



Hands-on Lab: Analyzing DB2 Data With Cognos Analytics

Objective for Exercise:

- To create a dashboard with Billing data on DB2 using Cognos Analytics and analyze the regionwise spend.

Prerequisites

Prior to starting this lab please ensure you have completed the previous labs to:

- [Create an IBM Cloud Account](#)
- [Provision an instance of DB2 on Cloud](#)
- [Provision an instance of Cognos Analytics](#)

Task 1- Load the data in DB2

If you have service credentials created, skip steps 1 and 2.

1. Click on **Service Credentials** and create new credentials.

A screenshot of the IBM Cloud Service Credentials page. At the top, it shows the resource name "Db2-4y", a green "Active" status, and a "Details" button. A blue box highlights the "Actions..." dropdown menu. Below this, there are four categories: "Manage", "Getting started", "Service credentials" (which is highlighted with a blue box), and "Connections". The "Service credentials" section contains a description: "You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud service." It includes a "Learn more" link and a search bar with the placeholder "Search credentials...". At the bottom right, there is a blue "New credential" button with a plus sign and a refresh icon.

2. Give the credential a name and **Manager** privilege and add it.

Create credential

Name:

Role:

[Advanced options](#)

[Cancel](#) [Add](#)

3. Click on the down arrow next to the credential. You will see the credential details. Make a note of the username, password and jdbc connection url. These will be used in later part of the lab to connect from Cognos.

Service credentials	
You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud service. Learn more	
Key name	Date created
<input checked="" type="checkbox"/> Service credentials-1	2021-09-20 12:30 PM
<pre> "db2": { "authentication": { "method": "direct", "password": "*****", "username": "*****" }, "certificate": { "certificate_base64": "LS0tLS1CRUdJTiBDRVJUSUZJQ0FURS0tLS0tCk1JSURFakNDQWZxZ0F3SUJBZ01KQVA1S0R3ZTNCTkxiTUEwR0NTcUdTSWIzRFFFQkN3VUFN0iR4SFRRBYUJnTlYK0kFNTJIIwhFNUIJ0JFYkc5MVnD0kV7WFJowW1ge1nYTxDtaGN0TwnBd01nSTVNRF5TVRBeVdoY05NekF3Tw0JMs0NRFF5TVRBeVdn0WVNIInd3R2d7RFZRUReQk5UkwswZLeyeH2k1FnukGf1FBT0NBUThTULjQknNs0NBUUW8aXuvB1tpWw9xdkdnU8x5GpeA1psK25iYje4UKr4ZGwKtZRL3FoUGMxMTREY1FUK0p1RxhdG13aG1jTGxaQnF2QwFMb1hrbmhqSVFOMG01L0x5YzdBT291VNmSGROQwpDVGcrUsxbjBrdDMzTHM3d1dTakxqV96N3M31ZUSUyYmx3cnIRIu1vM1JWTKv6SkNHw5LSxdZMwZVSUtxCldNMlR0SD15enFSGN0Z2p1ULFmRkVTRm1YaHj1ODhS0md0amIva0xtVGpCaTfBeEvadlnobWZZQVRmnEN0Y3EKY210cHNqdDBPtN0YnhJMVRyUwxEemN1N1hNSFBxW91SuprdnVzMUZvaTEySmRNH1Mrk3labFZPMUZmZkU3bwpKMjhUdGj0Z3JG0tIU0NMSkJyTTFSZ3FPZG90Vm500C9E0WZhamNNN01Wd24a01s0TNKR1JREFRQUJvMu13c1VUQWRcZ05WSFE0RUZhUV1Q3JZanF3Qzc1VupxVmZEMDH1ZwdqeDZ1UmN3ShdZRFZSMGpCQnd3Rm9BVWVDc1kkAnFJQzc1VUpxVmZEMD1h2ZwdqeDz1UmN3RhZRFZSMFRB0UgVQkFVd0F3RU1vekFOQmdircWhrauc5dzBCQVFzRgpBQJ9DQVFFOUkyRTBU0U13M1N3PjJ2MXBqaHV4M01kWWV25GFVSKRMb0tPd0hSrnfSOHgxZ2dRcGVFcBnMk5SCkx3R08yeK85SWZUMmhLaWd1d2orWnJ5SGxxch1xQ0pLOHJEU28xZUVPeKIyWmE2S1YzQTVscttMwdjv3VHYzMKK1UzTfTzDd1UjDZFFuvju0tVU4aErVn19sVHRMRVb2Mnc3V1NPS1FDK013ejgtTFJMdjVHSW5BN1JySwNhKwozM0wxNnB4ZEttd1pLYThWcn8nMXJ3QzRnY3d1YUhYMUNEW42K0JibzhvW65YWh6UG91c1dYS1BoaGdXZ2J5CkNdcUdIK0NWNQ1eFg3b07Qn3VNSUNqRVZndnNLWnRqeTQ5VW5inVNZzbHQ0b1J3d1Tf1bgdzRDNjelekltbj1LRREQKNHB1REFvYTZyMktZze4xVxxn3F3VG1Tbd1TU05RPT0KLS0tLS1FTkQg00VSVE1GSUNBVETLS0tLQo=", "name": "1ccb1b6-3a1a-4d49-9262-3102a8f7a7c8" }, "composed": ["db2://lf1n96733:dl0xxWY1FWkzIe0Y@fb88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu01qde00.databases.appdomain.cloud:32731/blu"], "database": "bludb", "host_res": ["fb88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu01qde00.databases.appdomain.cloud:32670"], "hosts": [{ "hostname": "fb88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu01qde00.databases.appdomain.cloud", "port": 32731 }], "jdbc_url": ["jdbc:db2://fb88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu01qde00.databases.appdomain.cloud:32731/bludb:user=<userid>;password=<your_password>;sslConnection=true;"] } </pre>	

*Note: You have to replace the placeholder for username and password in the jdbc url string with actual username and password. Remove the angle brackets.

4. Go to the [data link](#). Right-click and choose **Save AS....** Save the file in your local system as **cloud-billing-dataset.csv**.

5. Once the instance is created from the db2 instance page, choose **Manage** from the left menu and click on **Go to UI**.

Resource list /

Db2-4y Active Add tags

Details Actions...

Manage Getting started Service credentials Connections

Getting started

Where can I find my credentials?
Get your username and password by clicking the "Service Credentials" link to the left and selecting "New Credentials".

Go to UI **Getting started docs**

6. Click on the **Data** icon on the left menu, choose **Load Data** and browse and select the file, **cloud-billing-dataset.csv** which you saved in your local system.

Load Data Load History Tables Views Indexes Aliases MQTs Sequences

Data

Source Target Define Finalize

You are loading the file

My Computer
A single delimited text file (CSV) without header row.

S3 Amazon S3

Cloud Object Storage

File selection

Drag a file here or [browse files](#)

Next

7. Choose the **Schema**, click on **New Table +** and create a new table with the name **BillingData** and click on **Create**.

Source Target Define Finalize

You are loading the file **cloud-billing-dataset.csv**

Select a load target

Refresh ↺

Schema

Find schemas

XQR63068

Table

New table +

Find tables in XQR63068

No entries found.

Create a new table

BillingData

Create

Back **Next**

8. You will see the table is added to the schema. Click on **Next** to load the data from the file.

Source Target Define Finalize

You are loading the file **cloud-billing-dataset.csv** into **XQR63068.BILLINGDATA**

Select a load target

Refresh ↺

Schema

Find schemas

XQR63068

Table

New table +

Find tables in XQR63068

BILLINGDATA

Back **Next**

9. The table is loaded. You will see that each column has data type and column width auto generated based on the content. Edit column attributes by clicking on the pencil icon next to the respective attributes to change the width of **country** column to varchar of 30 and **month** column to varchar of 7.

Source Target Define Finalize
You are loading the file **cloud-billing-dataset.csv** into **XQR63068.BILLINGDATA**

Code page (character encoding): 1208 (UTF-8) Separator: , Header in first row: Time & date format:

	CUSTOMERID	CATEGORY	COUNTRY	INDUSTRY	MONTH	BILLEDAMOUNT
	SMALLINT	VARCHAR(10)	VARCHAR(22)	VARCHAR(24)	VARCHAR(6)	SMLLINT
1	1	Individual	Indonesia	Engineering	2009-1	5060
2	614	Individual	United States	Product Management	2009-1	9638
3	615	Individual	China	Services	2009-1	11573
4	616	Individual	Russia	Accounting	2009-1	18697
5	617	Individual	Chile	Business Development	2009-1	944
6	618	Individual	Nicaragua	Human Resources	2009-1	3539
7	41	Company	Brazil	Marketing	2009-1	6591
8	619	Individual	Russia	Business Development	2009-1	16061
9	620	Individual	China	Business Development	2009-1	1250
10	956	Individual	Peru	Research and Development	2009-1	15105

Back Next

×

month
VARCHAR(6)
2009-1
2009-1
2009-1
2009-1
2009-1

Edit column data type

Data type

VARCHAR

Maximum number of characters
(1 - 32592)

7

Close OK

country
VARCHAR(22)

Indonesia

United States

China

Russia

Chile

Edit column data type

Data type

VARCHAR ▾

Maximum number of characters
(1 - 32592)

30

Close

OK

10. Once the column attributes are changed, check to see if it reflects and then click on **Next**

Source Target Define Finalize

You are loading the file **cloud-billing-dataset.csv** into **XQR63068.BILLING DATA**

Code page (character encoding):	1208 (UTF-8)	Separator:	Header in first row:	Time & date format:	
CUSTOMERID SMALLINT	CATEGORY VARCHAR(10)	COUNTRY VARCHAR(30)	INDUSTRY VARCHAR(24)	MONTH VARCHAR(7)	BILLEDAMOUNT SMALLINT
1 1	Individual	Indonesia	Engineering	2009-1	5060
2 614	Individual	United States	Product Management	2009-1	9638
3 615	Individual	China	Services	2009-1	11573
4 616	Individual	Russia	Accounting	2009-1	18697
5 617	Individual	Chile	Business Development	2009-1	944
6 618	Individual	Nicaragua	Human Resources	2009-1	3539
7 41	Company	Brazil	Marketing	2009-1	6591
8 619	Individual	Russia	Business Development	2009-1	16061
9 620	Individual	China	Business Development	2009-1	1250
10 956	Individual	Peru	Research and Development	2009-1	15105

Back Next

11. Review the settings and click on **Begin Load** to load the data.

The screenshot shows the 'Review settings' step of the data load process. On the left, a red box highlights the 'Summary' section, which contains various file format and delimiter settings. On the right, the 'Option' section is shown with a maximum warning limit of 1000. At the bottom right are 'Back' and 'Begin Load' buttons, with 'Begin Load' being highlighted by a red box.

12. If the data is successfully loaded, you get a message on the screen indicating the number of rows that have been loaded.

The screenshot shows the 'Load Results' screen. It displays a large blue circular progress bar. Below it, the text '132,000 132,000 0' indicates rows read, loaded, and rejected respectively. A message states 'The data load job succeeded. You can now work with your data.' To the right, error and warning counts are shown as 'Errors 0' and 'Warnings 0'. A download icon is also present. At the top, there's a status bar with a 'COMPLETE' icon, source ('My computer cloud-billing-data.csv'), target ('XQR63068.BILLING_DATA'), and buttons for 'View Table' and 'Load More Data'.

Task 2 - Connect Cognos to DB2

1. Go to myibm.ibm.com, login with your IBM Cloud credentials and launch Cognos Analytics.

The screenshot shows the 'Products' section of the IBM My IBM dashboard. It lists two offerings: 'IBM Cloud' (Active) and 'IBM Cognos Analytics on Cloud - Trial' (Active). Each offering has 'Launch' and 'Manage' buttons.

2. Choose the hamburger menu on the upper left and select **Manage**.

The screenshot shows the IBM Cognos Analytics interface. At the top, there's a dark header bar with the title "IBM Cognos Analytics". Below it is a navigation bar with several items: "Home" (with a house icon), "+ New" (with a plus sign icon), "Upload files" (with an upward arrow icon), "Content" (with a folder icon), "Recent" (with a clock icon), and "Manage" (with a person icon). The "Manage" button is highlighted with a red rectangular box.

3. Choose the **Data Server Connection**.

The screenshot shows the "Manage" screen in IBM Cognos Analytics. It lists several management options: "People" (with a person icon), "Data server connections" (with a clipboard icon), "Customization" (with a gear icon), "Collaboration" (with a person icon), and "Secure Gateways" (with a lock icon). The "Data server connections" option is visible and appears to be the target of the next step in the instructions.

4. Click on + to add a data server and choose IBM DB2 from the list shown.

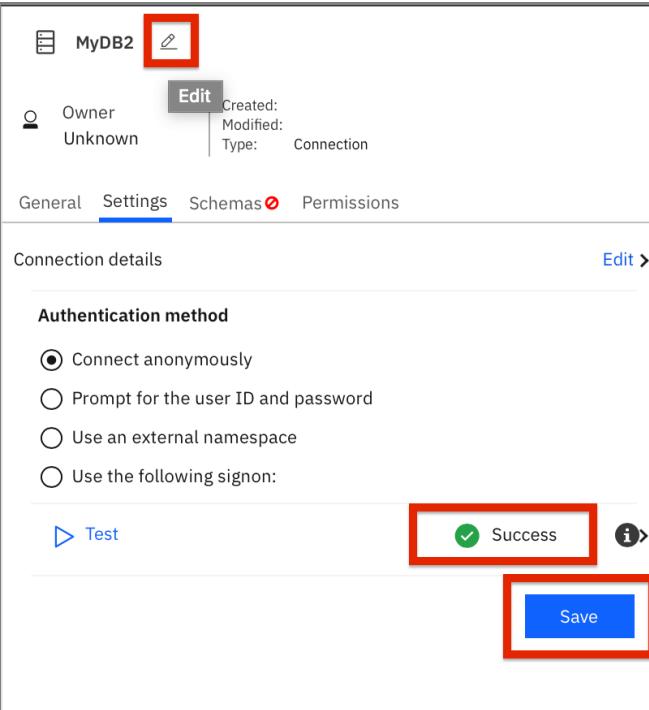
The screenshot shows the 'Data server connections' page. On the left, there's a table with columns 'Name' and 'Modified'. A single row is visible: 'Weather Company' was modified on '25/05/2021 8:57 PM'. To the right is a 'Select a type' dropdown menu containing a list of database types, each with an icon and a blue link:

- Amazon Athena
- Amazon Redshift
- Cloudera Impala
- Hive
- IBM Big SQL
- IBM Db2**
- IBM Db2 for i
- IBM Db2 Warehouse
- IBM Informix Dynamic Server
- IBM Netezza
- IBM Planning Analytics

5. Choose to **Connect Anonymously** and enter the jdbc url with your db2 user name and password that you copied earlier in Task 1. Click on **Test** to test the connection.

The screenshot shows the 'New data server connection' dialog for IBM Cognos Analytics. On the left, under 'General' settings, the 'Owner' is listed as 'Unknown' and the 'Type' is 'Connection'. The 'JDBC URL' field contains a long string of text, which is highlighted with a red rectangle. On the right, the 'Edit IBM Db2 connection' panel is open, showing the JDBC URL and other configuration options like 'Driver class name' set to 'com.ibm.db2.jcc.DB2Driver'. Below the JDBC URL, a 'Test' button is highlighted with a red rectangle. At the bottom right of the dialog, there are 'Save' and 'Close' buttons.

6. If the test succeeded and Cognos managed to connect to the Db2 instance, you will see **Success** with a green tick next to it. Click on the pencil icon, give the connection a name, **MyDB2**, and save it.



The screenshot shows the 'Edit IBM Db2 connection' interface. On the left, under 'General' settings, there's a 'Connection details' section with an 'Edit' link. Below it is an 'Authentication method' section with four radio button options: 'Connect anonymously' (selected), 'Prompt for the user ID and password', 'Use an external namespace', and 'Use the following signon:'. A 'Test' button is followed by a 'Success' button with a green checkmark icon. A red box highlights the 'Save' button at the bottom right of the main form.

Edit IBM Db2 connection

JDBC URL:
`jdbc:db2://fdb88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgiu0lqde00.databases.appdomain.cloud:32731/bludb:user=lfn96733;password=_____';sslConnection=`

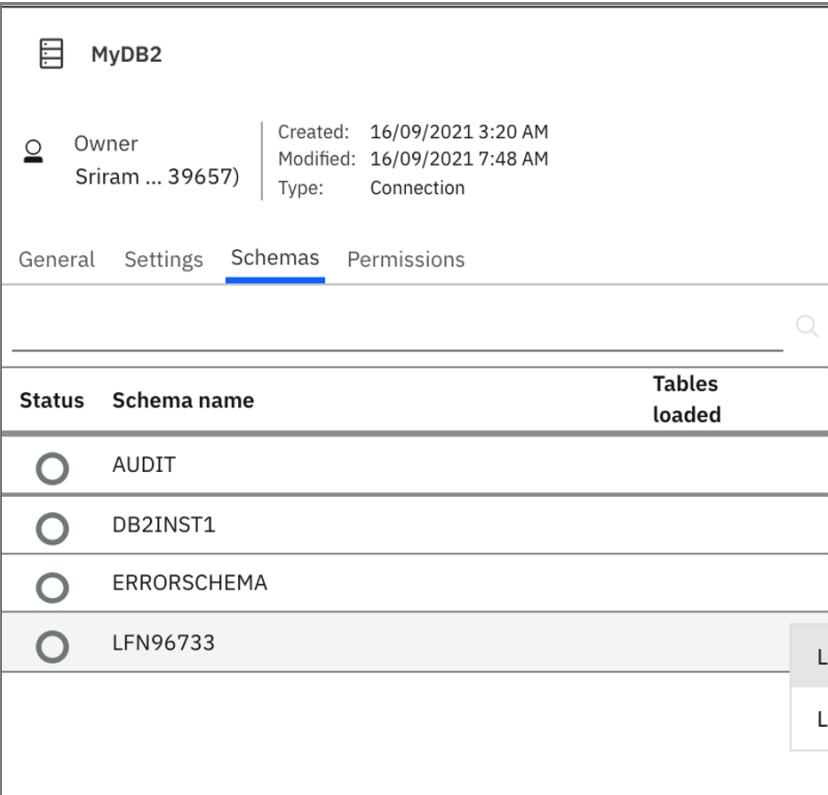
Driver class name:
`com.ibm.db2.jcc.DB2Driver`

Connection properties: ⓘ

Cloud certificate details ⓘ

Secure Gateway destination ⓘ

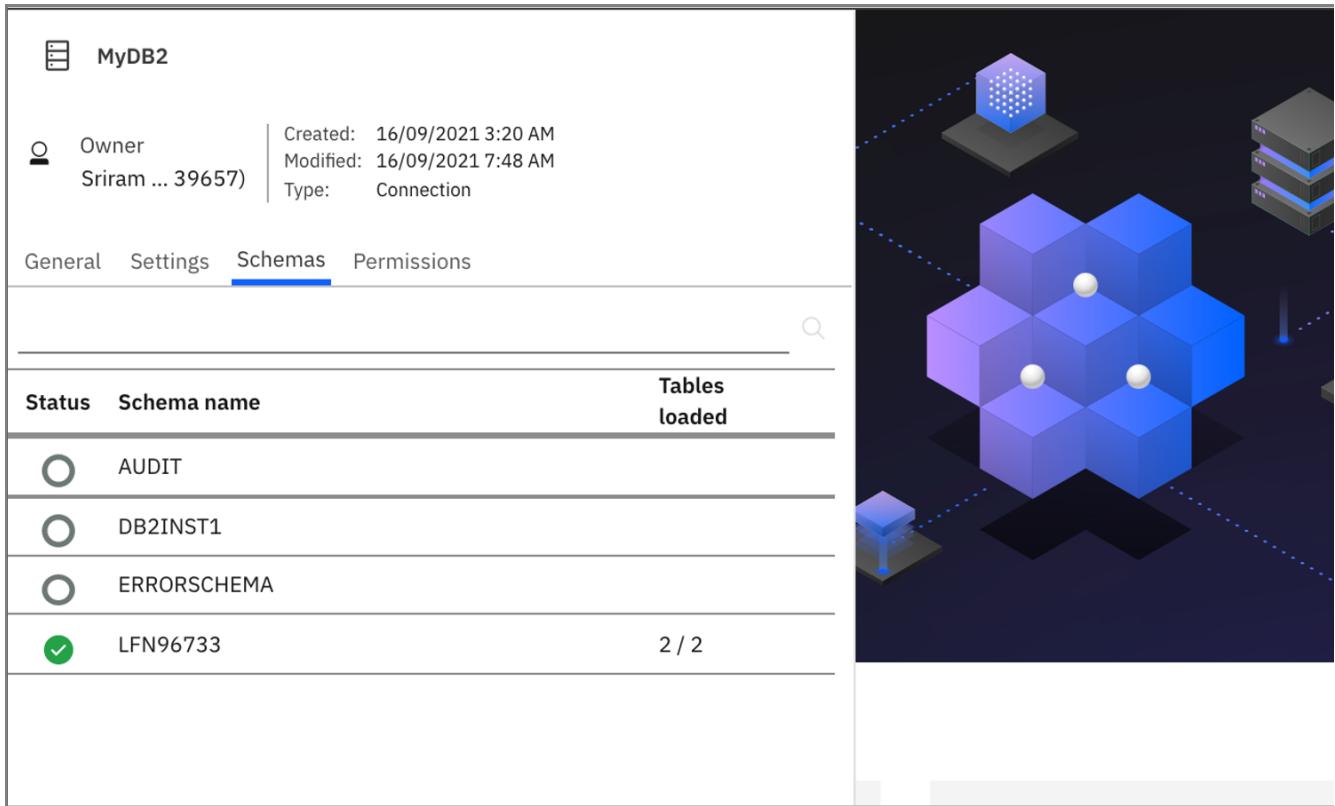
7. Go to the **Schema** and click on the '...' next to the schema name. Choose **Load Metadata** from the menu that appears.



The screenshot shows the 'Schemas' tab of the 'MyDB2' connection. It lists four schemas: AUDIT, DB2INST1, ERRORSHEMA, and LFN96733. The LFN96733 row has a context menu open with options 'Load metadata' and 'Load options'. To the right of the table is a decorative 3D cube graphic.

Status	Schema name	Tables loaded
○	AUDIT	
○	DB2INST1	
○	ERRORSCHEMA	
○	LFN96733	

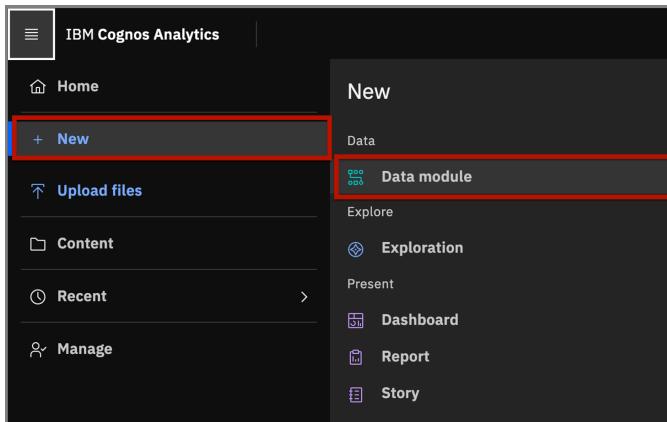
8. Once the metadata is loaded you will see a green check mark next to the schema name and it will also indicate how many tables are available in the schema for analysis.



The screenshot shows the IBM Cloud Data Services interface. On the left, a sidebar displays a tree view with 'MyDB2' selected. Below it, connection details are shown: Owner (Sriram ... 39657), Created: 16/09/2021 3:20 AM, Modified: 16/09/2021 7:48 AM, Type: Connection. A navigation bar at the top includes General, Settings, Schemas (which is underlined in blue), and Permissions. The main content area lists schemas: AUDIT, DB2INST1, ERRORSCHHEMA, and LFN96733. A status bar indicates 'Tables loaded'. On the right, there is a decorative graphic of 3D cubes.

Task 3 - Create Data Module in Cognos

1. From the menu, choose **New** and then from the submenu choose **Data Module**.



The screenshot shows the IBM Cognos Analytics interface. The left sidebar has sections for Home, Content, Recent, and Manage. The 'New' option is highlighted with a red box. A dropdown menu titled 'New' is open, showing categories: Data (with 'Data module' highlighted with a red box) and Explore. Other options include Present, Dashboard, Report, and Story.

2. Click the **Data servers** icon and choose the **MyDB2** connection that we created in the previous task.

Select sources

The screenshot shows a sidebar with icons for search, folder, user, and database. The main area is titled 'Data servers' with a search bar. It lists two items: 'MyDB2' (9/16/2021 3:20 AM) and 'Weather Company' (5/25/2021 8:57 PM).

MyDB2
9/16/2021 3:20 AM

Weather Company
5/25/2021 8:57 PM

3. Choose the schema from where you want to load data.

The screenshot shows a sidebar with icons for search, folder, user, and database. The main area is titled 'Select sources' and shows a breadcrumb path '← Data servers / MyDB2'. It has a search bar and lists one item: 'LFN96733' (9/16/2021 3:52 AM). The 'LFN96733' entry is highlighted with a blue border.

← Data servers / MyDB2

LFN96733
9/16/2021 3:52 AM

Cancel OK

4. Choose the **Select Tables** option and click **OK**.

Add tables

Specify how to add tables to your data module.



Select tables

Select the tables that you want to include in your data module, and create the data module manually.



Discover related tables

Engage the system to recommend related tables for your data module and create the data module for you.

Cancel **Next**

5. It will list the tables available in the schema. For this lab, we will use the **Billing data** table. Choose the table and click on **OK**. If you want to view the data you may click on **Refresh**.

Select tables

Customerid	Category	Country	Industry	Month	Billedamount
LFN96733	Billing Data				
	Customer Loyalty				

Available sources

Search

LFN96733

- ▶ Billing Data
- ▶ Customer Loyalty

Data will appear here

Refresh

Previous **Cancel** **OK**

6. The **Data module** loaded with the data appears. Click on **Save**, once you see that the data is correctly loaded.

The screenshot shows the IBM Cognos Data module interface. On the left, there's a sidebar with a search bar and a tree view of data modules. Under 'Billing Data', several fields are listed: Customerid, Category, Country, Industry, Month, and Billedamount. On the right, a grid displays data for these fields. The columns are Customerid, Category, Country, Industry, Month, and Billedamount. The rows show various entries such as 1 (Individual, Indonesia, Engineering, 2009-1, 5060), 614 (Individual, United States, Product Management, 2009-1, 9638), etc.

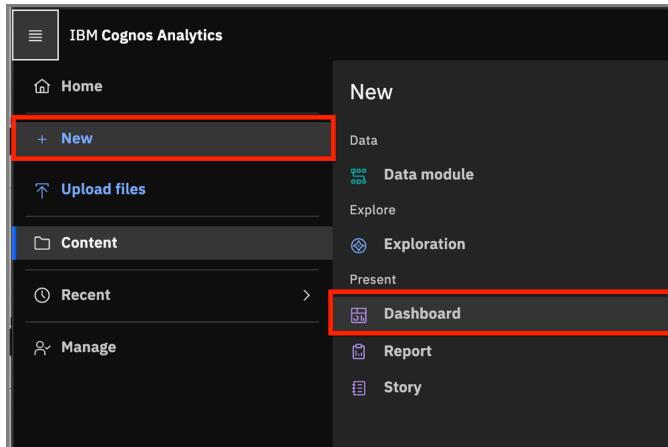
Customerid	Category	Country	Industry	Month	Billedamount
1	Individual	Indonesia	Engineering	2009-1	5060
614	Individual	United States	Product Management	2009-1	9638
615	Individual	China	Services	2009-1	11573
616	Individual	Russia	Accounting	2009-1	18697
617	Individual	Chile	Business Development	2009-1	944
618	Individual	Nicaragua	Human Resources	2009-1	3539
41	Company	Brazil	Marketing	2009-1	6591
619	Individual	Russia	Business Development	2009-1	16061
620	Individual	China	Business Development	2009-1	1250
956	Individual	Peru	Research and Development	2009-1	15105
621	Individual	Angola	Services	2009-1	6644

7. You can now save it with an appropriate name under **My Content**.

The screenshot shows the 'Save as' dialog box. It has a 'Name' field containing 'BillingDataModule' (highlighted with a red box). Below it, 'Selected destination: My content' is selected (also highlighted with a red box). The 'My content' tab is active. At the bottom, there are 'Cancel' and 'Save' buttons, with 'Save' being highlighted with a red box.

Task 4 - Create Dashboard

1. From the IBM Cognos menu, choose, **New** and click on **Dashboard**.



2. Choose the **Tabbed** as shown in the following image.

A screenshot of the 'Create a dashboard' screen. At the top, it says 'Create a dashboard' and 'Select a template for your dashboard'. There are two tabs: 'Tabbed' (which is selected and highlighted with a blue underline) and 'Infographic'. Below the tabs is a grid of 20 different dashboard template preview cards. The 'Tabbed' tab section contains 5 cards, each showing a single large rectangular panel. The 'Infographic' tab section contains 15 cards, each showing a grid of smaller panels of varying sizes. The card for the 'Tabbed' tab has a small black dot in its bottom right corner, indicating it is the selected template.

3. Click on **Select Source** to choose the source for the template.

The screenshot shows the IBM Cognos Analytics interface. At the top, there's a navigation bar with the title "IBM Cognos Analytics" and a "New dashboard *" tab. A notification badge with the number "29" is visible in the top right corner. Below the navigation bar, there's a toolbar with various icons: a speech bubble, a green "Edit" button, a dropdown menu, a search icon, and others. On the left side, there's a sidebar with icons for Data, Reports, Dashboards, and Workbooks. The main area is titled "Data" and contains a large cube icon with the text "Select a source". Below this, a message says "Click select a source to add data to use to build a dashboard." At the bottom of this section is a blue button labeled "Select a source" with a plus sign. To the right of the main area, there's a section titled "All tabs" with a "Drag and drop data here..." placeholder. A tab labeled "Tab 1" is currently selected. The URL in the browser address bar is https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DBO... .

4. From the list, choose the data module we just created and click on **Add**.

Select a source

My content Team content

Name	Type	Last Modified
BillingDataModule	Data module	20/09/2021 4:18 AM

Cancel Add

Task 5 - Visualization

You will now see the table listed on the left panel with all the attributes.

1. Drag and drop the **Billed Amount** on the template.

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Selected sources' pane shows 'BillingDataModule' with 'Billedamount' selected. The main workspace contains a tab labeled 'Tab 1' with a blue box labeled 'Billedamount' being moved. A tooltip indicates 'Drop here to maximize'.

2. The total billed amount will now appear on the Dashboard. The size and position can be adjusted as per requirement and the text display can be edited and formatted by double-clicking on it.

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Selected sources / BillingDataModule' pane is open, displaying navigation paths: Billing Data (Customerid, Category, Country, Industry, Month), Billedamount, and Billedamount. The main area shows 'Tab 1' with a large text visualization '1.32B'. Above the visualization, the text 'Billedamount' is displayed, which is highlighted with a red arrow and a tooltip: 'Double click on this to edit or format the text'. The status bar at the bottom right indicates 'Data on this dashboard is provided by IBM Db2.'

3. Drag and drop **Billed Amount** and **Industry** onto the dashboard as shown in the following image. With this, we can visualize the build amount per industry.

The screenshot shows the IBM Cognos Analytics interface. The 'Selected sources / BillingDataModule' pane has 'Industry' selected, indicated by a blue highlight. Below the visualization, a small box contains the text 'Billedamount' with 'Industry' underneath, accompanied by a tooltip: 'Drop here to maximize'. The status bar at the bottom right indicates 'Data on this dashboard is provided by IBM Db2.'

4. Drag and drop **Billed Amount**, **Country** and **Industry** onto the dashboard as shown in the following image. This will generate a heat map of spending by country and by industry.

IBM Cognos Analytics New dashboard * 26 Search Cognos Analytics Filters Fields Properties

Selected sources /

BillingDataModule

Navigation paths

- Billing Data
 - Customerid
 - abc Category
 - Country
 - abc Industry
 - Month
 - Billedamount**

Tab 1 +

Billedamount

1.32B

Billedamount

Billedamount by Industry

Industry	Billedamount (Sum)
Accounting	~90,000,000
Business Development	~110,000,000
Engineering	~120,000,000
Human Resources	~110,000,000
Legal	~120,000,000
Marketing	~120,000,000
Product Management	~110,000,000
Research and Development	~110,000,000
Sales	~110,000,000
Services	~110,000,000
Support	~95,000,000
Training	~120,000,000

Country

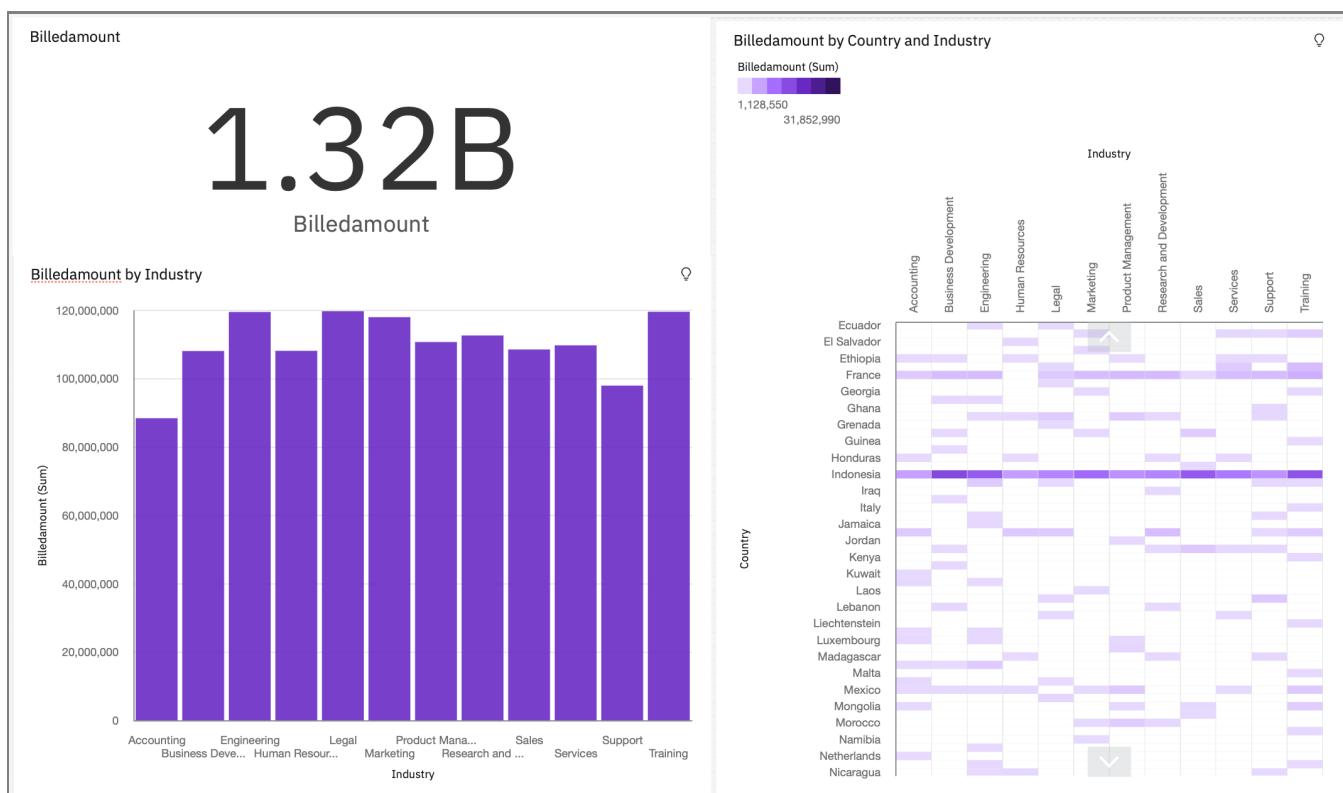
Industry

Billedamount

Drop here to maximize

Data on this dashboard is provided by IBM Db2.

5. The finished dashboard will appear as in the following image.



6. Optionally, try to change the properties and settings to see how the dashboard changes. You can also observe the billed amount changing as you click on a region on the heat map or the bar graph.

Author(s)

[Lavanya T S](#)

Changelog

Date	Version	Changed by	Change Description
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Date	Version	Changed by	Change Description
2020-09-20	1.0	Lavanya	Created the lab
2021-10-7	1.1	Steve Hord	Copy Edit lab

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