



Lab – IBM DataWorks™

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Owner:	IBM Developer Ecosystem and Startups

Lab : IBM DataWorks™

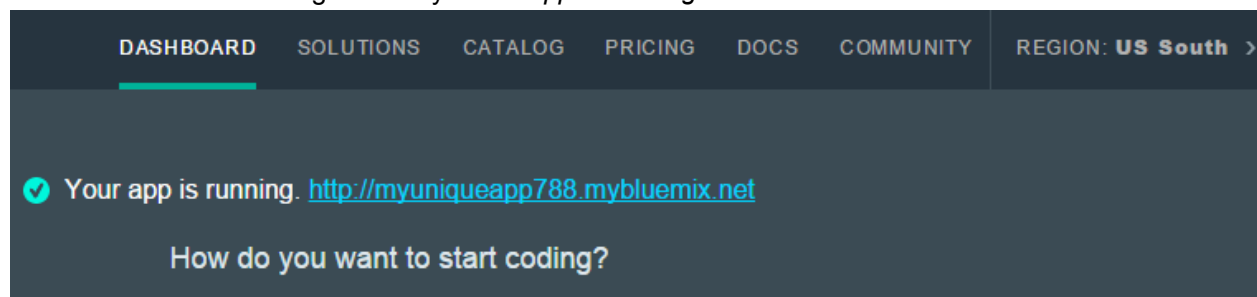
Lab Objectives: This lab will show you how to use the IBM DataWorks service in IBM Bluemix to filter and then transfer data from a dashDB database in Bluemix to a Cloudant database in Bluemix

Lab Duration : 30 minutes

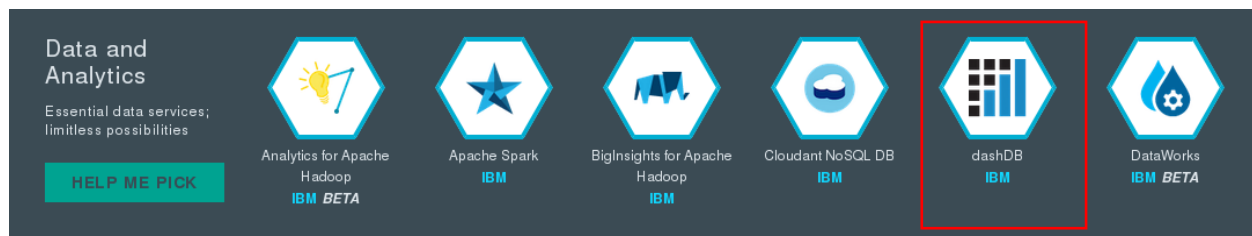
1. Creating an app and a dashDB instance in Bluemix

In this section you'll create an app and an instance of the dashDB service in IBM Bluemix.

1. In your browser go to the Bluemix URL <http://bluemix.net> and login is necessary.
2. Make sure you're in the **Dashboard** tab (if not click on the **Dashboard** link at the top of the page to take you there)
3. Click on **CREATE APP**
4. Click on **WEB**
5. Click on **SDK for Node.js** and then click **CONTINUE**
6. Give your app a unique name using alphanumeric characters only and click **FINISH**
7. Wait for the message that says *Your app is running*



8. Click on the **Dashboard** link at the top of the page again
9. Click on **USE SERVICES OR APIS**
10. Scroll down to the **Data and Analytics** section and click on **dashDB**

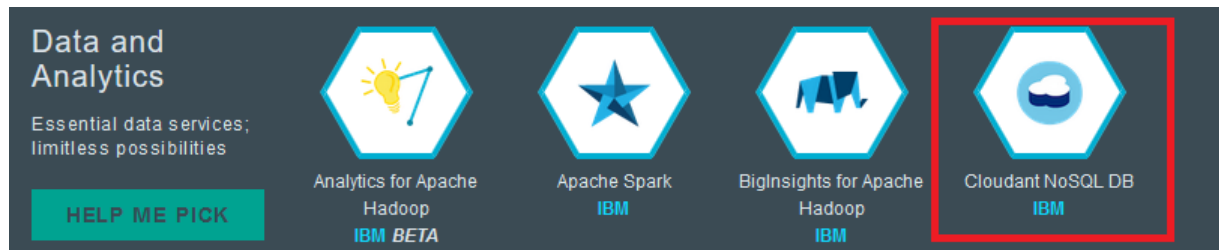


11. Under **App** select the app you just created
12. Click on **CREATE** to create a new instance of dashDB
13. Click **RESTAGE** when prompted to restage your app.

2. Creating a Cloudant instance in Bluemix

In this section you'll create an instance of the Cloudant service in IBM Bluemix.

1. Click on the **Dashboard** link at the top of the page again
2. Scroll down to the **Services** section and click on **ADD A SERVICE OR API**
3. Scroll down to the **Data and Analytics** section and click on **Cloudant NoSQL DB**

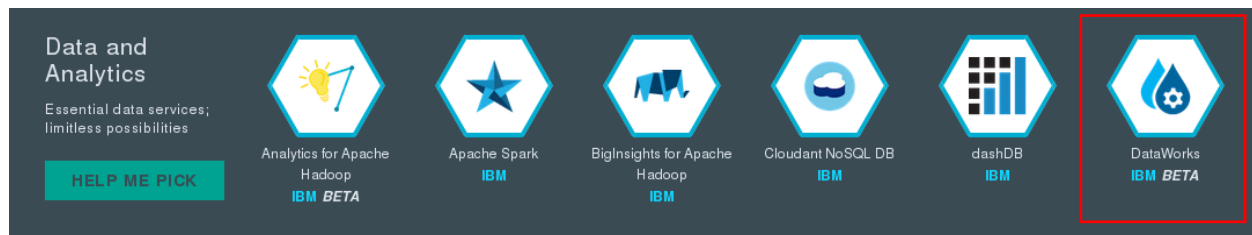


4. Under **App** select the app you just created
5. Click on **CREATE** to create a new instance of Cloudant
6. Click **RESTAGE** when prompted to restage your app.

3. Creating a DataWorks instance in Bluemix

In this section you'll create an instance of the DataWorks service in IBM Bluemix.

1. Click on the **Dashboard** link at the top of the page again
2. Click on **USE SERVICES OR APIS**
3. Scroll down to the **Data and Analytics** section and click on **DataWorks**



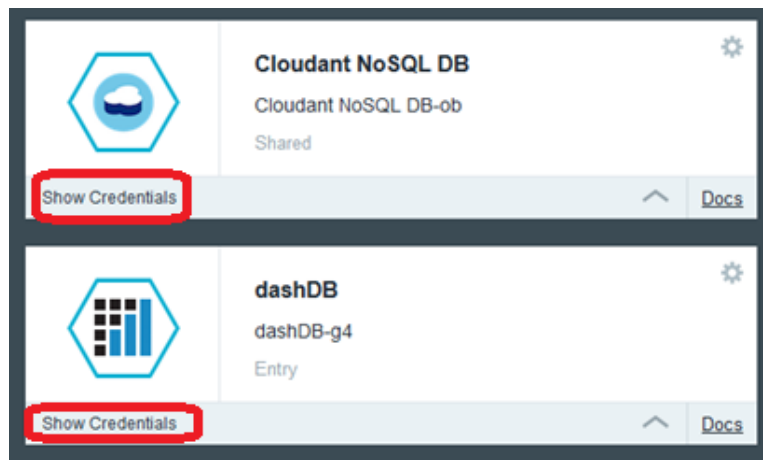
4. Under **App** select **unbound**
5. Click on **CREATE** to create a new instance of DataWorks

4. Save dashDB and Cloudant credentials

In this section you'll save the access credentials for dashDb and Cloudant for later use.

1. Click on the **Dashboard** link at the top of the page again
2. Scroll down to **Applications** and click on the icon for the app you created.

3. Click on the **Show Credentials** link for your dashDB service instance

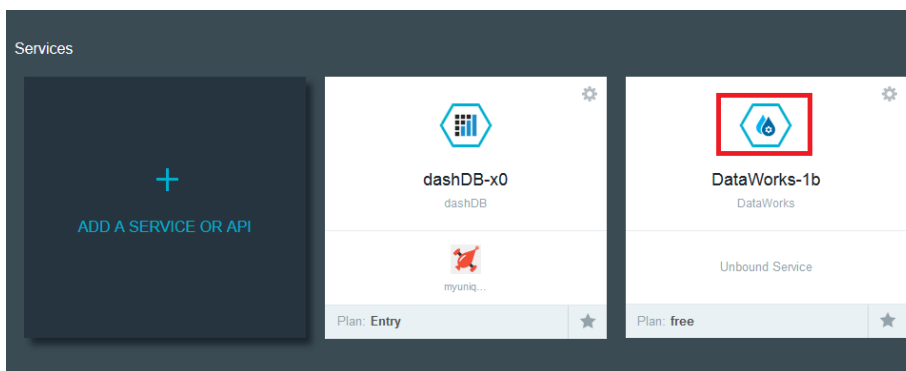


4. Copy and paste the dashDB credentials to a text file of your choice.
5. Repeat for the credentials of your Cloudant service

5. Move data from dashDB to Cloudant

In this section you'll move a subset of data in your dashDB instance to your instance of Cloudant using DataWorks

1. Click on the **Dashboard** link at the top of the page again
2. Scroll down to **Services** and click on the icon for your DataWorks service instance



3. Click on the arrow icon to the right of **IBM DataWorks**
4. Click on **Create Connection** to begin creating a connection for your dashDB instance
5. Click on the icon for **dashDB**
6. In the **Configure Connection** panel, enter **mydashDB connection** as the **Connection name**

- Under the Details section copy the appropriate values from the text file where you saved your dashDB credentials. You'll need the **host**, **db**, **username** and **password** field values.

Create Connection ✕

Connection Type → [Configure Connection](#) CANCEL CREATE CONNECTION

Connection Type	Details	Permissions
IBM dashDB	Hostname or IP Address awh-yp-small02.services.dal.ibm.com	All Users
Connection Name	Database BLUDB	
mydashDB connection	Username dash103146	
Description	Password *****	
Add a description		

- Click on **Create Connection**.
- After the dashDB connection creation is confirmed, click **Add Connection** to create the Cloudant connection
- Select the **IBM Cloudant** icon
- Enter **IBM Cloudant connection** for the **Connection name** and complete the connection details from the saved credentials from the Cloudant service. You'll need the url, username and password

Create Connection ✕

Connection Type → [Configure Connection](#) CANCEL CREATE CONNECTION

Connection Type	Details	Permissions
IBM Cloudant	Cloudant Url https://f4d2cd96-2c1b-468d-8b12-34442d678bae	All Users
Connection Name	Username d2cd96-2c1b-468d-8b12-34442d678bae-blumix	
IBM Cloudant connection	Password *****	
Description		

- Click on **Create Connection**
- Select **Refine & Copy** from the Tasks list to start creating an Activity
- Select your dashDB connection item
- Select **GOSALES** from the Schemas column and **Product** from the Tables and Views column
- Select **Product_type_code** and then click **Refine**

Refine & Copy

Untitled Activit 



Connect Data → Select Data → **Refine** → Copy to Target

UNDO ADD NEXT

PRODUCT Data

Number of columns: 9
Last modified: 1/6/16 1:45 PM

9

Types of data

Text **1** Number **6** Date **2**


High Data Quality

3 columns contain suspecte...
1 column contains missing va...

87%

Data size

Number of rows: 274
Number of columns: 9



PRODUCT_NU...	BASE_PRODU...	INTRODUCTIO...	DISCONTINUE...	PRODUCT_TY...	PRODUCT_CO...	PRODUCT_SI...	PRODU
3110	3	2001-02-15 00:00:0...		951	924	825	701
20110	20	2003-03-05 00:00:...		953	903	820	704
92110	92	2001-02-15 00:00:0...		966	925	803	717
4110	4	2001-02-15 00:00:0...		951	923	804	701
16110	16	2003-03-05 00:00:...		952	923	815	702
5110	5	2001-02-15 00:00:0...		951	923	823	701
6110	6	2003-03-05 00:00:...		951	923	824	701
9110	9	2003-03-05 00:00:...		951	900	806	701
7110	7	2001-02-15 00:00:0...		951	923	845	701
8110	8	2003-03-05 00:00:...		951	912	846	701
13110	131	2010-05-01 00:00:0...		962	922	811	757

17. Click on the dots on the **Product_type_code** column header and select **Filter**

18. Scroll down and check the row with **961** from the list

Types of data

Text **1** Number **6** Date **2**

High Data Quality

3 columns contain suspecte...
1 column contains missing va...

87%

Filter on 'PRODUCT_TYPE_CODE'

Invert Clear

- 957
- 958
- 959
- 960
- ✓ 961
- 962
- 963

CANCEL FILTER

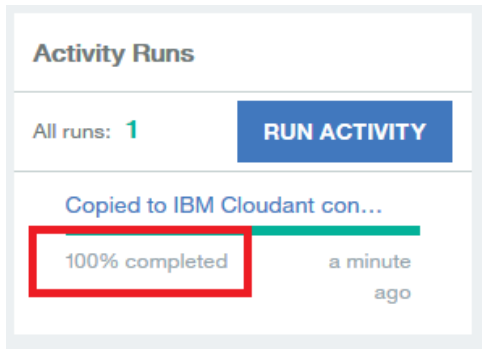
PRODUCT_NU...	BASE_PRODU...	INTRODUCTIO...	DISCONTINUE...	PRODUCT_TY...	PRODUCT_CO...	PRODUCT_SI...	PRODU
924				924			
903				903			
925				925			
923				923			
923				923			
923				923			
923				923			
900				900			
923				923			
912				912			
922				922			
908				908			
923				923			
922				922			
925				925			

19. Click on the **Filter** button

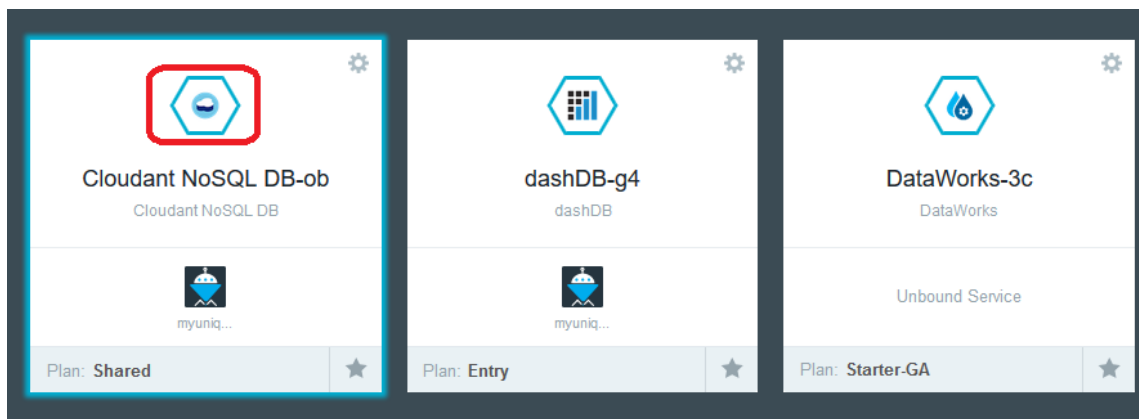
20. Click on **Next**

21. Select the IBM Cloudant connection as the target

22. Assign a name to the activity at the top and click **Run** – the display will show a tile for the activity that has started running
23. Click on the tile to open the details of the activity and confirm that the run has completed (keep refreshing the page until the activity is complete)

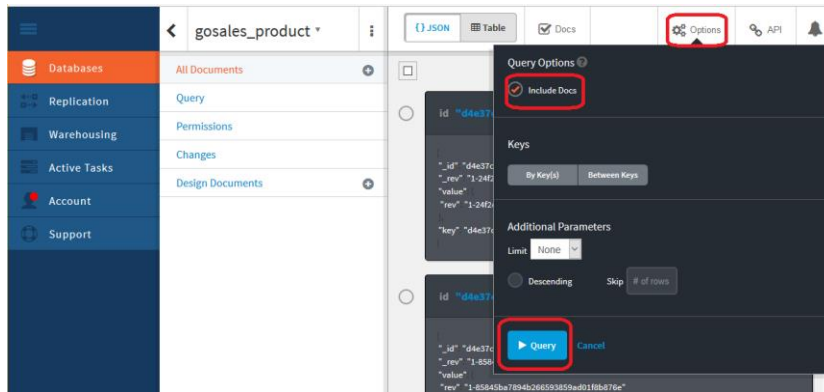


6. Verify the data was transferred to Cloudant

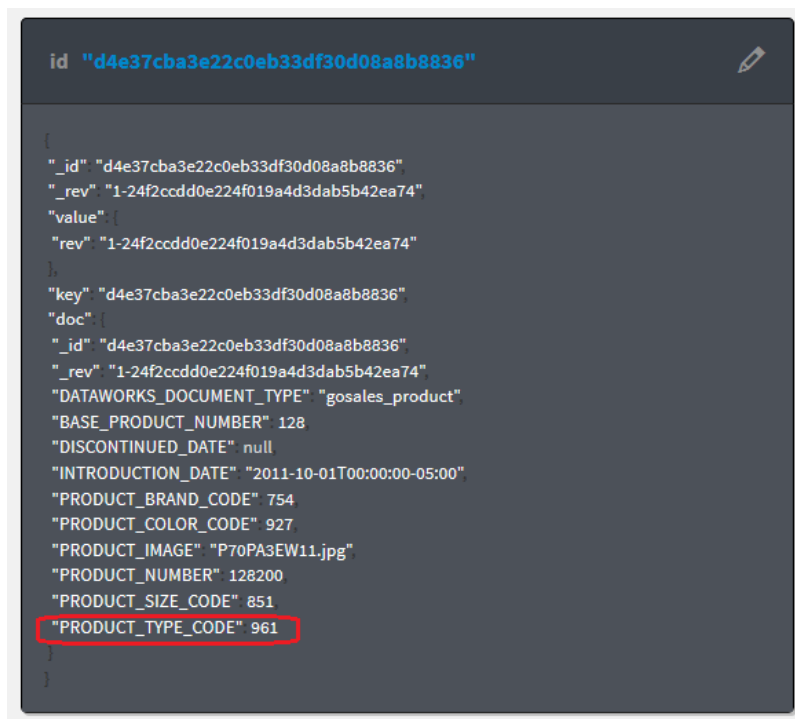


In this section you'll verify that the data was successfully copied to your Cloudant instance

1. In the Bluemix dashboard tab click on the **Dashboard** link at the top of the page
2. Scroll down to **Services** and click on the icon for your Cloudant service instance
3. Click on **Launch** to launch the Cloudant console
4. Click on the **gosales_product** database
5. Click on **Options**, select **Include docs** and click on **Query**



- Verify that your Cloudant database includes documents like the following with a `PRODUCT_TYPE_CODE` of 961



Congratulations! You successfully used IBM DataWorks to filter and move data between dashDB and Cloudant.