

Creating a Db2 Warehouse on Cloud instance in Bluemix



Selecting the Db2 Warehouse on Cloud icon in the DSX Lab #1 notebook creates a new tab with the following screen. Note: if your Bluemix credentials are already loaded you will be brought directly to the Db2 Warehouse on Cloud create screen.

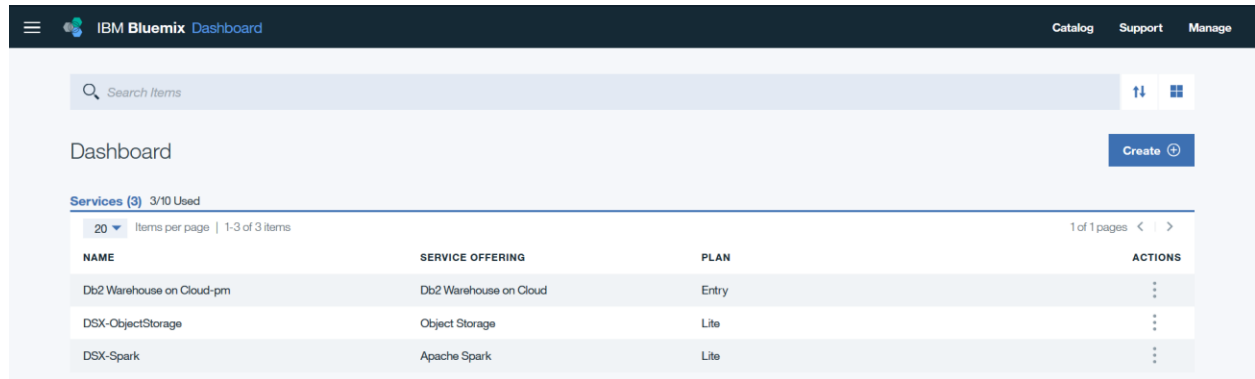
The screenshot shows the IBM Bluemix Catalog page for 'Db2 Warehouse on Cloud'. The page includes a header with 'IBM Bluemix Catalog', 'Docs', 'Catalog', 'Log In', and 'Sign Up' buttons. Below the header, there's a 'View all' link and the title 'Db2 Warehouse on Cloud'. The main content area is divided into two columns. The left column contains a description of the service, its features, and a 'View Docs' link. The right column contains a 'Features' section with four bullet points: 'Fully managed, safe, and secure', 'Highly Available (HA) with MPP', 'Compatible with Netezza and Oracle', and 'Built for the hybrid cloud'. Below the features, there's an 'Images' section with a description and a series of screenshots showing the user interface. At the bottom, there's a 'Need Help? Contact Bluemix Sales' link and a 'Log in' button next to a 'Sign up to Create' button.

Select **Log In**

Log In should log you into Bluemix using your DSX credentials and bring you to the Db2 Warehouse on Cloud create screen

The screenshot shows the IBM Bluemix Catalog page for 'Db2 Warehouse on Cloud', specifically the create screen. The page includes a header with 'IBM Bluemix Catalog', 'Catalog', 'Support', and 'Manage' buttons. Below the header, there's a 'View all' link and the title 'Db2 Warehouse on Cloud'. The main content area is divided into two columns. The left column contains a description of the service, its features, and a 'View Docs' link. The right column contains a 'Service name' field with the value 'Db2 Warehouse on Cloud-5j'. Below this, there are three dropdown menus: 'Select region to deploy in:' with the value 'US South', 'Choose an organization:' with the value 'jpatter@us.ibm.com', and 'Choose a space:' with the value 'DEMO'. Below these, there's a 'Features' section with four bullet points: 'Fully managed, safe, and secure', 'Highly Available (HA) with MPP', 'Compatible with Netezza and Oracle', and 'Built for the hybrid cloud'. At the bottom, there's a 'Need Help? Contact Bluemix Sales' link, an 'Estimate Monthly Cost Cost Calculator' link, and a 'Create' button.

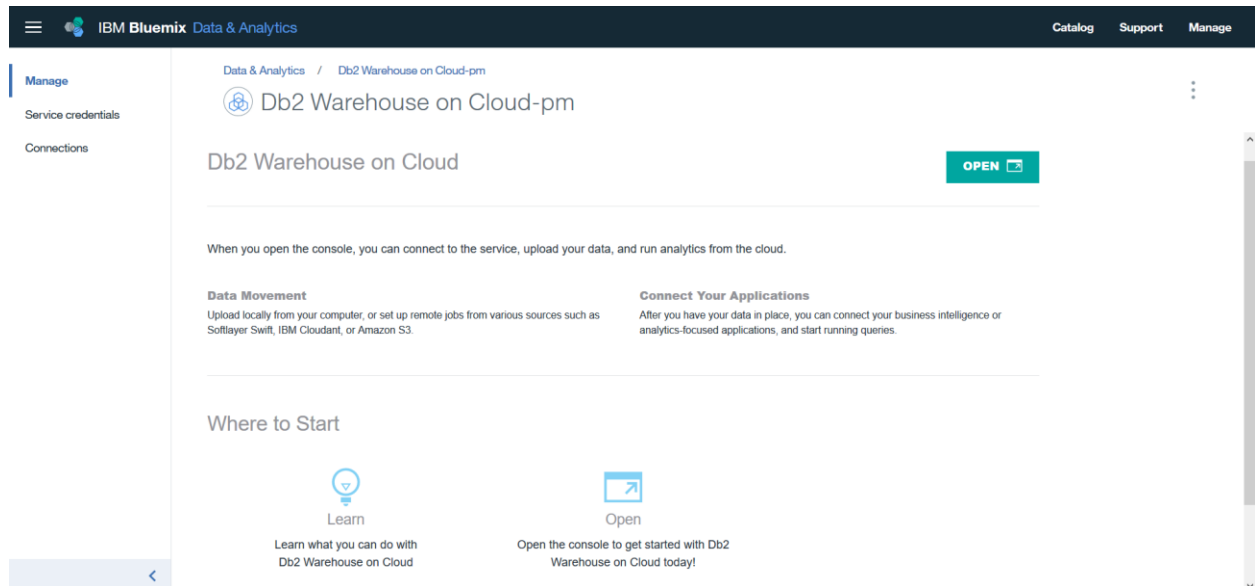
Provide a name for the Db2 Warehouse on Cloud service or take the default. **Create** the Db2 Warehouse on Cloud instance – you will be directed to the Dashboard and see something similar to (or you may go directly to the Db2 Warehouse on Cloud service screen as shown on the next page)



The screenshot shows the IBM Bluemix Dashboard. At the top, there's a navigation bar with the IBM Bluemix logo and 'Dashboard' text. On the right, there are links for 'Catalog', 'Support', and 'Manage'. Below the navigation bar is a search bar labeled 'Search Items'. The main content area is titled 'Dashboard' and includes a 'Create' button. A section titled 'Services (3) 3/10 Used' displays a table of services. The table has columns for 'NAME', 'SERVICE OFFERING', 'PLAN', and 'ACTIONS'. The services listed are 'Db2 Warehouse on Cloud-pm', 'DSX-ObjectStorage', and 'DSX-Spark'.

NAME	SERVICE OFFERING	PLAN	ACTIONS
Db2 Warehouse on Cloud-pm	Db2 Warehouse on Cloud	Entry	⋮
DSX-ObjectStorage	Object Storage	Lite	⋮
DSX-Spark	Apache Spark	Lite	⋮

Select the **Db2 Warehouse on Cloud** service – this brings you to the following



The screenshot shows the 'Db2 Warehouse on Cloud' console page. The navigation bar at the top includes 'IBM Bluemix Data & Analytics' and links for 'Catalog', 'Support', and 'Manage'. On the left, there's a sidebar with 'Manage', 'Service credentials', and 'Connections'. The main content area is titled 'Db2 Warehouse on Cloud-pm' and features an 'OPEN' button. Below this, there's a section titled 'Where to Start' with two options: 'Learn' (Learn what you can do with Db2 Warehouse on Cloud) and 'Open' (Open the console to get started with Db2 Warehouse on Cloud today!).

Select **OPEN** to open the Db2 Warehouse on Cloud console.

IBM Db2 Warehouse on Cloud
Load
Explore
Run SQL
Analyze
0%
dsxspare3@gmail.com
Upgrade

Quick stats

Connect to Db2 Warehouse on Cloud

Select a client

Select a client for details about getting your applications connected to Db2 Warehouse on Cloud.

Load activity

STATUS	SOURCE	FILENAME	TARGET	REQUESTED BY	ROWS LOADED	ROWS REJECTED
You have no recent load jobs						

Load data

Close the Quick Tour and select **Load Data**

IBM Db2 Warehouse on Cloud
Load
Explore
Run SQL
Analyze
0%
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Upgrade

Source
Target
Define
Finalize
Next

Select a data source

My computer
A single delimited text file (CSV).
Amazon S3
SoftLayer Swift
More ways to load
Lift

File selection

☐ High-speed loads powered by Aspera

Browse files and select the **female_human_trafficking.csv** file which you should have downloaded previously.

IBM Db2 Warehouse on Cloud | Load | Explore | Run SQL | Analyze | 0% | dsxspare3@gmail.com | Upgrade

Source | Target | Define | Finalize | Next

You are loading the file **Female-human-trafficking.csv**

My computer
A single delimited text file (CSV).

S3 Amazon S3
SoftLayer Swift

More ways to load
Lift

File selection

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

High-speed loads powered by Aspera

Selected file

Female-human-trafficking.csv

Select the schema. Select the one that has DASH in it.

IBM Db2 Warehouse on Cloud | Load | Explore | Run SQL | Analyze | 0% | dsxspare3@gmail.com | Upgrade

Source | Target | Define | Finalize | Back | Next

You are loading the file **Female-human-trafficking.csv**

Select a load target

Schema

Find a schema

DASH14899 ✓

ERRORSCHEMA

GOSALES Sample

GOSALESDW Sample

GOSALESHR Sample

GOSALESMR Sample

GOSALESRT Sample

SAMPLES Sample

ST_INFORMTN_SCHEMA

Table

Find a table in DASH14899

No entries found.

New Table

Select New Table and enter FEMALE_HUMAN_TRAFFICKING for the table name

IBM Db2 Warehouse on Cloud | Load | Explore | Run SQL | Analyze | 0% | dsxspare3@gmail.com | Upgrade

Source | Target | Define | Finalize | Back | Next

You are loading the file **Female-human-trafficking.csv**

Select a load target

Schema

Find a schema

DASH14899 ✓

ERRORSCHEMA

GOSALES Sample

GOSALESDW Sample

GOSALESHR Sample

GOSALESMR Sample

GOSALESRT Sample

SAMPLES Sample

ST_INFORMTN_SCHEMA

Table

Find a table in DASH14899

No entries found.

New Table

Create a new table

FEMALE_HUMAN_TRAFFICKING

Create

Select Create

IBM Db2 Warehouse on Cloud

Load

Explore

Run SQL

Analyze

0%

dsxspare3@gmail.com

Upgrade

Source

Target

Define

Finalize

Back

Next

You are loading the file `Female-human-trafficking.csv` into `DASH14899.FEMALE_HUMAN_TRAFFICKING`

Select a load target

Schema

Find a schema

DASH14899

ERRORSCHEMA

GOSALES Sample

GOSALESDW Sample

GOSALESHR Sample

GOSALESMR Sample

GOSALESRT Sample

SAMPLES Sample

ST_INFORMTN_SCHEMA

Table

Find a table in DASH14899

FEMALE_HUMAN_TRAFFICKING

Table definition

FEMALE_HUMAN_TRAFFICKING

No statistics available

Specify the table columns in the next step.

Select Next

IBM Db2 Warehouse on Cloud

Load

Explore

Run SQL

Analyze

0%

dsxspare3@gmail.com

Upgrade

Source

Target

Define

Finalize

Back

Next

You are loading the file `Female-human-trafficking.csv` into `DASH14899.FEMALE_HUMAN_TRAFFICKING`

Define table

Code page (character encoding): 1208

Separator: ,

Header in first row: ☒

Time & date format: ☐

Detect data types: ☒

Date format: MM/DD/YYYY

Time format: N/A

Timestamp format: N/A

⚠ Date format does not match data in column 'BIRTH_DATE'.

	INTERNAL_ID SMALLINT	VETTING_LEVEL SMALLINT	DESCRIPTION VARCHAR (2)	VETTING_LEVEL_PREDICTION SMALLINT	ALGORITHM_NAME VARCHAR (13)	NAME VARCHAR (27)	GENDER VARCHAR (1)	BIRTH_DATE DATE
1	1	100	NA	30	DECISION_TREE	Kathleen Bailey	F	11/27/1
2	2	30	NA	30	DECISION_TREE	Kelly Robbins	F	1/17/19
3	3	100	NA	30	DECISION_TREE	Linda Stewart	F	4/15/19
4	4	100	NA	30	DECISION_TREE	Stacey Courtney Gonzalez	F	3/27/19
5	5	30	NA	30	DECISION_TREE	Erika Patie Fowler	F	6/18/19
6	6	100	NA	30	DECISION_TREE	Ashlee Fisher	F	1/5/19
7	7	100	NA	30	DECISION_TREE	Jacqueline Clark	F	1/19/19

We need to fix the date format and adjust the length of some varchars.

First, deselect **Detect data types** and change **Date format** to **M/D/YYYY**

IBM Db2 Warehouse on Cloud

LoadExploreRun SQLAnalyze

0%

dsxspare3@gmail.com

Upgrade

Source

Target

Define

Finalize

Back

Next

You are loading the file *Female-human-trafficking.csv* into `DASH14899.FEMALE_HUMAN_TRAFFICKING`

Define table

Code page (character encoding): 1208
Separator: ,
Header in first row: ☒
Time & date format: ?
Detect data types: ☐

Date format: MM/YYYY
Time format: Type or select
Timestamp format: Type or select

	INTERNAL_ID SMALLINT	VETTING_LEVEL SMALLINT	DESCRIPTION VARCHAR (2)	VETTING_LEVEL_PREDICTION SMALLINT	ALGORITHM_NAME VARCHAR (13)	NAME VARCHAR (27)	GENDER VARCHAR (3)	BIRTH DATE
1	1	100	NA	30	DECISION_TREE	Kathleen Bailey	F	11/27/1
2	2	30	NA	30	DECISION_TREE	Kelly Robbins	F	1/17/19
3	3	100	NA	30	DECISION_TREE	Linda Stewart	F	4/15/19
4	4	100	NA	30	DECISION_TREE	Stacey Courtney Gonzalez	F	3/27/19
5	5	30	NA	30	DECISION_TREE	Erika Patie Fowler	F	6/18/19
6	6	100	NA	30	DECISION_TREE	Ashlee Fisher	F	1/5/199
7	7	100	NA	30	DECISION_TREE	Jacqueline Clark	F	1/19/19
			NA		DECISION_TREE	Shelley Clark		

Edit the VARCHAR lengths for the following fields by selecting the pencil icon by the field type:

NAME – change to VARCHAR(30)

ADDRESS – change to VARCHAR(75)

DEPARTURE_AIRPORT_MUNICIPALITY – change to VARCHAR(30)

DEPARTURE_AIRPORT_REGION – change to VARCHAR(10)

See below for editing example for NAME

NOTE: In Chrome I've seen selecting the Apply button not do anything, but if you select anywhere ***outside*** the popup that closes the window correctly.

NAME

VARCHAR (30)

Kathleen Bailey

Kelly Robbins

Linda Stewart

Stacey Courtney Gonzalez

Patie F

Edit column data type

Data type

VARCHAR

Maximum number of characters (1 - 32592)

30

Cancel

Apply

IBM Db2 Warehouse on Cloud

Load

Explore

Run SQL

Analyze

0%

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Upgrade

Source

Target

Define

Finalize

Back

Next

You are loading the file *Female-human-trafficking.csv* into DASH14899.FEMALE_HUMAN_TRAFFICKING

Define table

Code page (character encoding): 1208

Separator: ,

Header in first row: ☒

Time & date format:

Detect data types: ☐

Date format: MM/YYYY

Time format: Type or select

Timestamp format: Type or select

ADDRESS	SSN	PASSPORT_NUMBER	PASSPORT_COUNTRY	PASSPORT_COUNTRY_CODE	COUNTRIES_VISITED
VARCHAR (75)	VARCHAR (14)	INTEGER	VARCHAR (10)	VARCHAR (2)	VARCHAR (35)
79421 Jordan Orchard, Lawton, Oklahoma 73507	885-71-9055	240479506	Ghana	GH	AE,IE,RU,VN
5808 Jacobs Unions, Karval, Colorado 80823	141-10-9199	449064032	Pakistan	PK	UA,UZ,IS
824 Kristin Grv, Atlantic, Virginia 32303	011-46-5304	639217810	Ghana	GH	RU,LKET
322 Hutchinson Cres, Ten Mile, Tennessee 37880	691-25-2647	212838449	Ghana	GH	RU
07695 Michael Vie Ste 394, Wasilla, Alaska 96954	165-33-0802	16514173	Ghana	GH	IE,AE
4838 Cassandra Streets Apt. 931, Spring, Texas 77380	072-16-8742	513426119	Ghana	GH	AE,SG,IM
1148 Wang Fall Suite 988, Fullerton, California 92823	634-03-1462	742709558	Ghana	GH	IS,KW,CLOM,GB,CZ,BY
7234...on Form...650, ...ville, C...out 6...	07-14...	...9642	KW,SA...KH...CZ

Select Next

IBM Db2 Warehouse on Cloud

Load

Explore

Run SQL

Analyze

0%

dsxspare3@gmail.com

Upgrade

Source

Target

Define

Finalize

Back

Begin Load

You are loading the file *Female-human-trafficking.csv* into *DASH14899.FEMALE_HUMAN_TRAFFICKING*

Review settings

Summary

Code page: 1208

Separator: ,

Header in first row: Yes

Time format: HH:MM:SS (Default)

Date format: M/D/YYYY

Timestamp format: YYYY-MM-DD HH:MM:SS (Default)

String delimiter: * (Default)

Option

Maximum number of warnings 1000

Select Begin Load

IBM Db2 Warehouse on Cloud

Load

Explore

Run SQL

Analyze

0%

dsxspare3@gmail.com

Upgrade

Load details

COMPLETE

My computer

Female-human-trafficking.csv

Target

DASH14899.FEMALE_HUMAN_TRAFFI...

View Table

Load More Data

Status

Settings

Errors

Warnings

Download Log

1,085

1,085

0

Rows read

Rows loaded

Rows rejected

Start time

10/6/2017 at 9:58:33 AM Eastern Standard Time

End time

10/6/2017 at 9:58:34 AM Eastern Standard Time

The data load job succeeded.

You can now work with your data.

No errors

COMPLETE

My computer

Female-human-trafficki...

Target

DASH14899.FEMALE_...

The table is now loaded. You may exit Bluemix or close the tab if desired.

Now that a Db2 Warehouse on Cloud instance has been created, add it as a source to DSX in the next section.

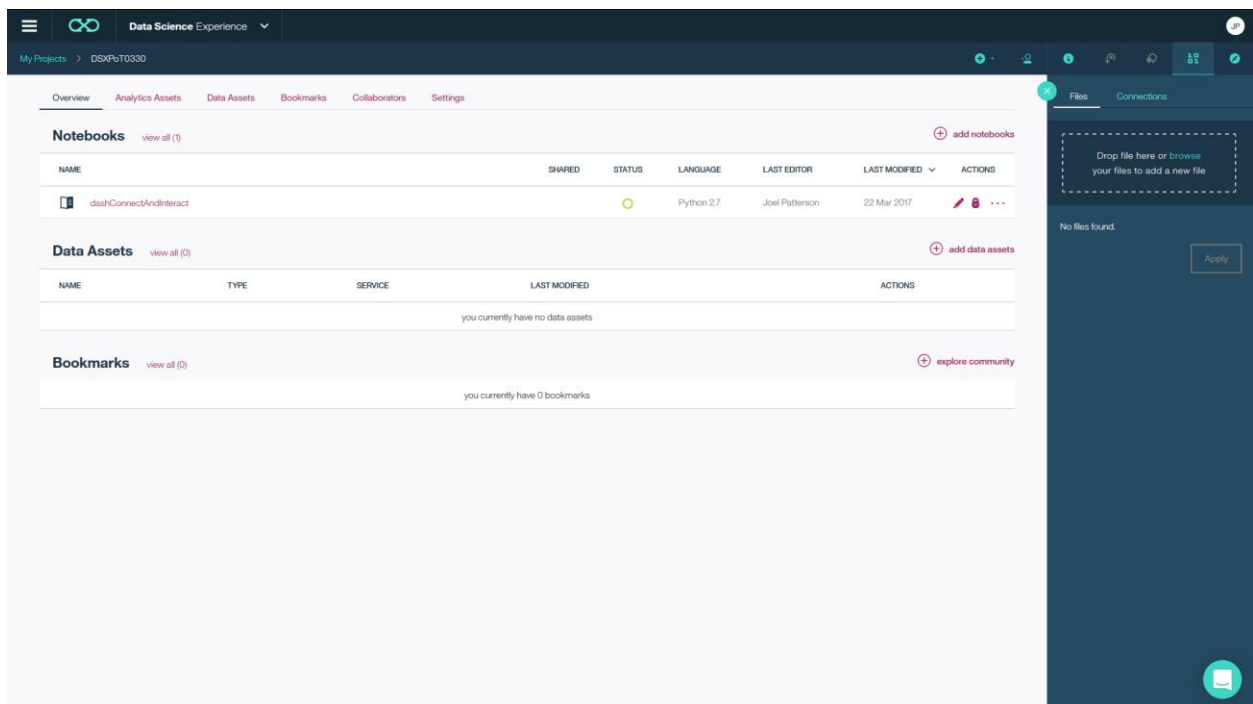
Adding Db2 Warehouse on Cloud as a DSX Data Source

Click the box of 1's and 0's which allows you to insert file or data connections. Select the **Connections** tab.

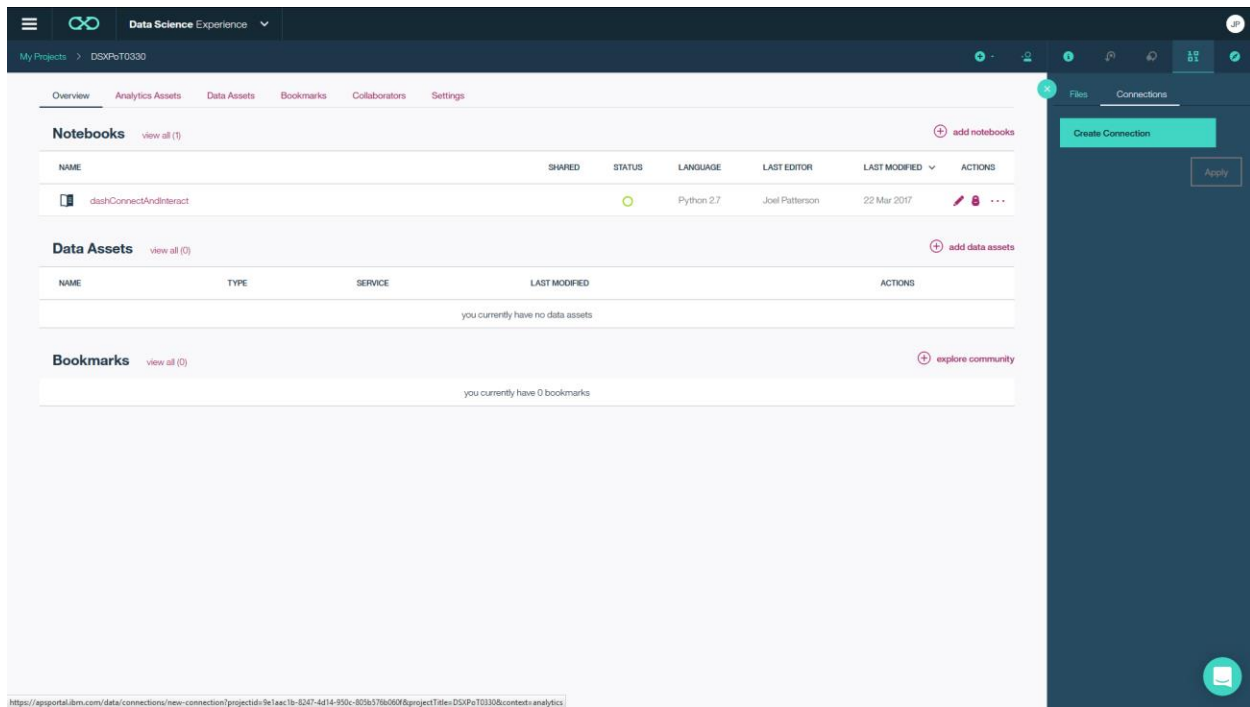
You should not have any connections defined.



Select **project page** to create a new tab in your browser displaying the project page:



Select **Connections**.



Select Create Connection

Name
Db2 Warehouse on Cloud

Description
Connection description

Service Category
☒ Data Service
 ☐ External

Service Instance
 Db2 Warehouse on Cloud: Db2 Warehouse on Cloud-ita

Database
 BLUDB

Create Cancel

Pick a name for your Db2 Warehouse on Cloud connection, an optional description, and then select the **Service Instance** (name will be what you picked when creating the instance) and **Database** (BLUDB).

Create.

IBM Data Science Experience

Projects Tools Data Services Community

US South Docs

My Projects > LMCO

Overview Analytics Assets Data Assets Bookmarks Deployments Collaborators Settings

Notebooks view all (1) + add notebooks

NAME	SHARED	STATUS	LANGUAGE	LAST EDITOR	LAST MODIFIED	ACTIONS
Lab-1			Python 3.5	Joel Patterson	6 Oct 2017	

Data Assets view all (1) + add data assets

NAME	TYPE	SERVICE	LAST MODIFIED	ACTIONS
Db2 Warehouse on Cloud	Connection	dashDB	6 Oct 2017	

Bookmarks view all (0) + explore community

you currently have 0 bookmarks

Create Connection

Db2 Warehouse on Cloud

Apply

The connection will now show in your list of Data Assets.

My Projects > LMCO > Lab-1

File Edit View Insert Cell Kernel Help

Trusted | Python 3.5 (Experimental) with Spark 2.1

Format Code

Access Db2 Warehouse on Cloud and explore the data with Python

This notebook shows how to access a DB2 data warehouse or DB2 database when using Python. The examples use a DB2 warehouse, but the instructions apply to both DB2 Warehouse and DB2.

Files Connections

Db2 Warehouse on Cloud

Insert to code

And will automatically update in the list of Connections for your notebook.