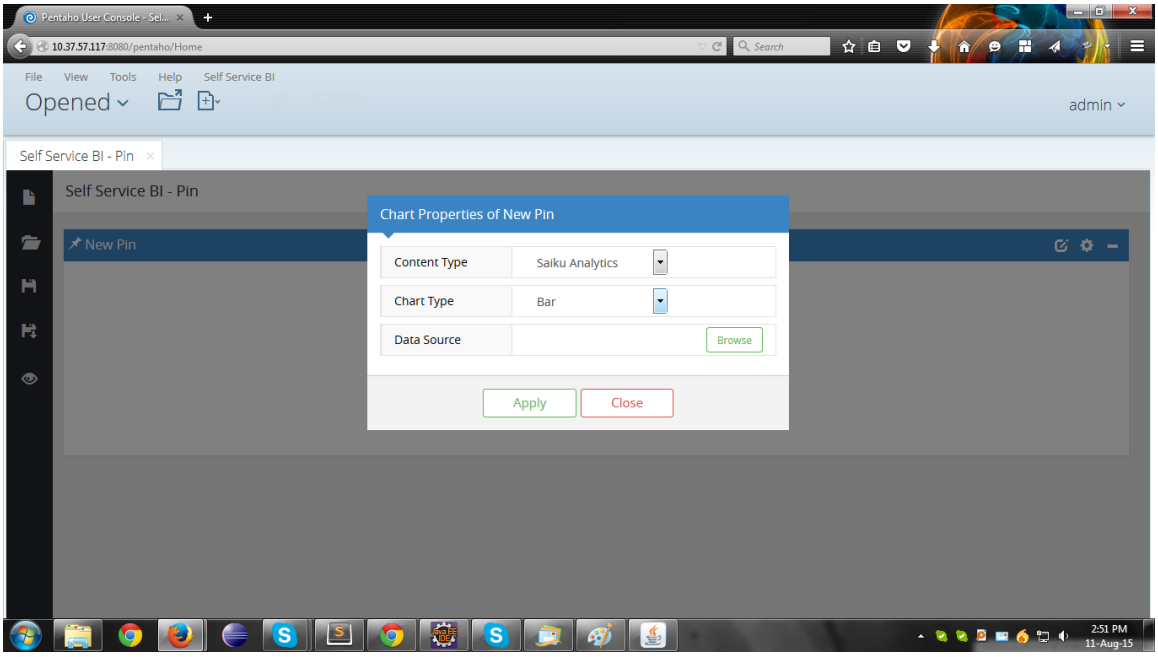


New Pin: From the left panel we can add a new Pin. When you choose the option 'Pin' from Self Service BI menu, by default, a New Pin is created.
Open Pin: This option lets you open a previously saved Pin in Pentaho and edit it.
Save Pin: The Save option lets you save the Pin in Pentaho repository.
Preview Pin: The Preview Pin option gives you preview in a new window/tab, where you can only view the Pin but cannot edit the Pin.

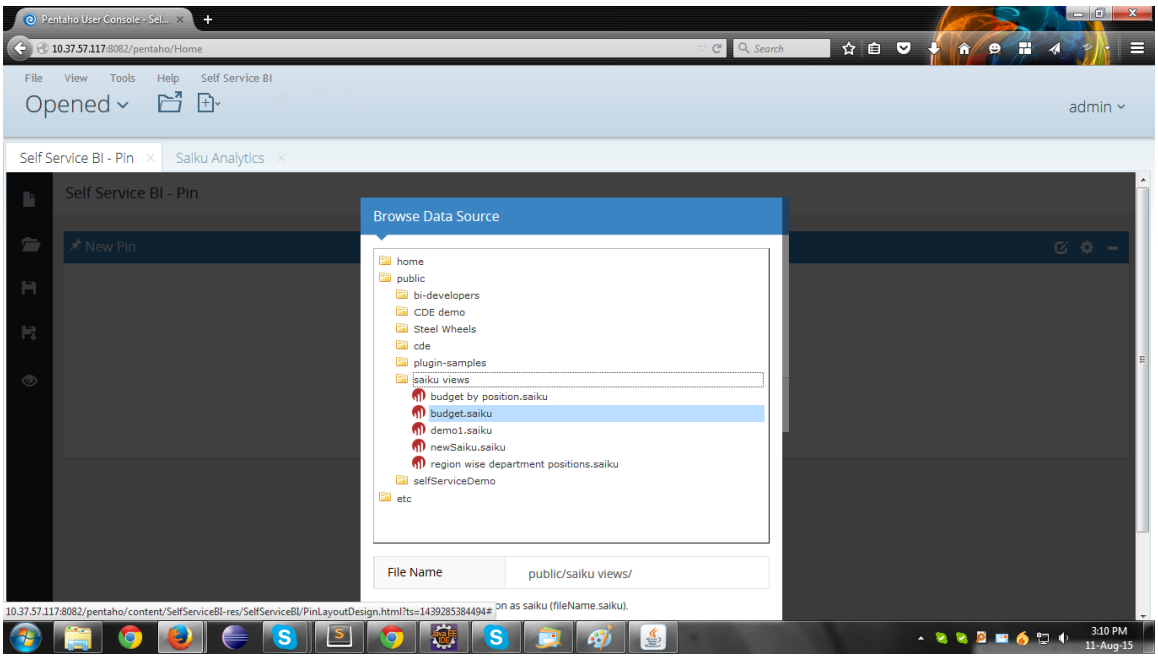
- Select ‘Chart Properties’ of Pin



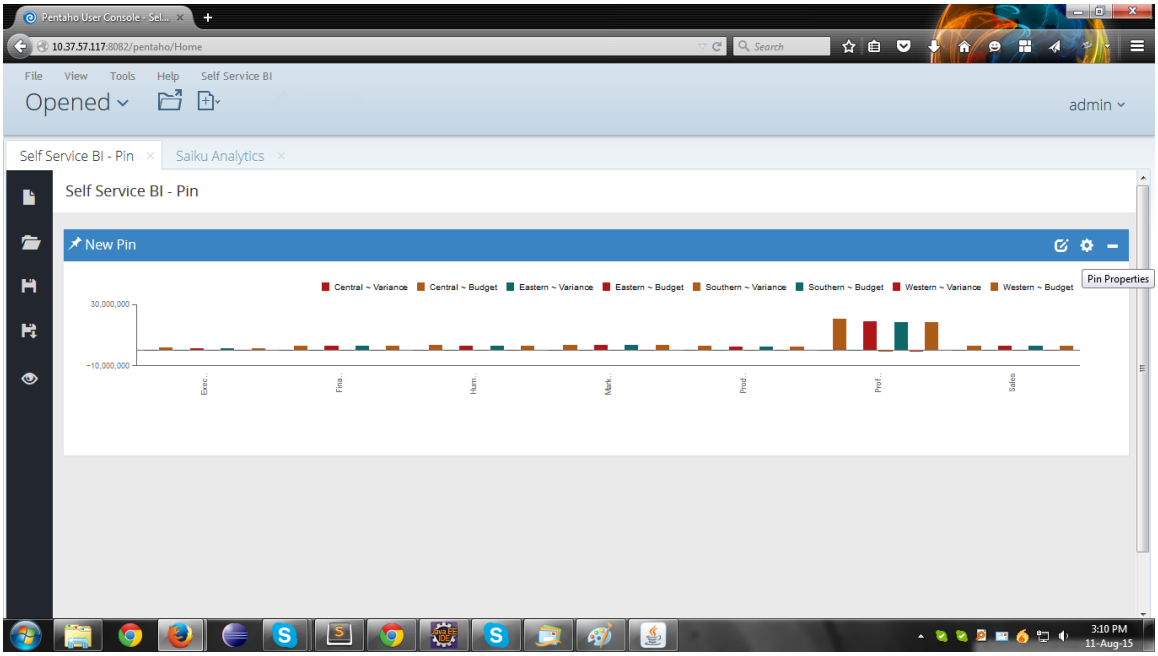
- Select content type as ‘Saiku Analytics’. Select chart type for data representation, which could be Area, Bar, Dot, Line, Multiplebar, Pie, Stackedbar, Treemap, Waterfall and Line.
- Please make sure proper no. of dimensions and measures are selected in data source.



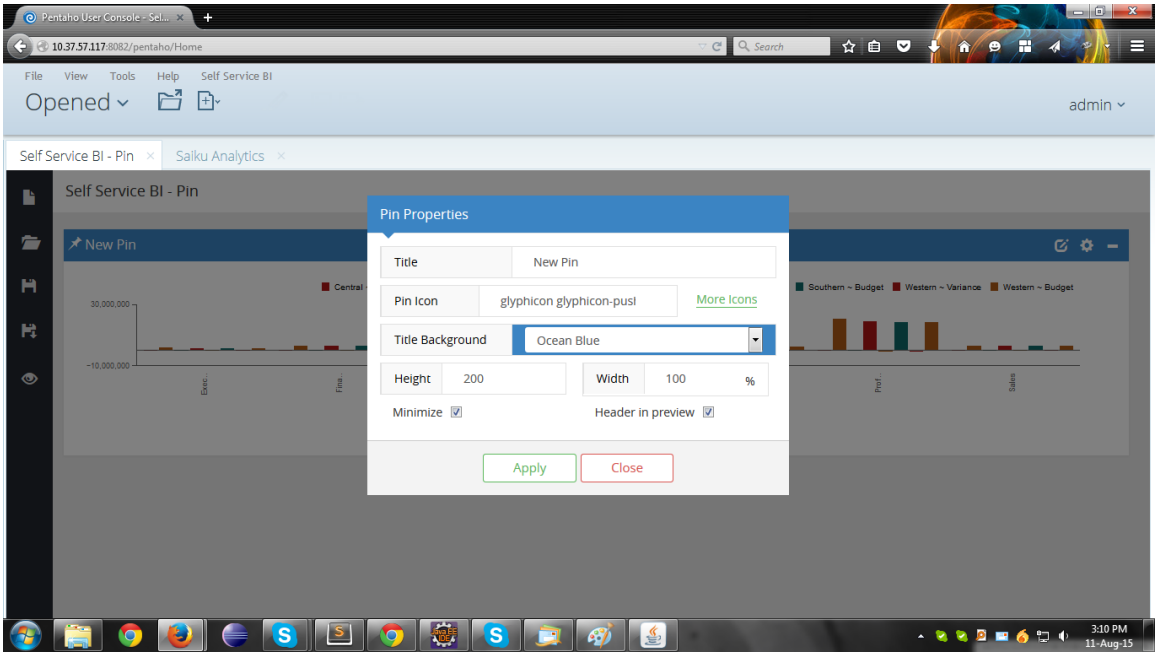
- Browse the Saiku data source saved in the Pentaho repository.



- Click on 'Apply' to render a 'Saiku chart' in Pin.



- You can set different properties like header title, color, Pin height, width, hide header in preview, hide minimize button etc. using 'Pin Properties' option.


Pentaho User Console - Sel...
10.37.57.117:8082/pentaho/Home
File View Tools Help Self Service BI
Opened
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Self Service BI - Pin
Saiku Analytics
Self Service BI - Pin
New Pin
Pin Properties
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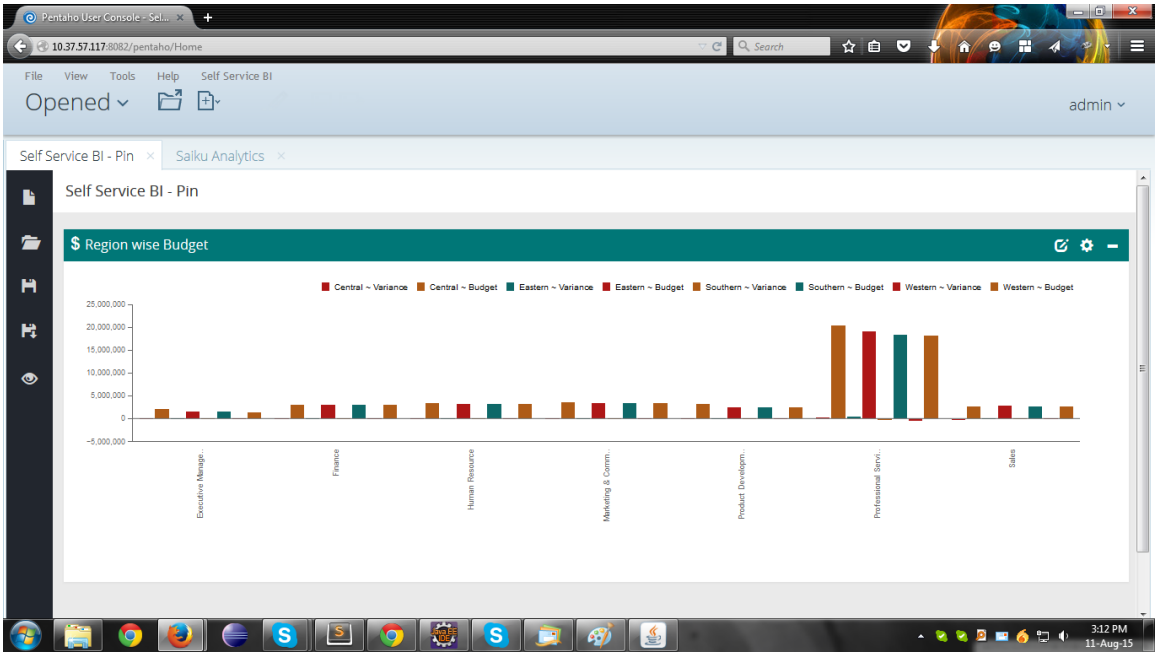
Pentaho User Console - Sel...
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File View Tools Help Self Service BI
Opened
admin
Self Service BI - Pin
Saiku Analytics
Self Service BI - Pin
$ Region wise Budget
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Central ~ Budget
Eastern ~ Variance
Eastern ~ Budget
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Finance
Human Resource
Marketing & Comm..
Product Developm..
Professional Servi..
Sales
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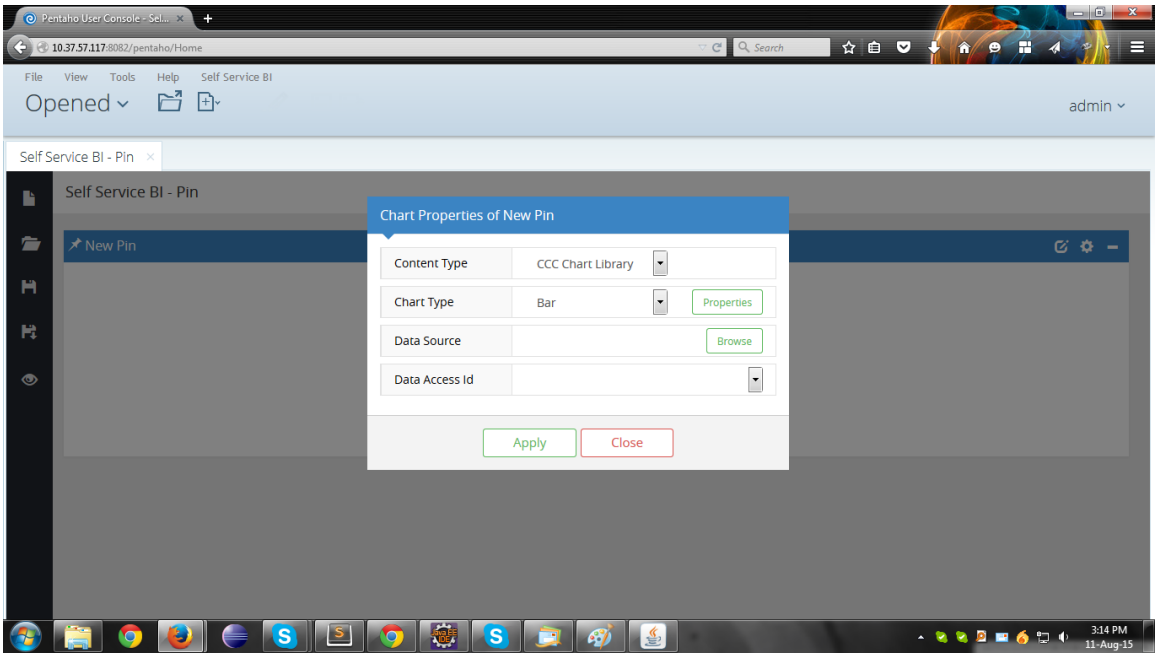
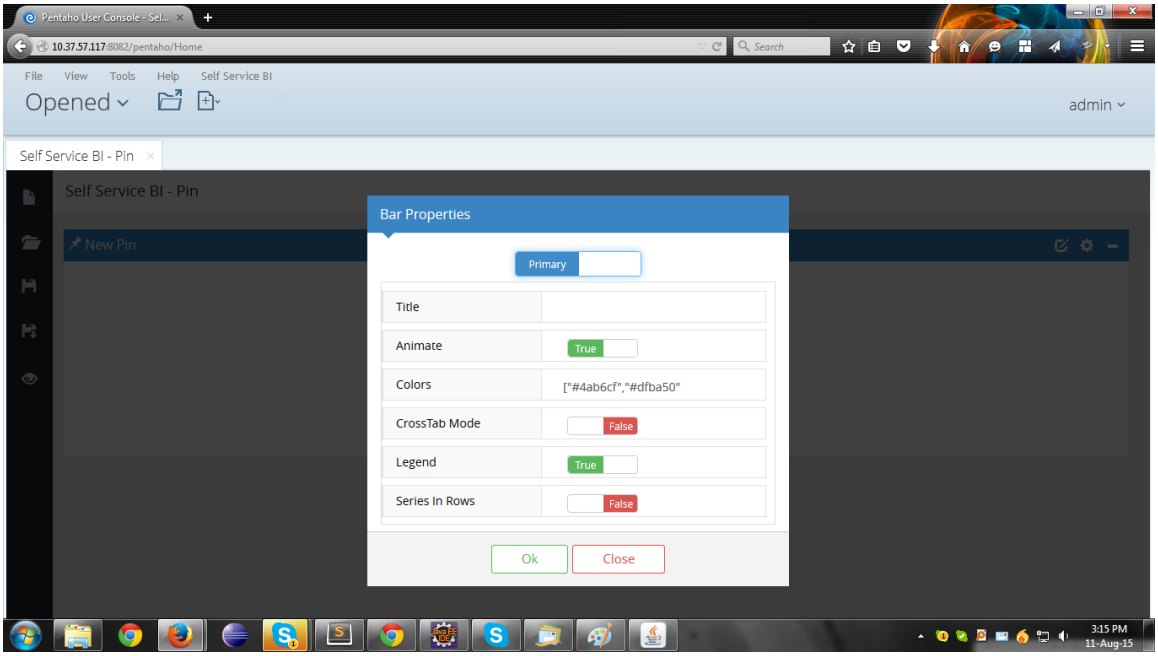
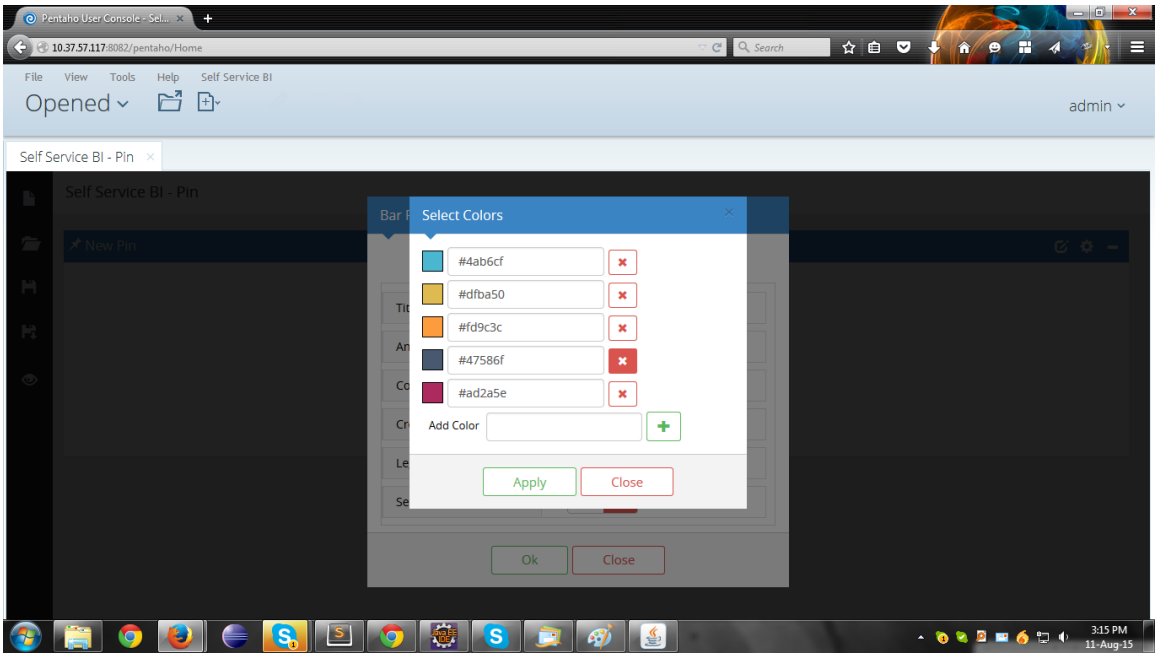
- Select Chart Properties of Pin.
- Select content type as ‘CCC Chart Library’.
- Select ‘Chart Type’ for CCC chart, which could be Bar, BoxPlot, Bullet, Dot, Heatgrid, Line, Pie, StackedArea, Stackedline, SunBrust, Treemap and Waterfall. Every chart has properties associated with it.

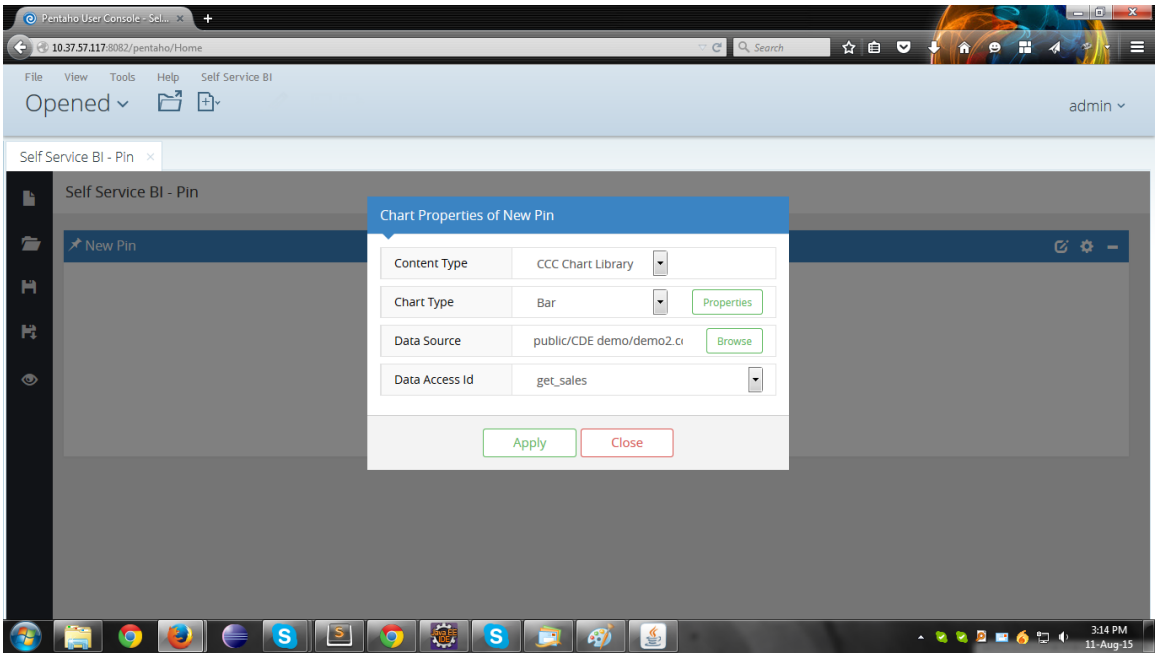


- Click on ‘Properties’ to set properties of chart. Some important properties are described below:
  - **Title**: Defines the title for the chart.
  - **Animate**: It controls animation effect while rendering the chart.
  - **Colors**: It lets you add colors for a particular chart.
  - **Legend**: It controls legend visibility.
  - **Series in Rows**: It considers each series as row.

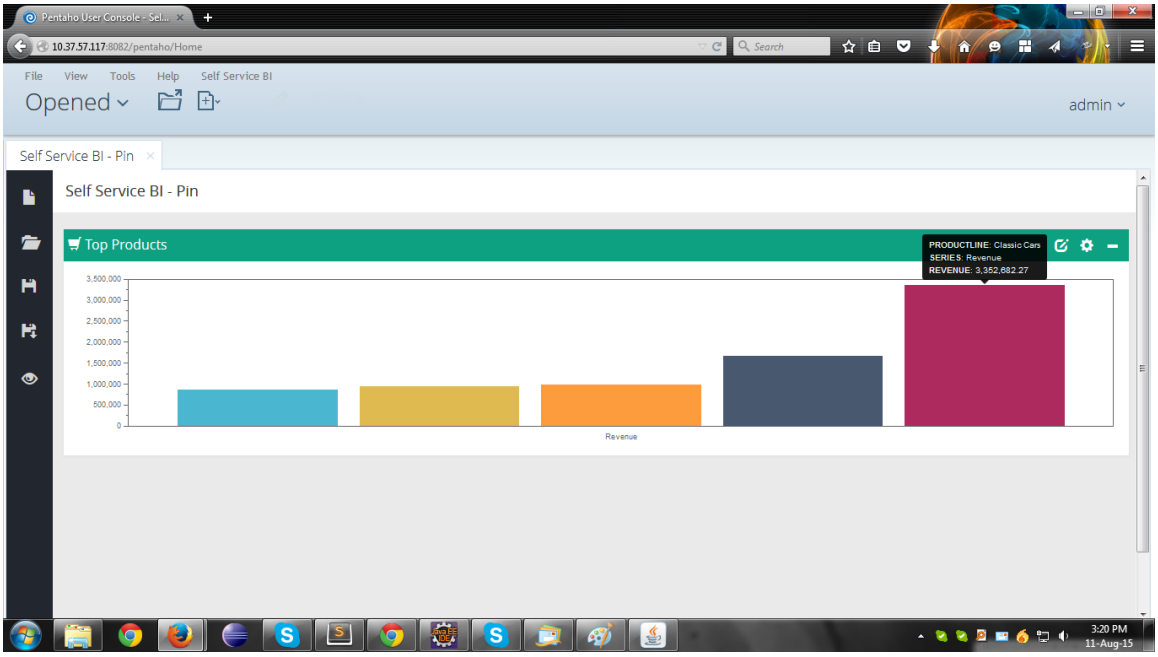




- Browse through CDA data source of Pentaho
- Select Data Access Id for selected CDA data source.

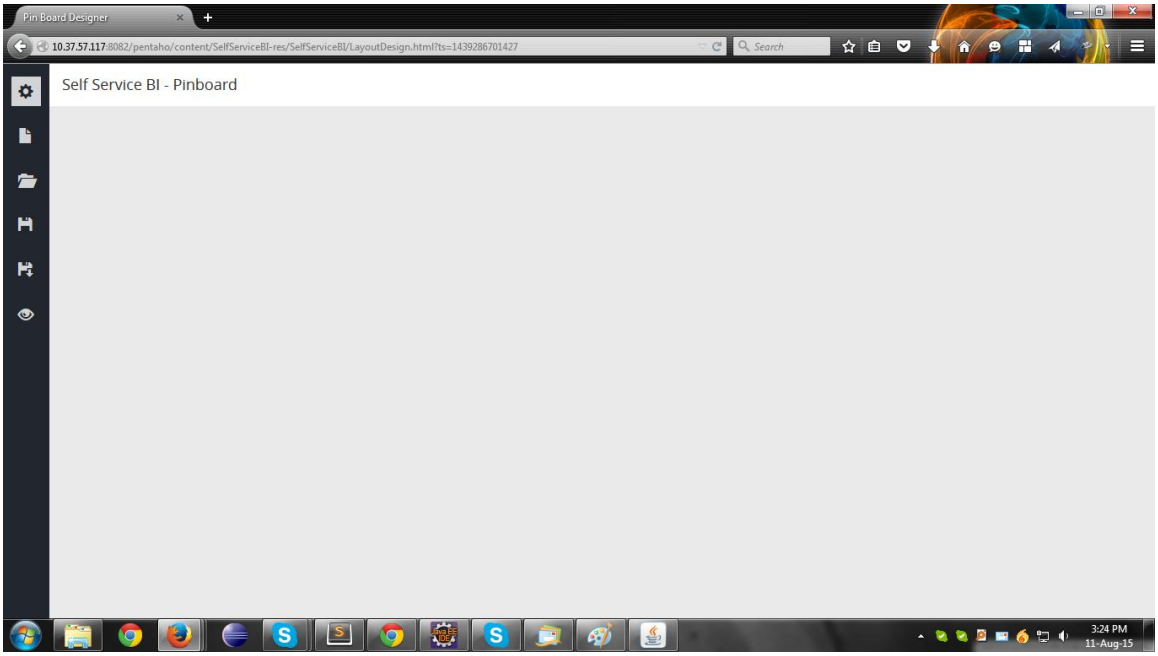


- Click on 'Apply' to render CDA chart in Pin.
- Set various Pin Properties like header title, color, Pin height, width, hide header in preview, hide minimize button etc.



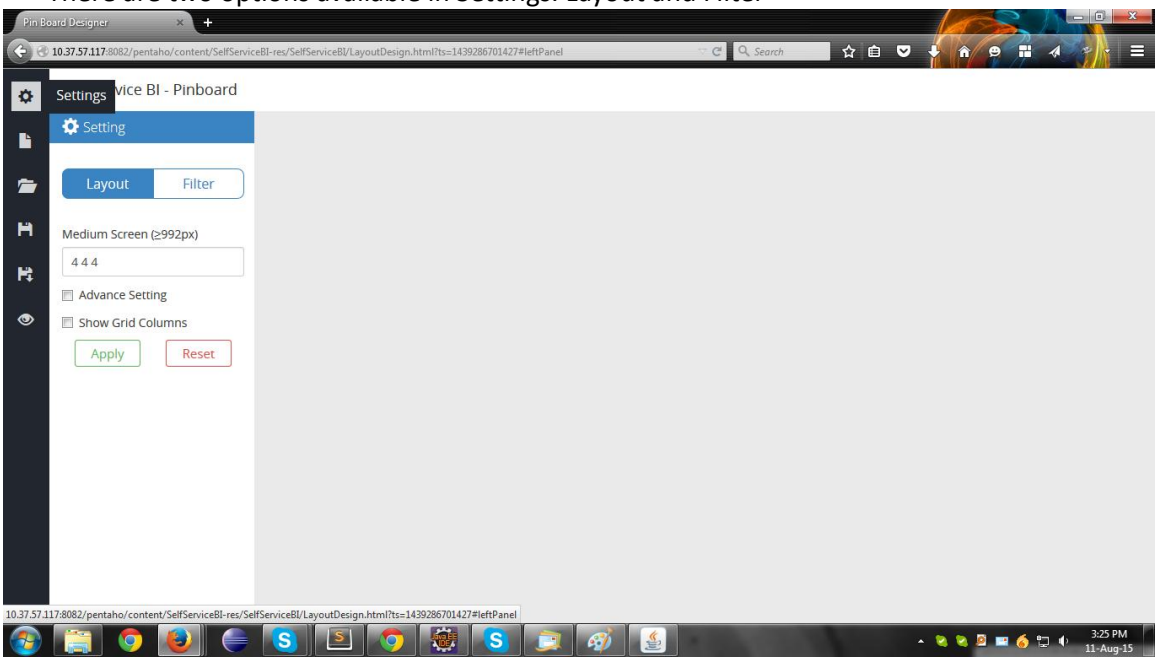
4. PINBOARD

- Pinboard represents the dashboard on which various reports can be generated with different parameters. You can either create the Pins first or the Pinboard first, as per your need.



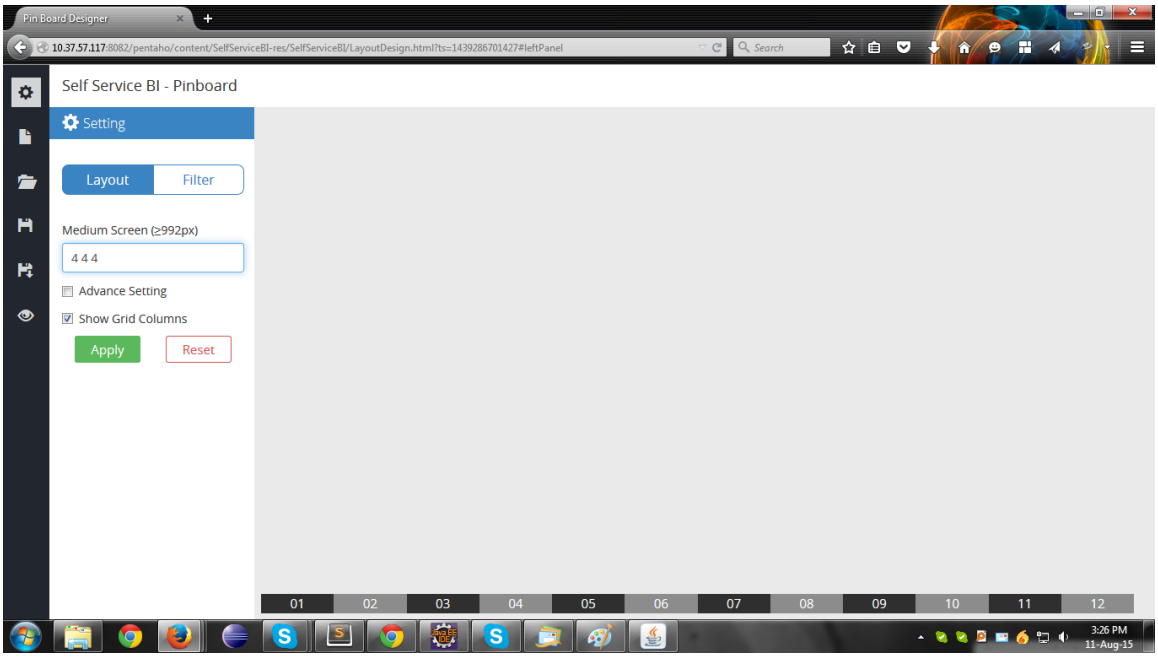
4.1 Settings Option

- There are two options available in Settings: Layout and Filter

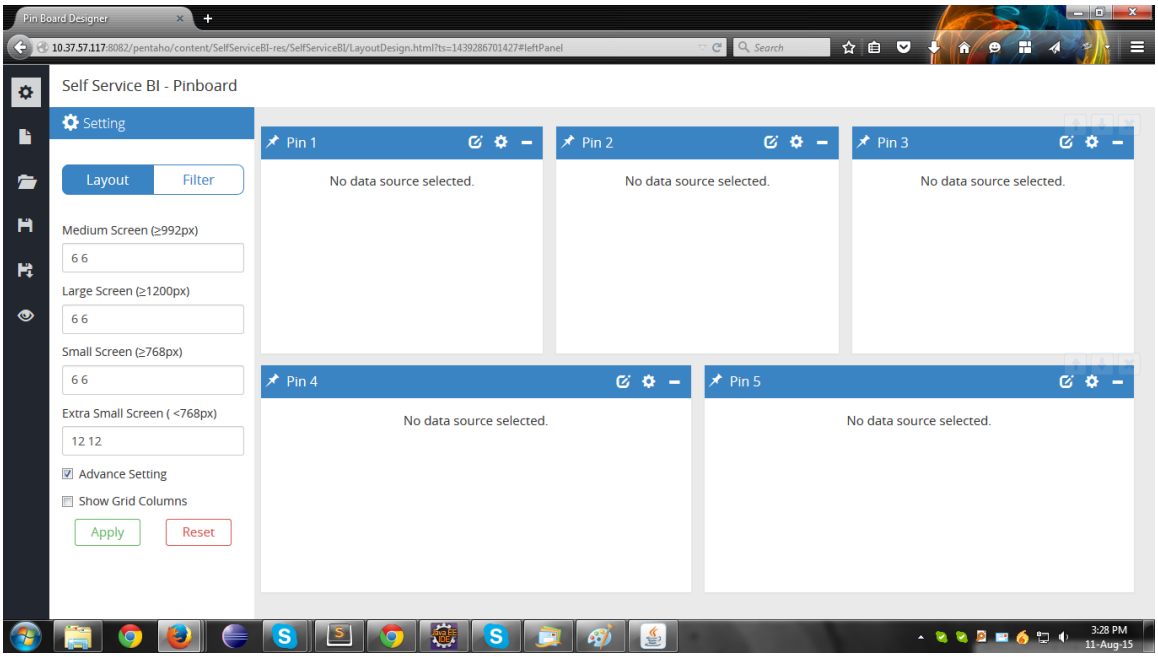


4.1.1 Layout Settings

- In this Layout Settings option, you can add Pin in the Pinboard.

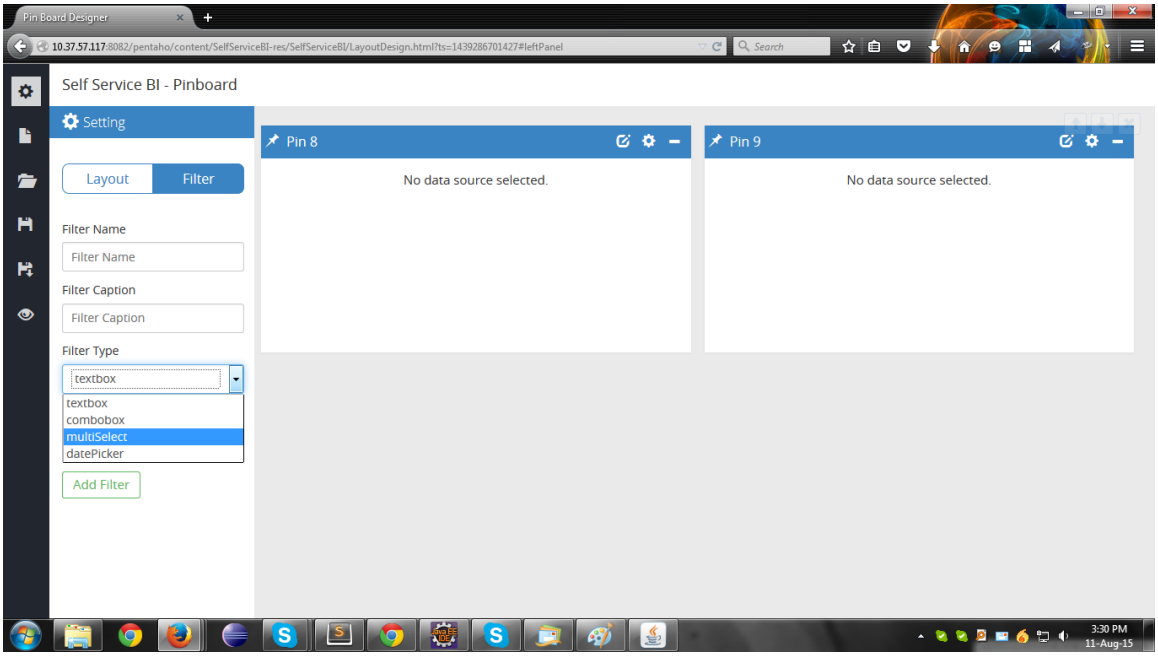


- Screen is divided in 12 columns layout and you can add number of Pin with its size (which is less than 12). You can, by default add Pin for medium screen - 992px to 1200px. You can also use advance settings to set Pin visibility for different screen sizes like Phone, Tablet, and Large Desktop.
- With 'RESET' button, you can reset the Pinboard by removing all Pins.
- Caution Note: Care needs to be taken while deleting Pins. Individual pins cannot be deleted, only rows of Pins can be deleted, hence organizing pins in rows needs to be defined very carefully.

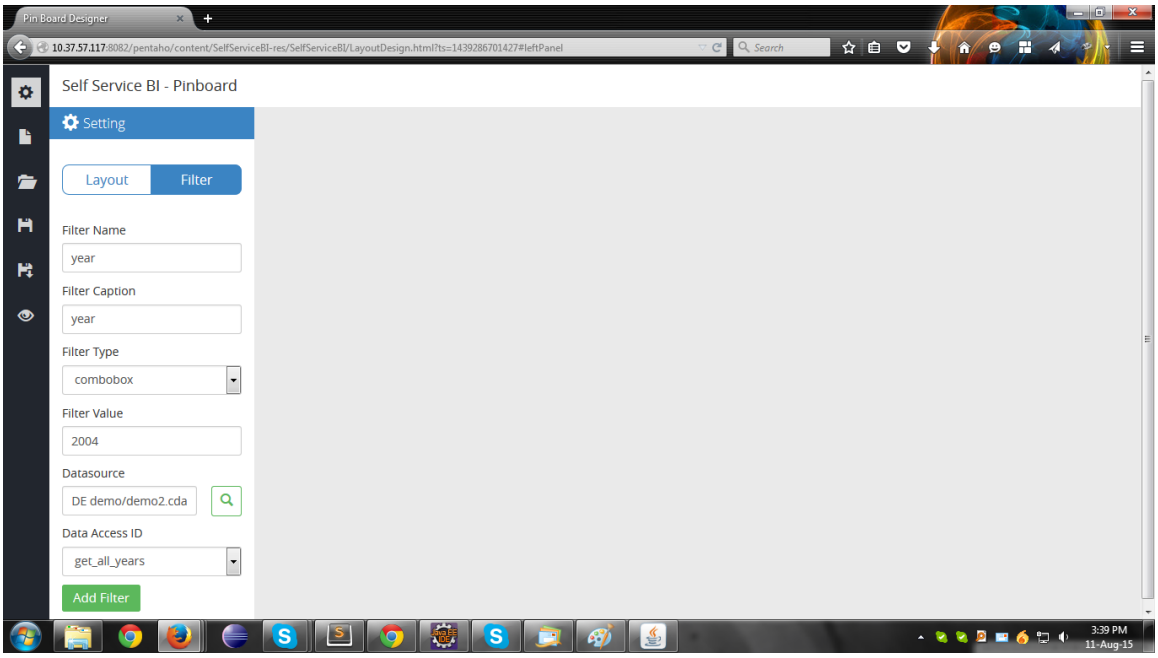


4.1.2 Filter Settings

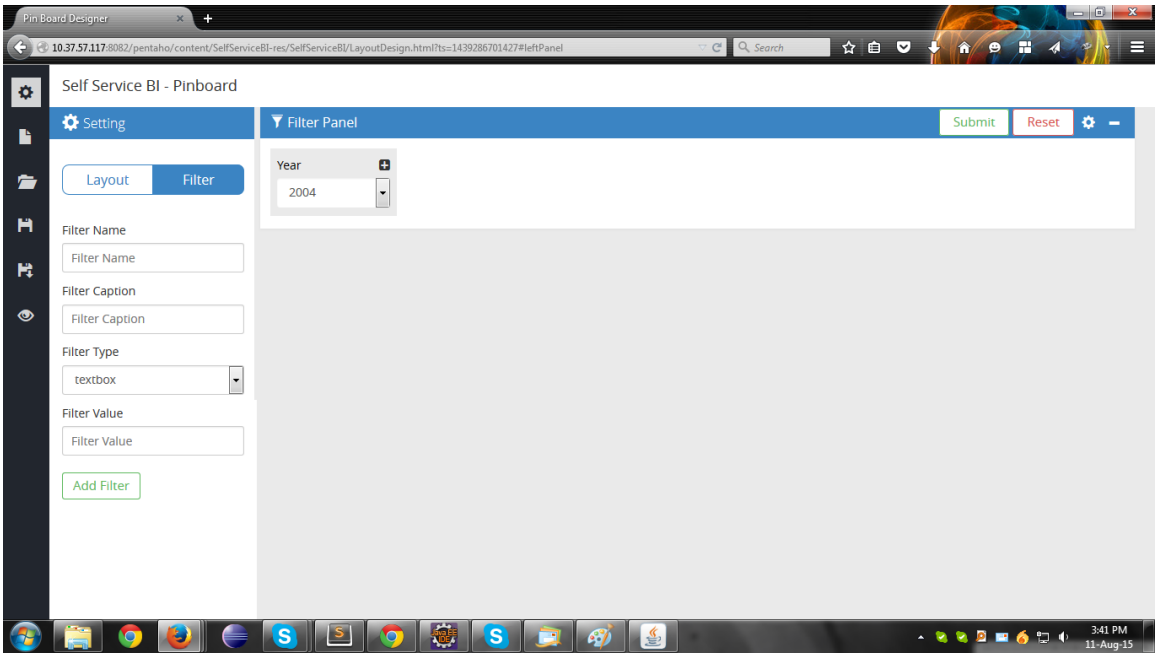
- The Filter Settings allow you to add various filters to filter your data according to values.
- There are four types of filter:
    - Textbox
    - Combobox
    - Multiselect
    - Date Picker



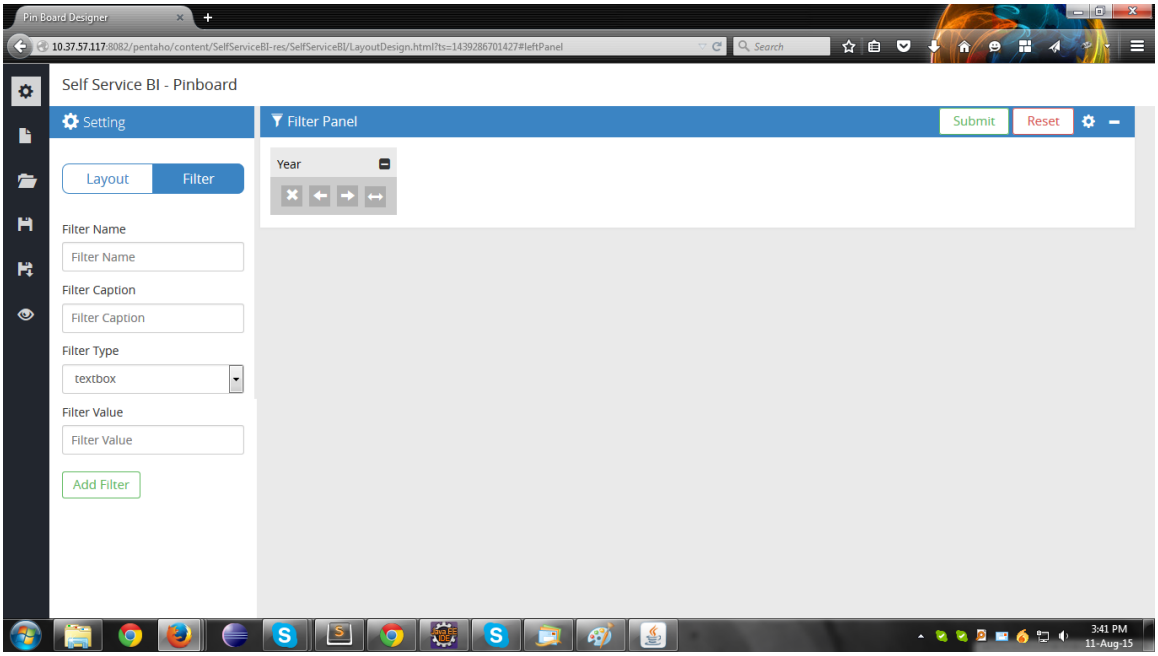
- For Combobox and Multiselect, you have to specify the data source to get values from.



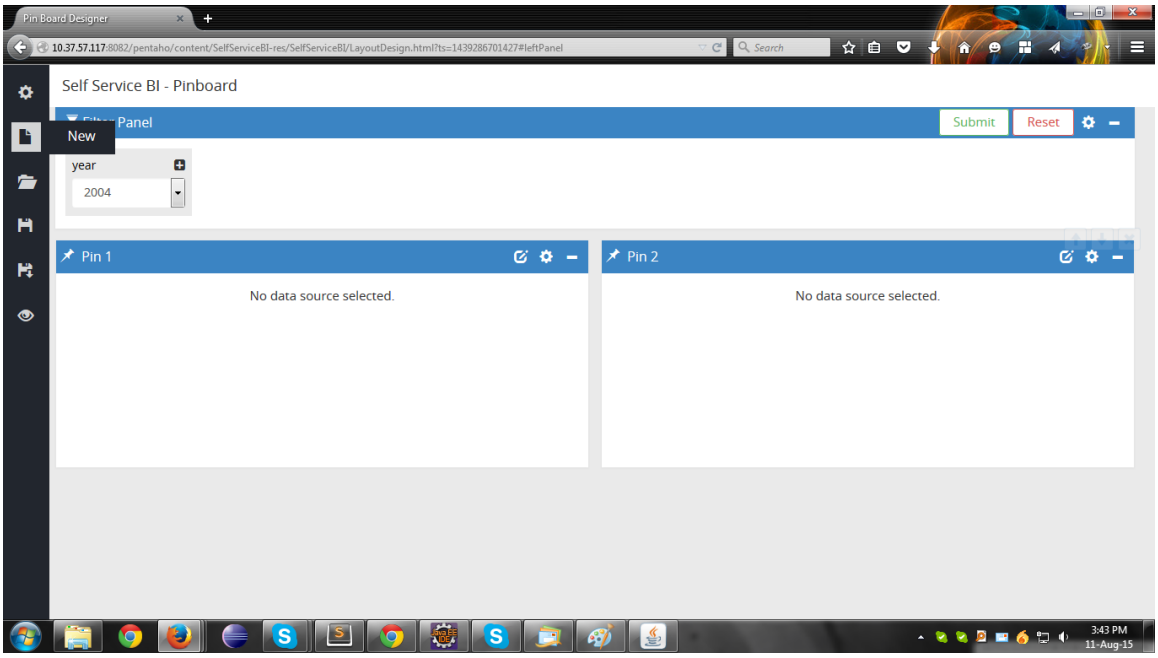
- You can specify Filter caption which will be visible with filter in the panel.



- When you add filter, it will append in the filter panel. Each filter has a Settings button through which you can set different properties like position, width and remove filter from the panel.



4.2 New / Open / Save Pinboard

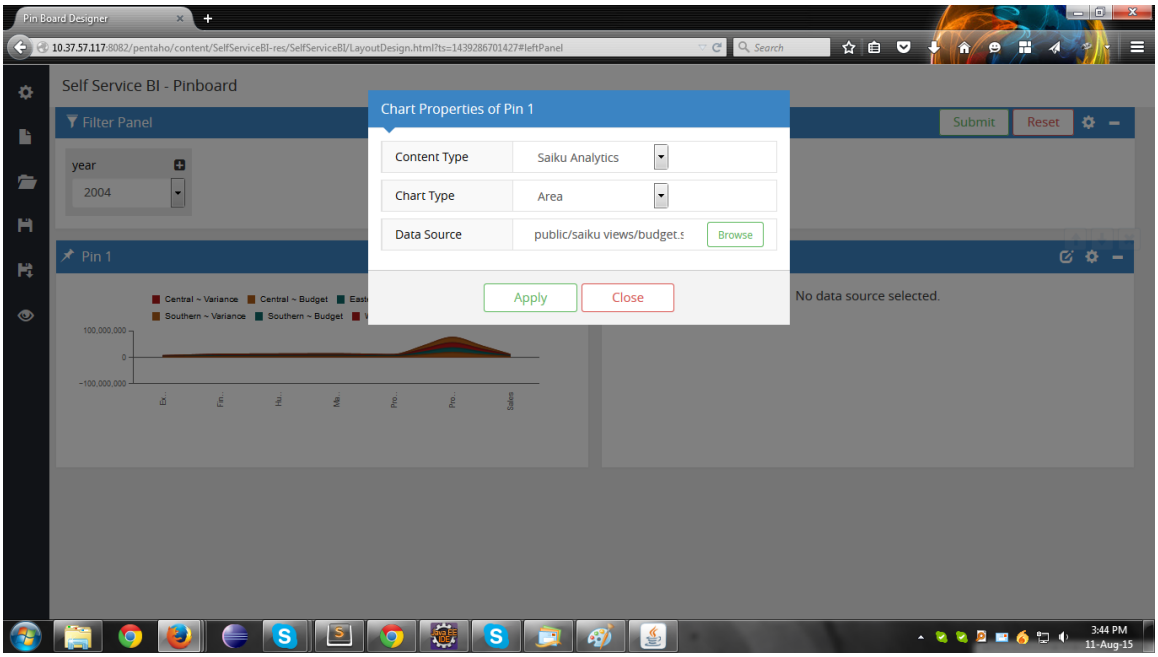


- **New Pinboard:** This option allows you to create a new Pinboard.
- **Open Pinboard:** This option allows you to open saved Pinboard and edit it.
- **Save Pinboard:** This option allows you to save the Pinboard on Pentaho server.

4.3 Steps to create CCC chart in Pinboard using Saiku Data source

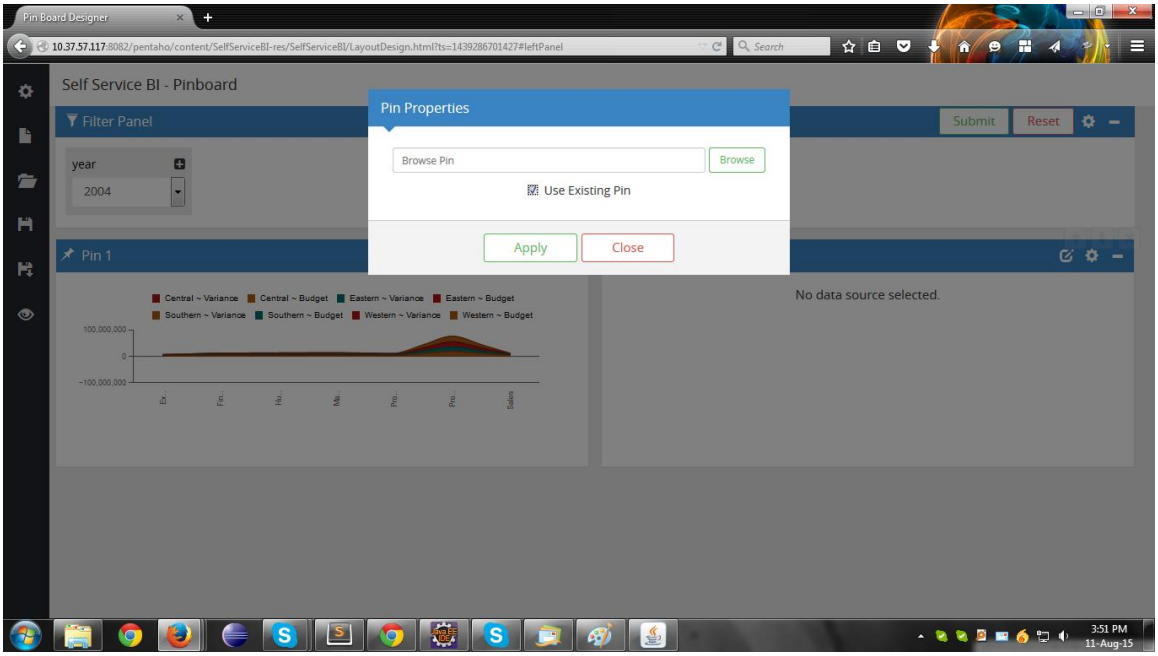
4.3.1 Create a New Chart

- First add Pins in Pinboard by using the Layout settings.
- Now click on 'Chart Properties' icon to set properties to generate chart.
- A dialog box will popup. Select content type 'Saiku Analytics' from it.
- Choose Chart type in which you want your data to be represented.
- Browse through Saiku data source, which you already have in the Pentaho Server.
- Click 'Apply' and it will render the Saiku chart in the particular Pin.
- Follow the same procedure for every pin in which you want the Saiku chart.

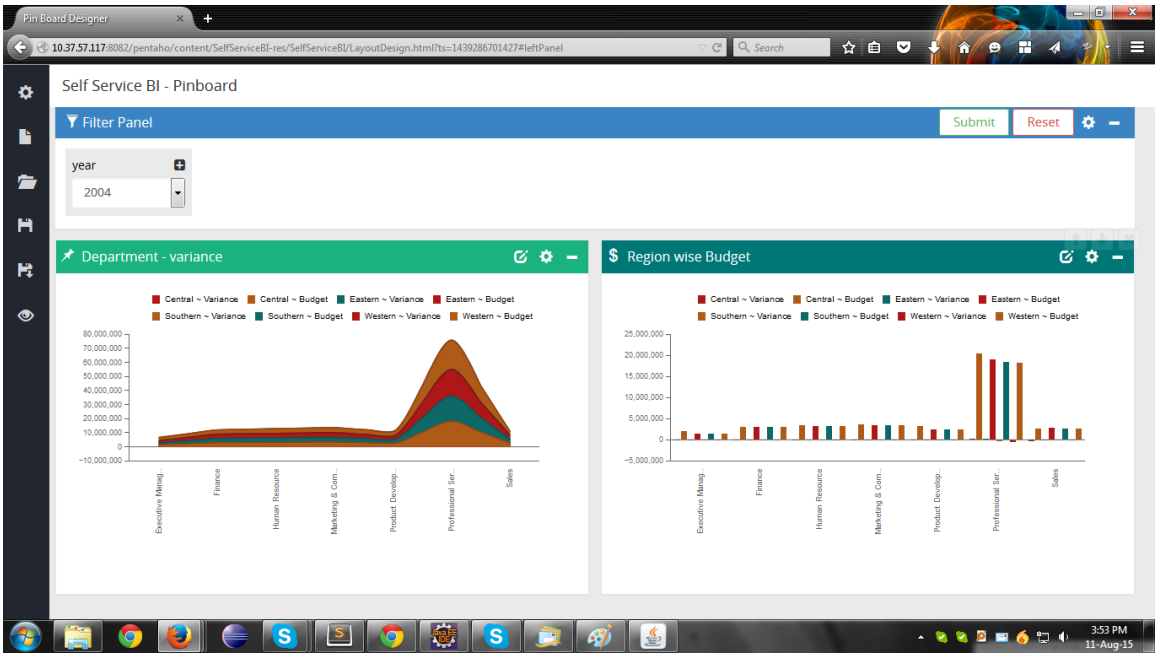


4.3.2 Use Existing Pin to Create Chart

- To use existing pin as reference to create chart in Pinboard, click on ‘Pin Properties’ icon on Pin.
- It will open a dialog, click the ‘Use Existing Pin’ checkbox.
- Now browse through your existing Pin in Pentaho server repository and select the desired one.



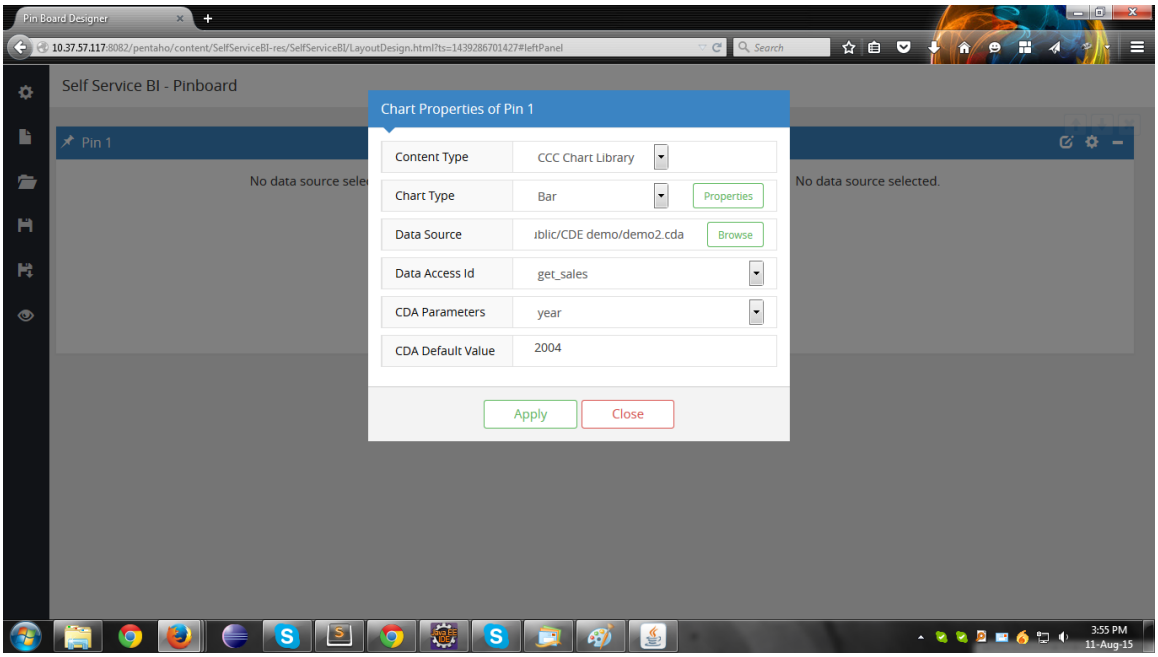
- Click on apply and it will render Saiku chart from existing Pin in your Pin.



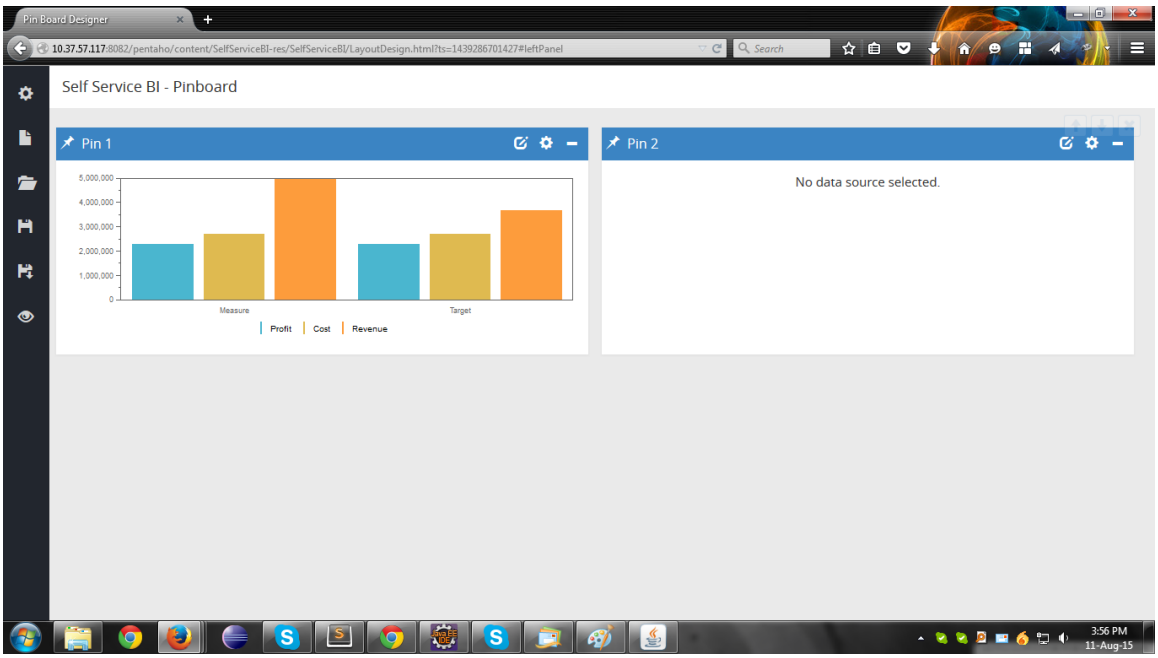
4.4 Steps to generate CCC chart in Pinboard using CDA data source

4.4.1 Create a New Chart

- First add Pins in Pinboard using Layout settings.
- Now click on 'Chart Properties' icon to set properties to generate chart.
- Select content type 'CCC Chart Library'.
- Select chart type to represent your data.
- Click on properties to set properties of chart. Some important properties are described below :
    - Title: Defines the title for chart.
    - Animate: It controls animation effect while rendering chart
    - Colors: It let you add colors for the particular chart
    - Legend: It controls legend visibility
    - Series In Rows: It considers each series as row.
- Browse through your CDA data source of Pentaho.
- Select Data Access Id for selected CDA data source.



- Clicking on Apply will render CCC chart in Pin.

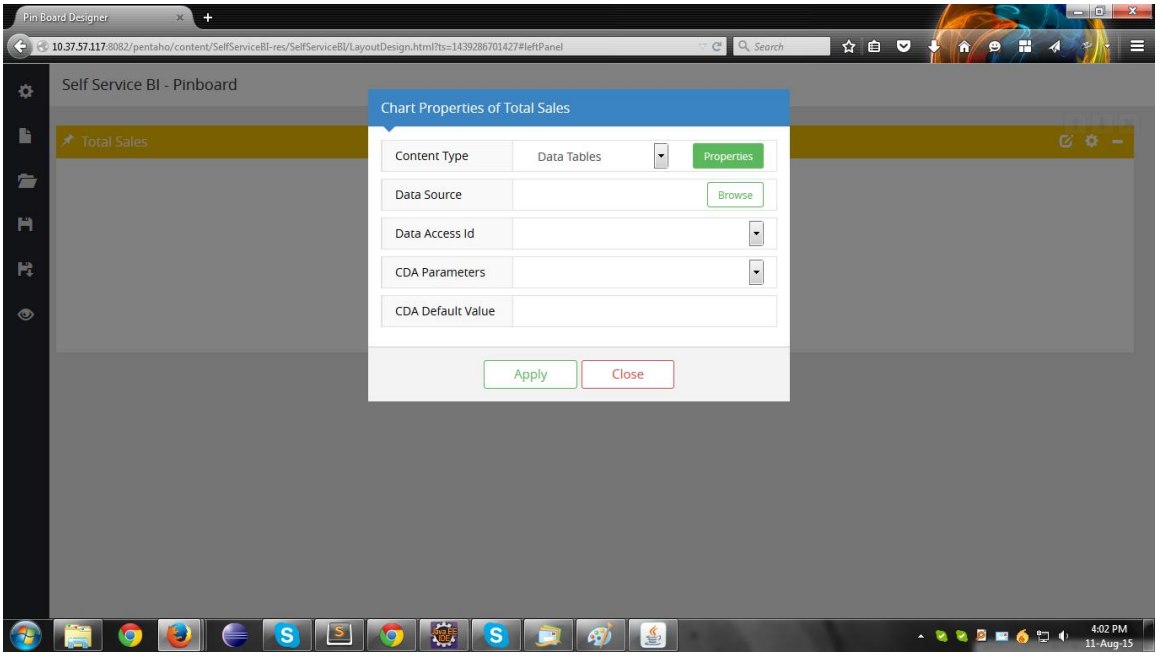


4.4.2 Use Existing Pin to Create Chart

- To use existing Pin as reference to create chart in Pinboard, click on 'Pin Properties' icon on Pin.
- It will open a dialog, click the 'Use Existing pin' checkbox.
- Now browse through your existing pin in Pentaho server repository and select the desired one

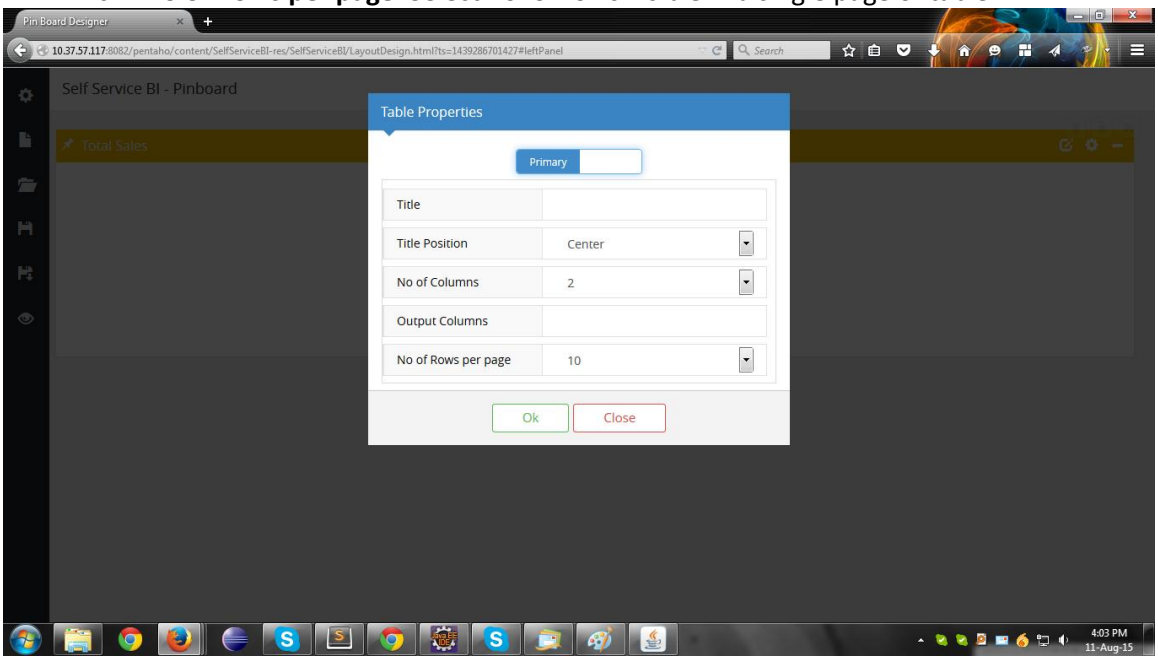
4.5 Steps to generate Data Tables in Pinboard using CDA data source

- Click on ‘Chart Properties’ icon of the Pin.
- Select ‘Data Tables’ as the Content Type option.

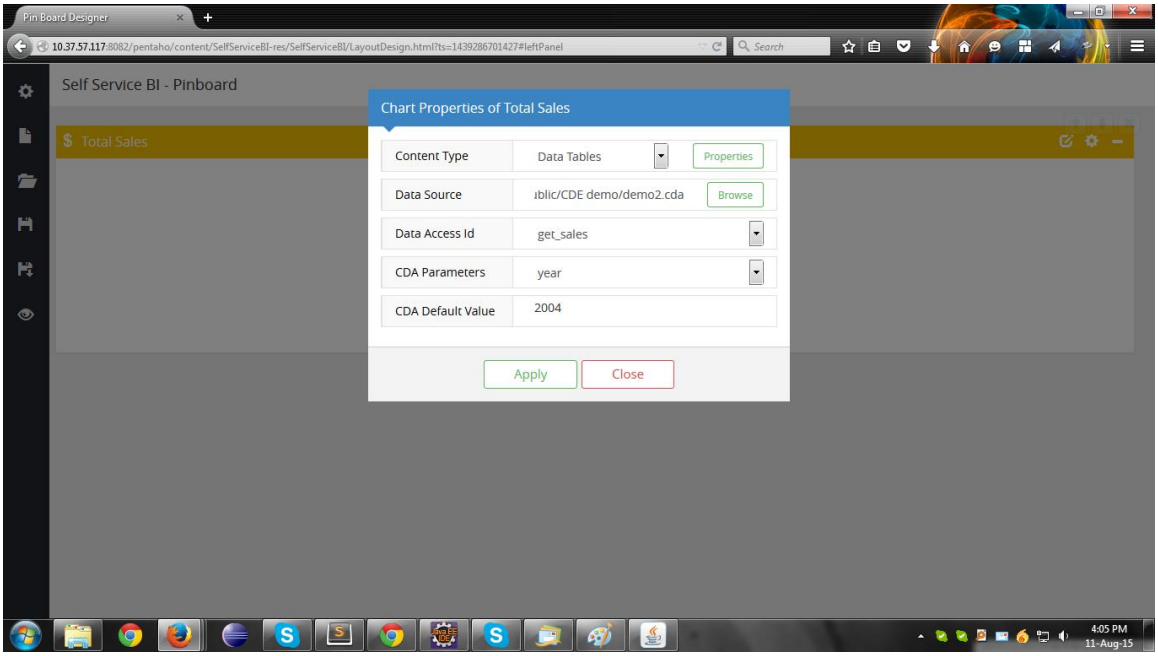


- Set properties for ‘Data Tables’ by clicking on Properties button. Some properties are:

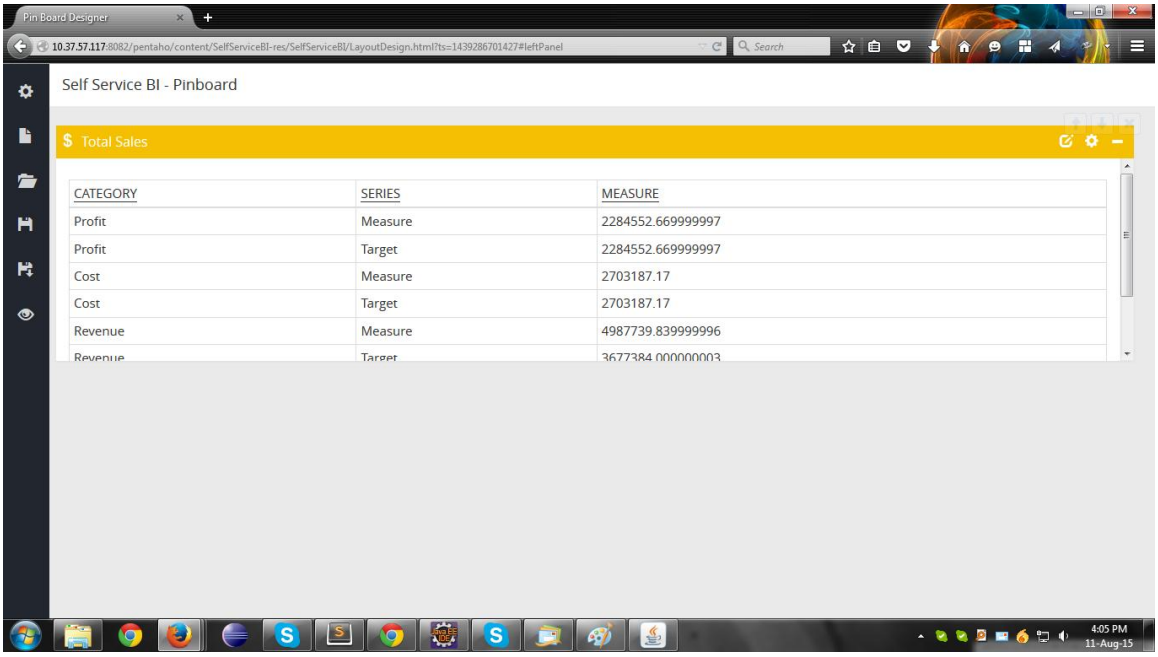
    - **Title**: Specify the title of the table.
    - **Title Position**: Select the position on title in Pin.
    - **No of Columns**: Number of columns visible in the table.
    - **Output Columns**: Column index of those included in the table.
    - **No of Rows per page**: Select no. of rows visible in a single page of table.



- Browse through your CDA data source of Pentaho.
- Select Data Access Id for selected CDA data source.

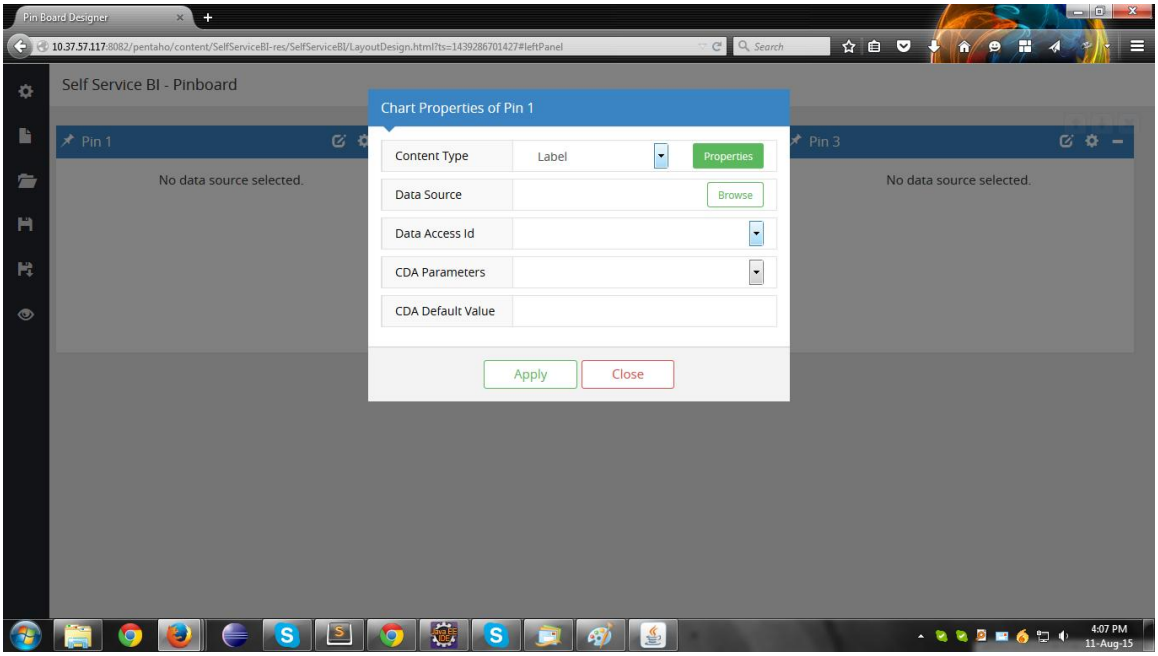


- Clicking on Apply will render Data Table in Pin.



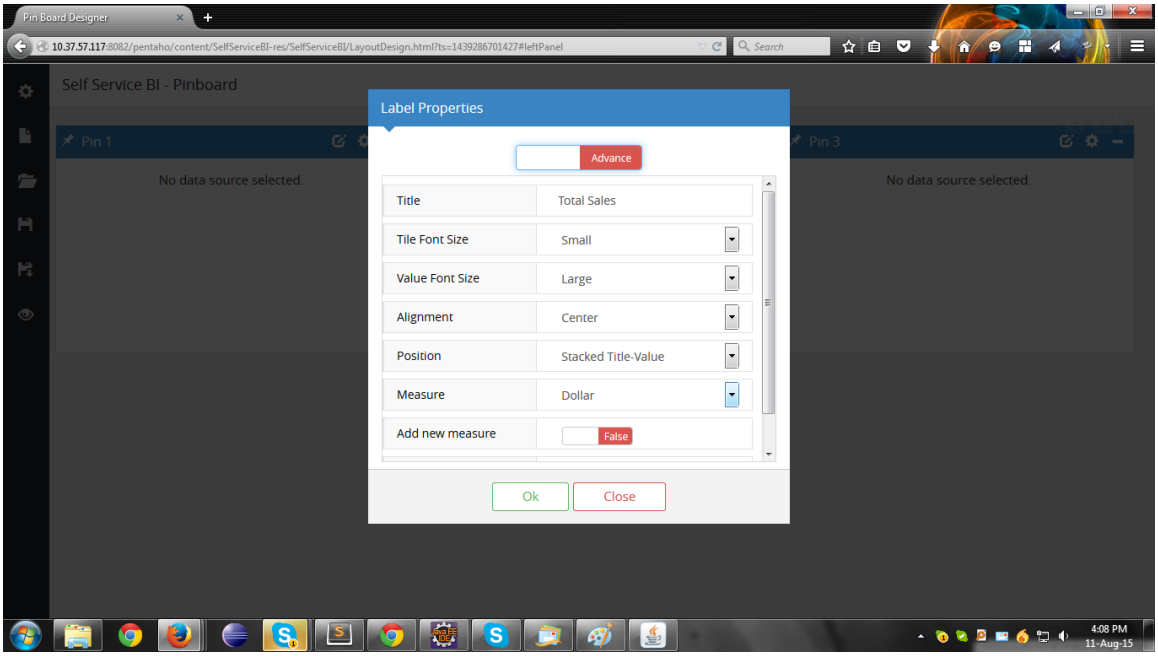
4.6 Steps to generate Label in Pinboard using CDA data source

- Click on ‘Chart Properties’ icon of the Pin.
- Select ‘Label’ as the Content Type.

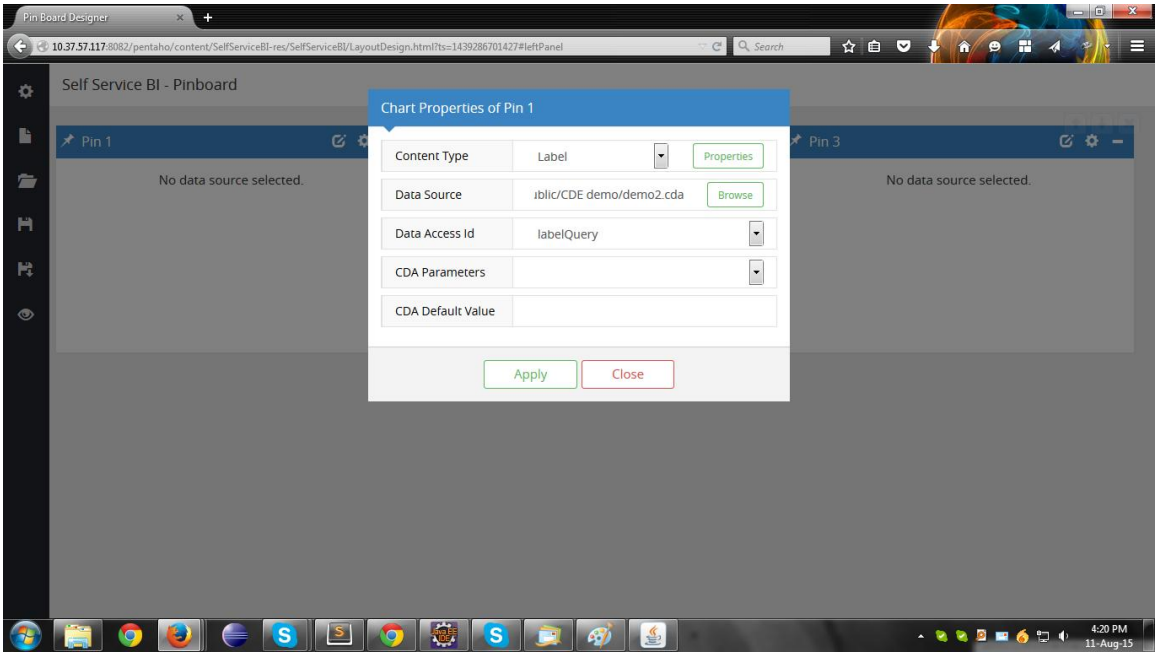


- Set properties for ‘Label’ by clicking on Properties button. Some properties are:

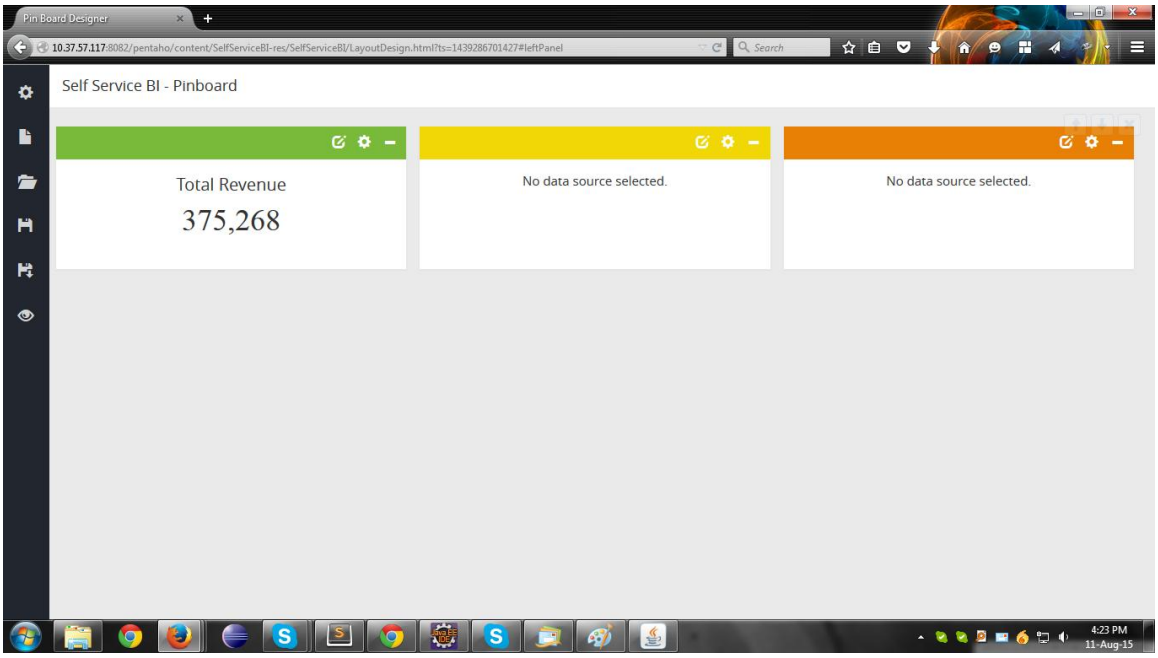
  - Title: Specify the title for the label.
  - Alignment: Select the position for label according to Pin.
  - Position: It will allow you to select through different positions:
    - Stacked Title- Value: First title and then value in vertical position
    - Stacked Value- Title: First value and then title in vertical position
    - Inline Title- Value: First title and then value in horizontal position
    - Inline Value- Title: First value and then title in horizontal position
  - Title Position: Select the position on title in Pin.
  - No of Columns: Number of columns visible in table.
  - Output Columns: Column index of those included in the table.
  - No of rows per page: Select no. of rows visible in one page of table.



- Browse through your CDA data source of Pentaho.
- Select Data Access Id for selected CDA data source.

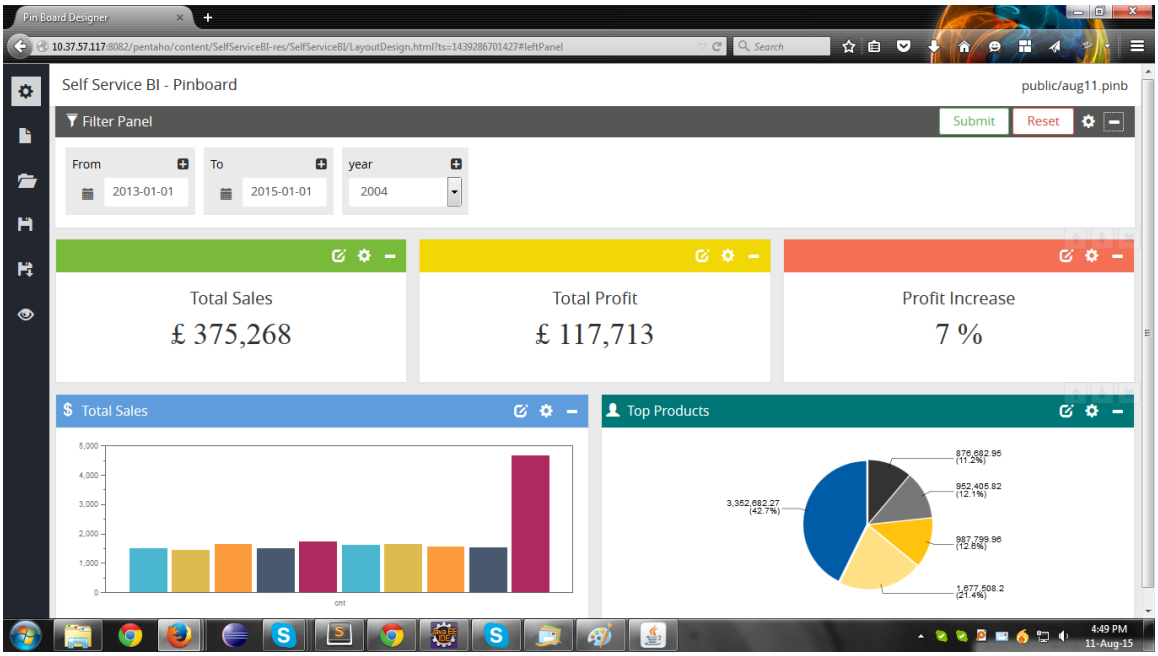


- Clicking on Apply will render Label in Pin

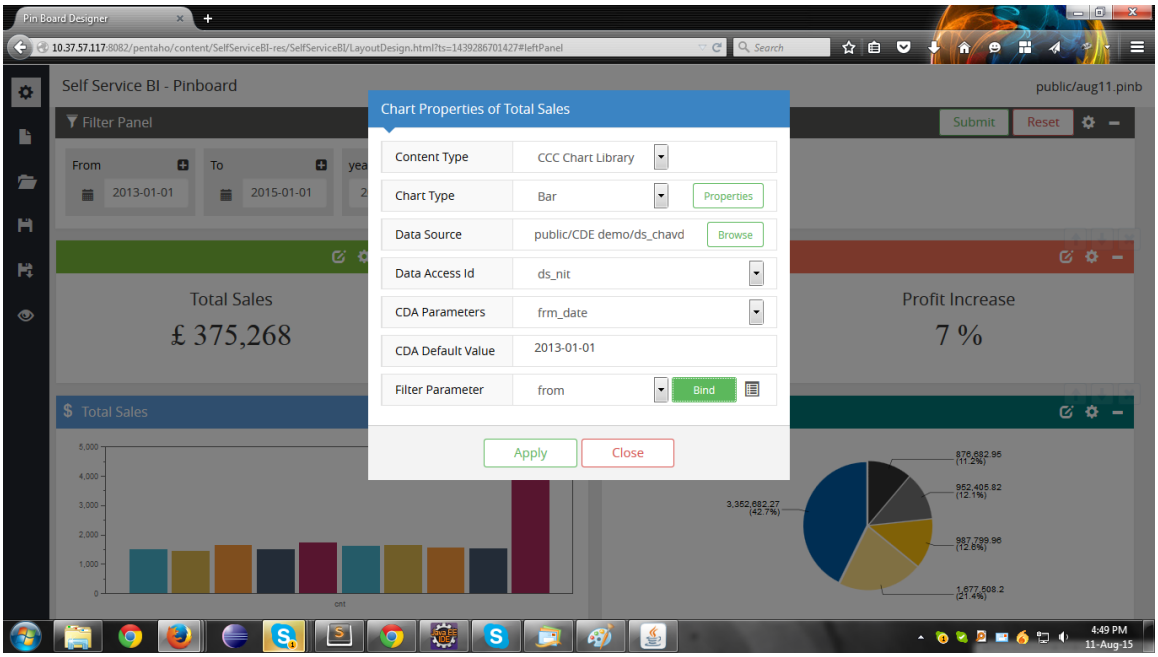


4.7 Steps to add filter in CCC chart, Data Tables and Label

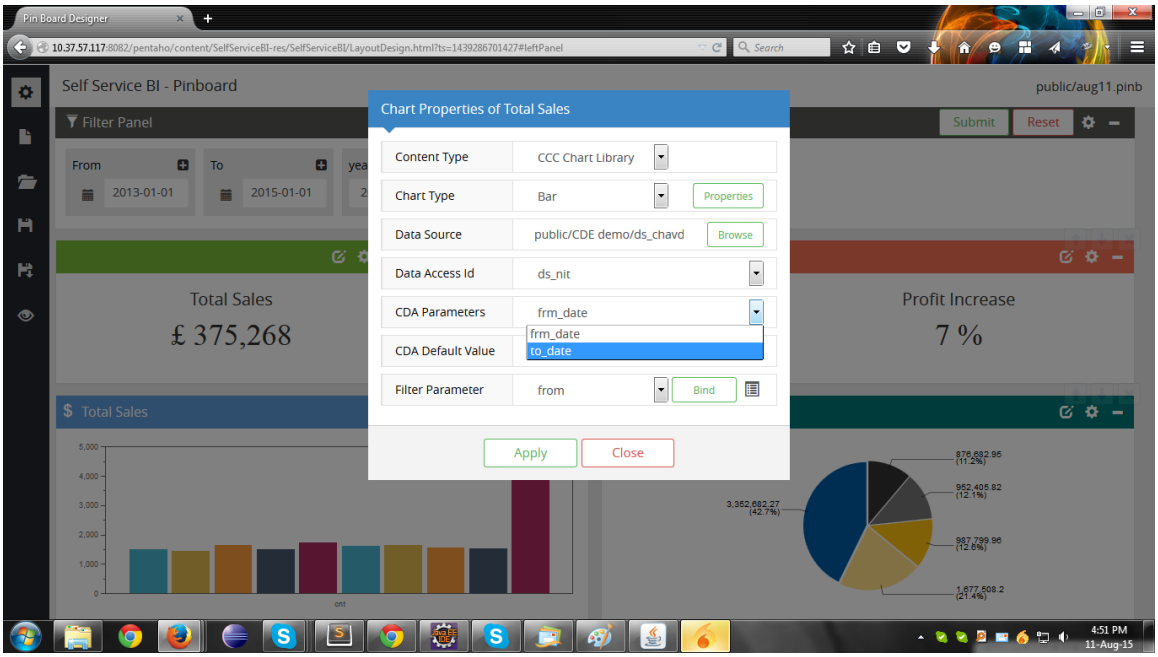
- Filter can be added in CCC chart, Data Tables and on Label to manipulate data as per filter values.
- Add filters from Settings panel, which will be visible in the panel.



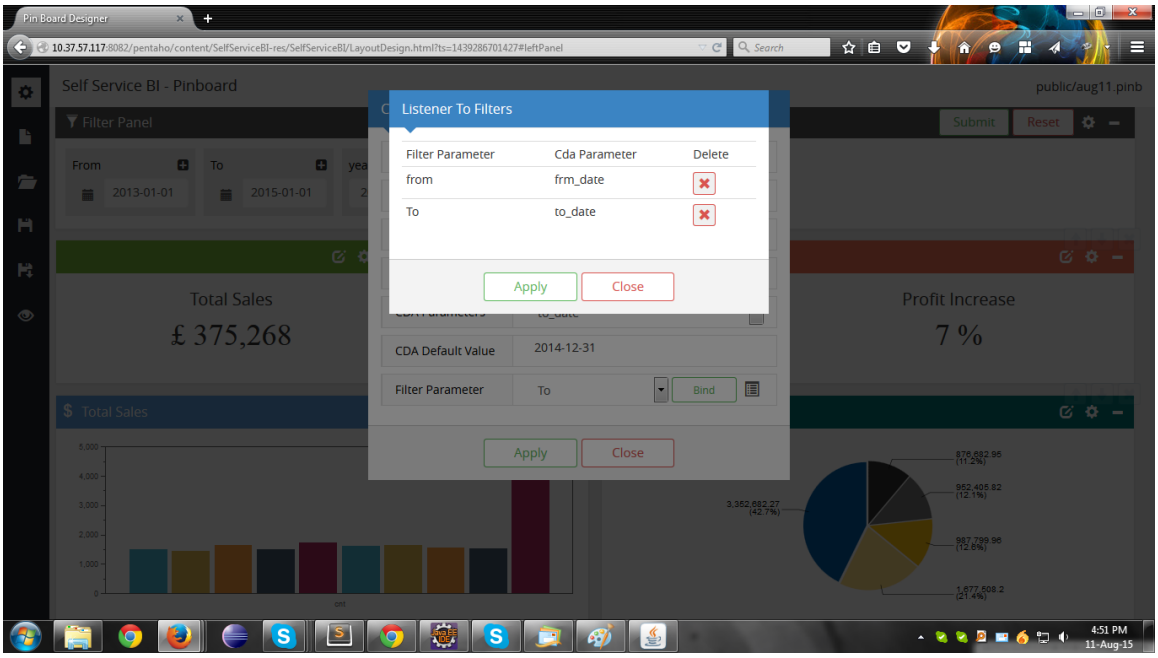
- Now, click on ‘Chart Properties’ icon of the Pin on which you want to apply the filter.
- Now choose CDA Parameter (e.g. year) and appropriate filter. Then click on ‘Bind’. It will bind CDA parameter with Filter. With one CDA parameter, you can only bind one filter.



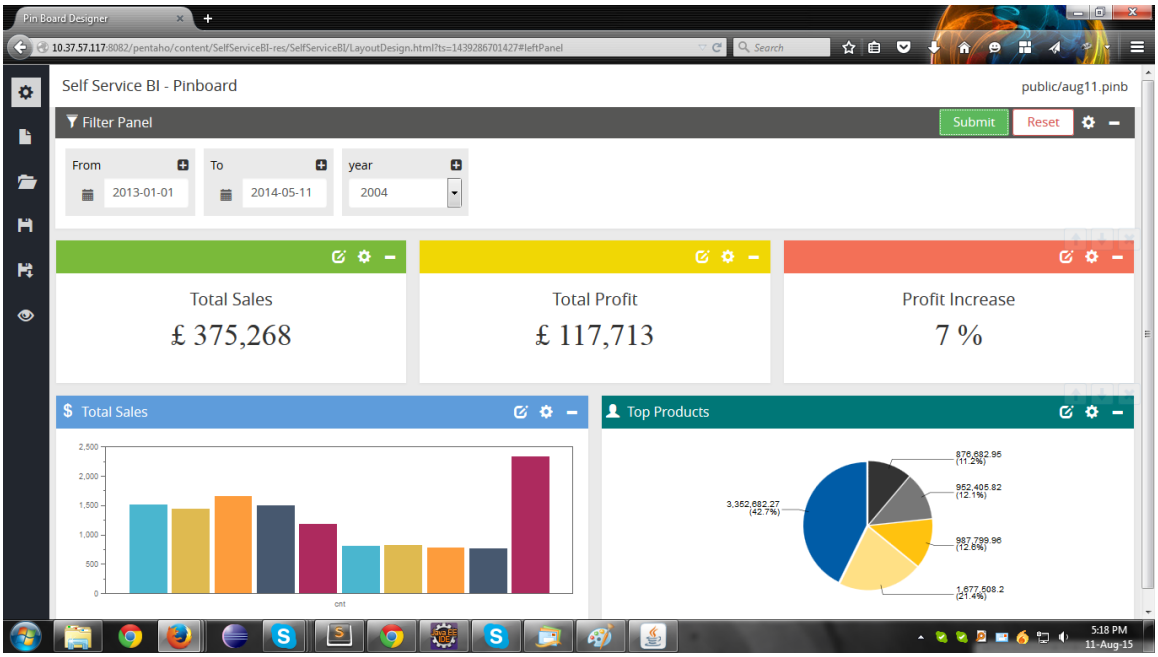
- Similarly, you can bind different filters with various CDA parameters.



- You can see already bound filter with CDA parameter on clicking ‘Show Listener’ icon.

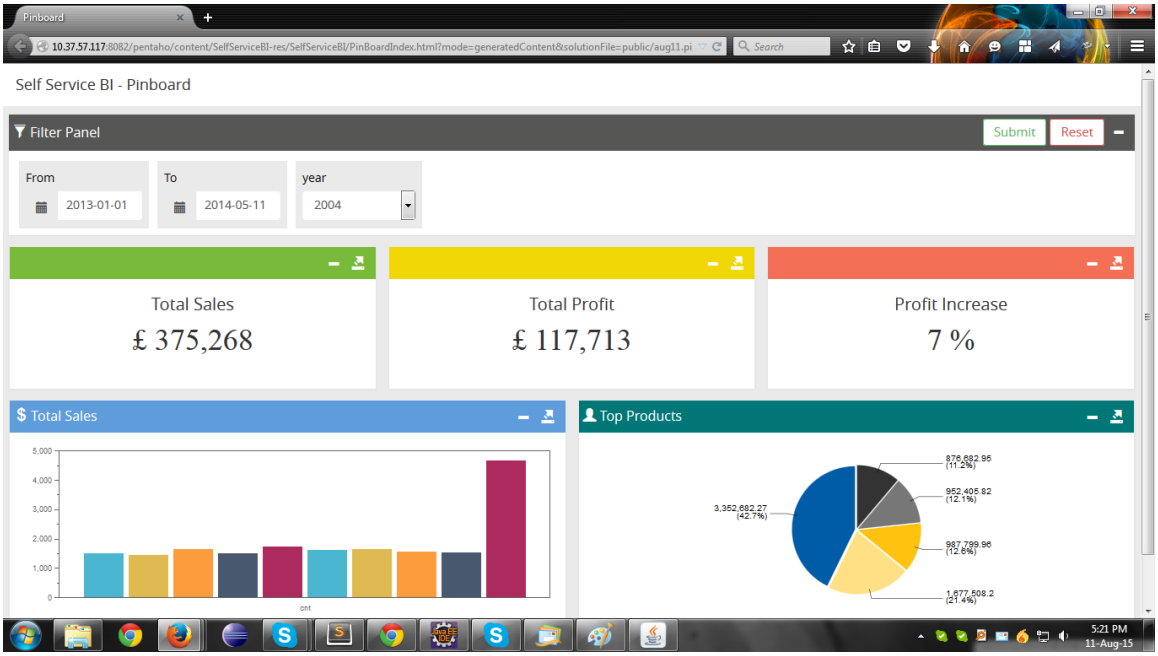


- Click on Apply to bind the filter with Pin.
- Now change values of filter in the panel and click ‘Submit’. It will render Listener chart/table/label with new parameter values.



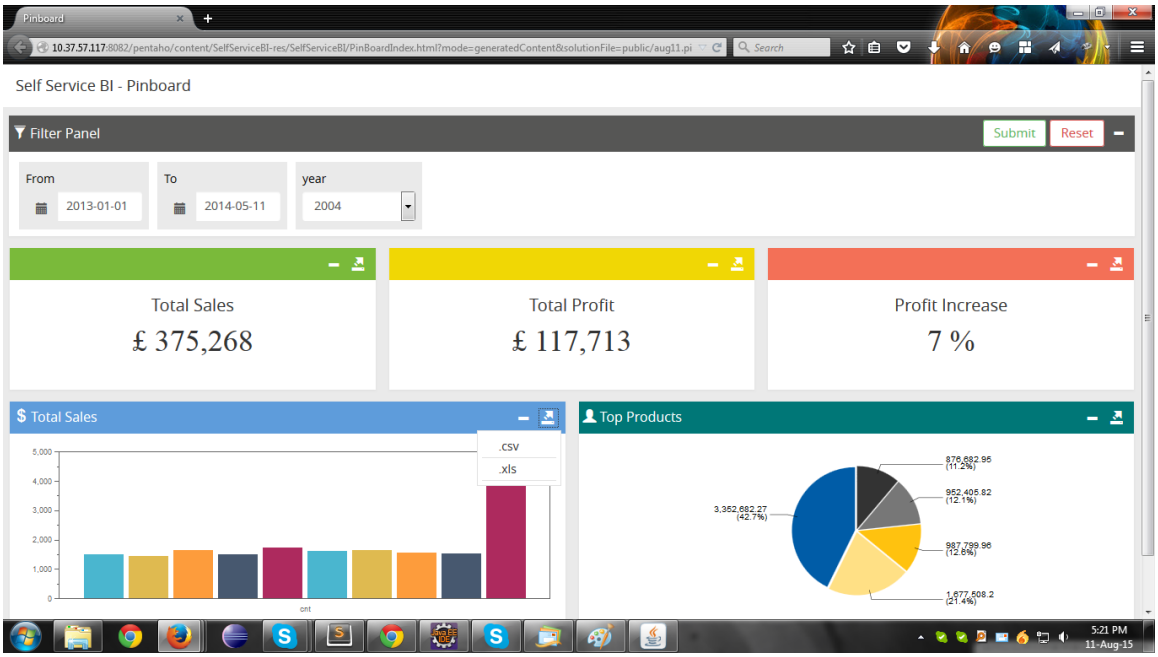
4.8 Preview Option

- When you select Preview option after saving the Pinboard, it will open Pinboard in Preview mode.
- In preview mode, the Settings panel, to modify Pin or filter, won't be visible to you.
- You can only change value in filters and submit them to generate chart/table/label accordingly.

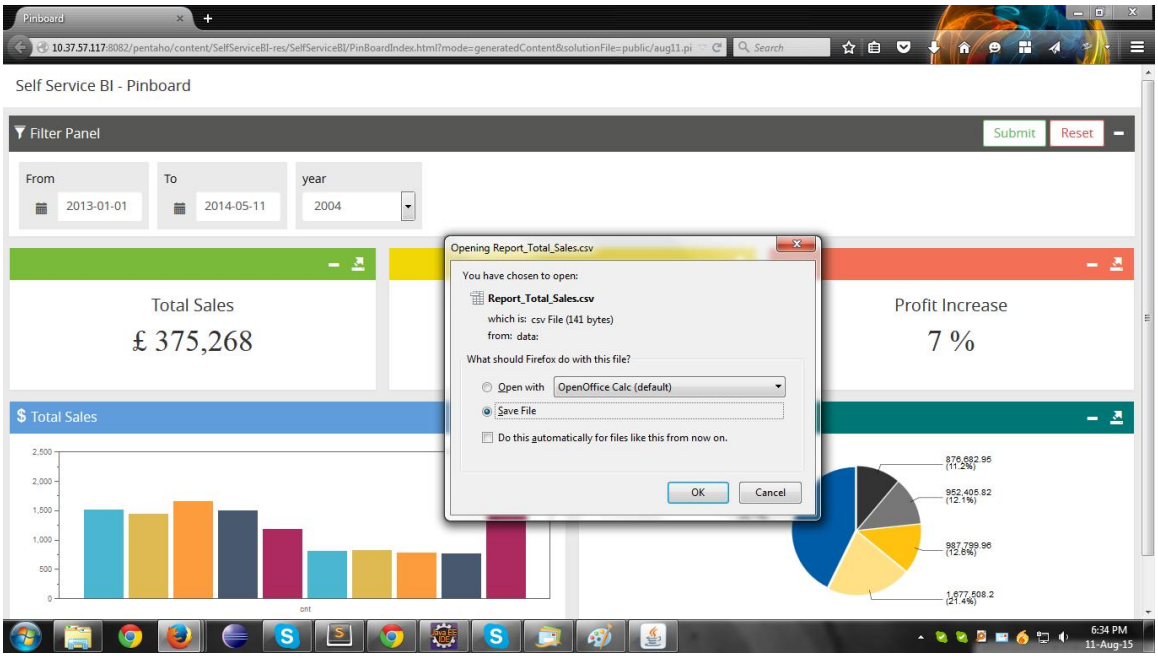


4.9 Export Pin Option

- In preview mode, you can export data for that particular Pin by clicking on 'Export' icon.



- There are two formats in which you can export the data: CSV and XLS.



5. Have a Pleasant Experience Using our Self Service BI Plug-in

Thank you for downloading our Self Service BI Plug-in and its User Guide. We hope our detailed and self explanatory User Guide provides you with the essential knowledge of this plug-in, to give you the best of results. For any queries pl. contact bi@spec-india.com.

In order to avail our BI and Big Data services, do visit http://www.spec-india.com/services/bi-bigdata-database-services.html or write to lead@spec-india.com and request for a Free POC to test drive our services.