IBM Bluemix Tutorial

Getting Twitter Messages and Saving to MongoDB using Bluemix v2.0

This laboratory exercise demonstrates how to get Twitter messages and save it in MongoDB using Bluemix.

Prerequisite

Item	Comment
Bluemix Account	do the "Creating a Bluemix Account" laboratory exercise if you do not have a Bluemix account
Twitter Acount	Go to https://twitter.com to create an account

Procedure

1. Go to the IBM Bluemix website and login using your Bluemix account (http://ibm.biz/bluemixph).
2. In the menu, click the CATALOG link.

3. In the Boilerplate area, click the Node-RED Starter icon.
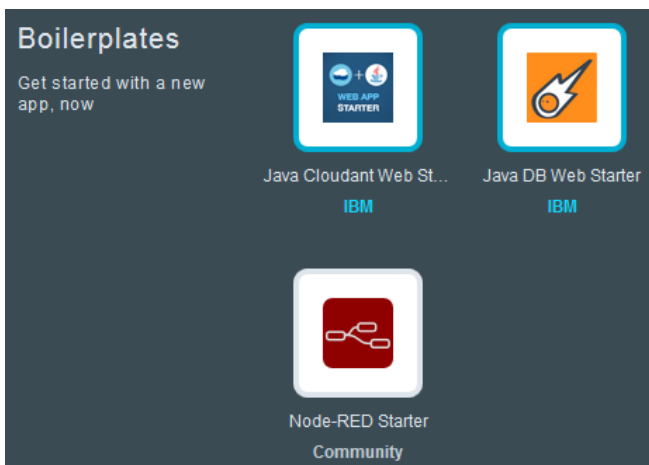
4. Fill-up the "Create an app" form. Use the same value for the "Name" and "Host" field. Click "CREATE". As a convention, use the name "twitterapp-<your name>" in the "Name" and "Host" field.

Create an app:

Space:

dev

Name:

twitterapp-john

Host:

twitterapp-john   . mybluemix.net

Selected Plans:

SDK for Node.js™

Default

cloudantNoSQLDB

Shared

CREATE

5. In "Getting Started with…" click "VIEW APP OVERVIEW".

Your app is ready! http://twitterapp-john.mybluemix.net

The instance of your application is now running.

10:35 AM

Getting Started with:

Node-Red Flow Editor
Create IoT apps with Node-Red using the visual flow editor.

Start coding with Node-RED

1 After your application has started, click on the **Routes URL** or enter the following URL in a browser:

http://<yourhost>.mybluemix.net

:

6 Access your app. See your changes here:

twitterapp-john.mybluemix.net

GS For detailed directions, see Creating apps with Node-RED starter.
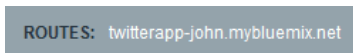
VIEW APP OVERVIEW

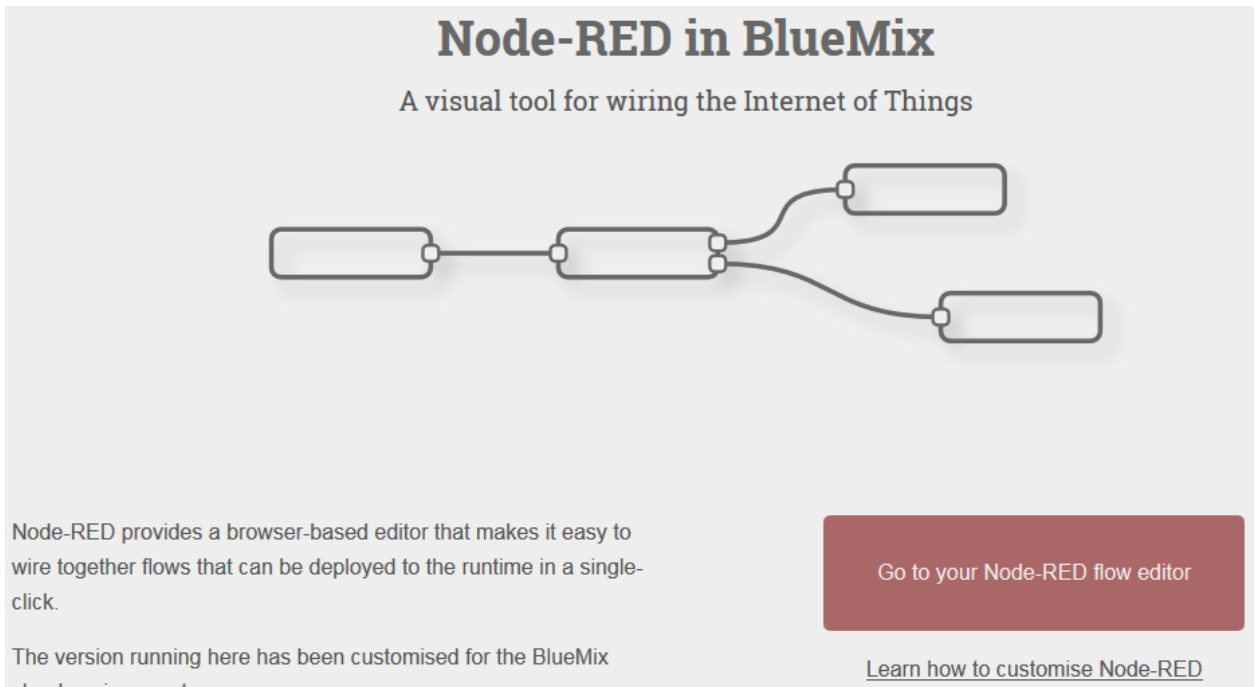6. You will be redirected to the Overview page of your application.
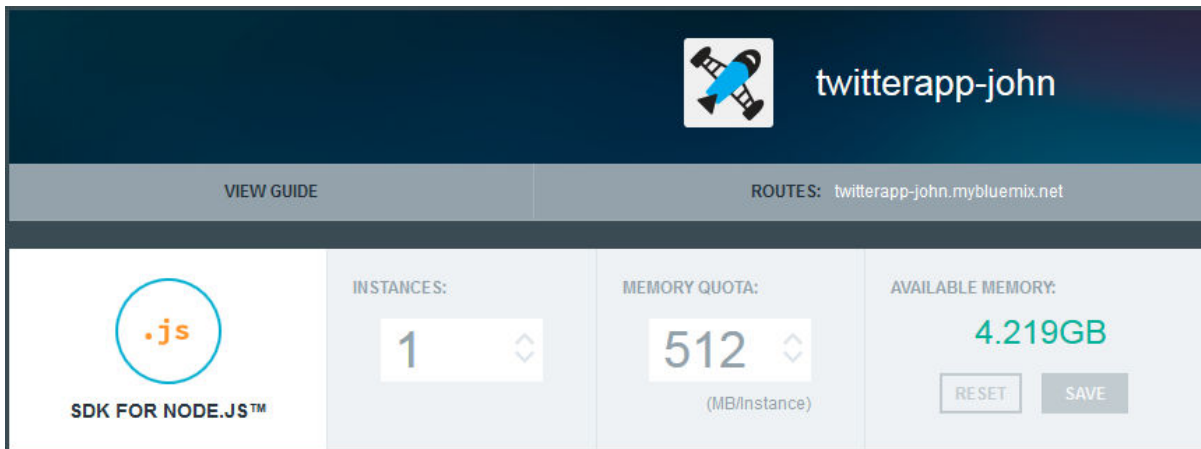

7. Wait for your application to start.
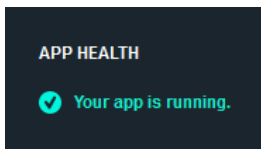
8. Click your application's hyperlink to test your application.

9. In the Node-Red in Bluemix page of your application, click the "Go to your Node-RED flow editor" button.

Node-RED in BlueMix
A visual tool for wiring the Internet of Things

Node-RED provides a browser-based editor that makes it easy to wire together flows that can be deployed to the runtime in a single-click.

The version running here has been customised for the BlueMix cloud environment.

Go to your Node-RED flow editor

Learn how to customise Node-RED

10. In the Node palette (left pane), scroll down until you see the "twitter" input node. Take note that there are two "twitter" nodes, one is an input and the other one is an output. You may move your mouse over the node to know if it is an input or output node.
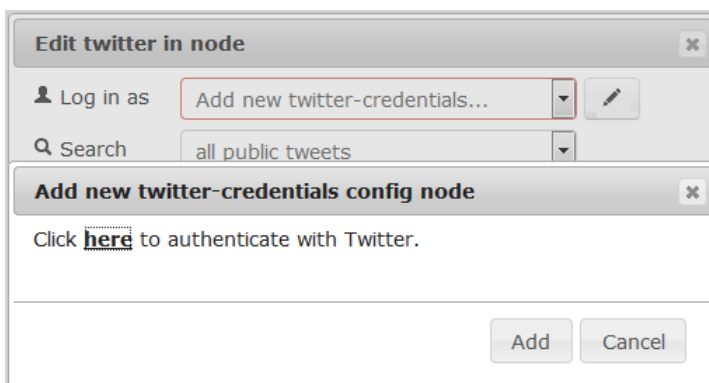
social

twitter — Twitter input node. Can be used to search either:

irc

twitter

irc
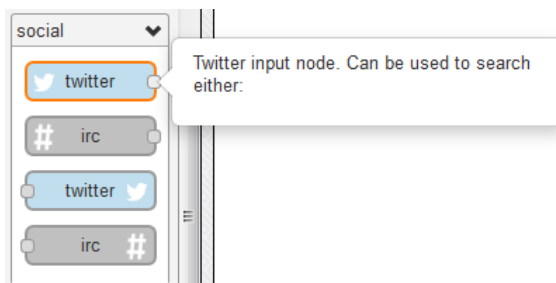
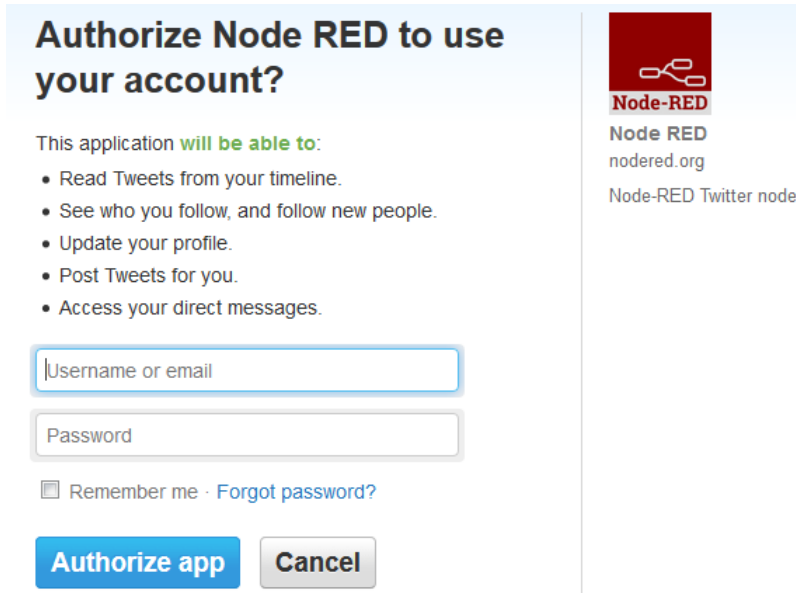11. Drag and drop a "twitter" input node to the work area.
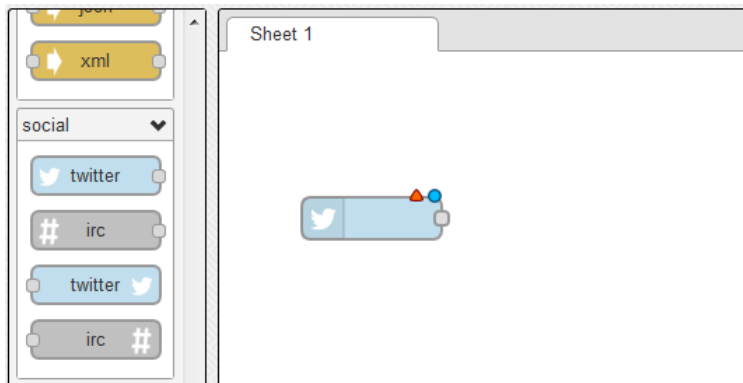
12. Double-click the "twitter" input node in the work area.
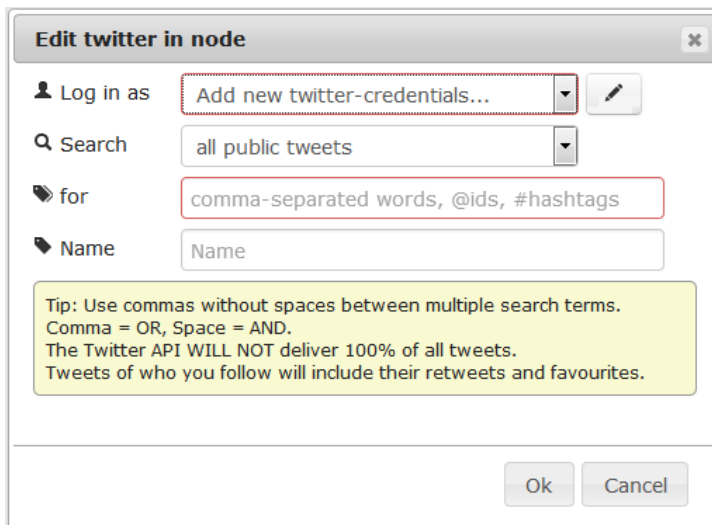
13. Click the edit [pencil icon] icon to add a new twitter-credential.

14. Click the "here" hyperlink to authenticate with Twitter. Enter your credentials in Twitter and click the "Authorize app" button.
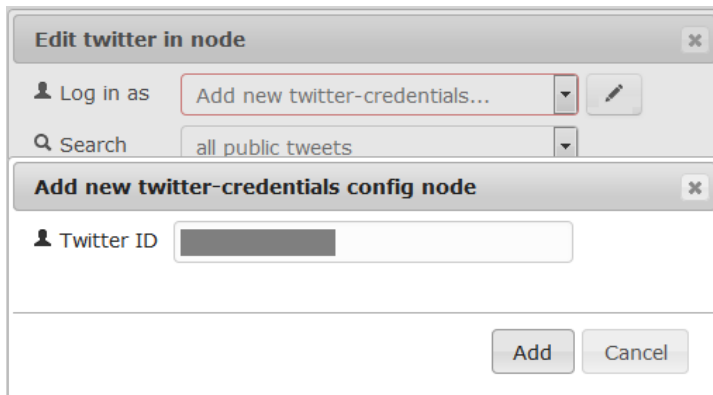

15. Wait for the message "Authorized…" to appear. You may close the tab containing this message.
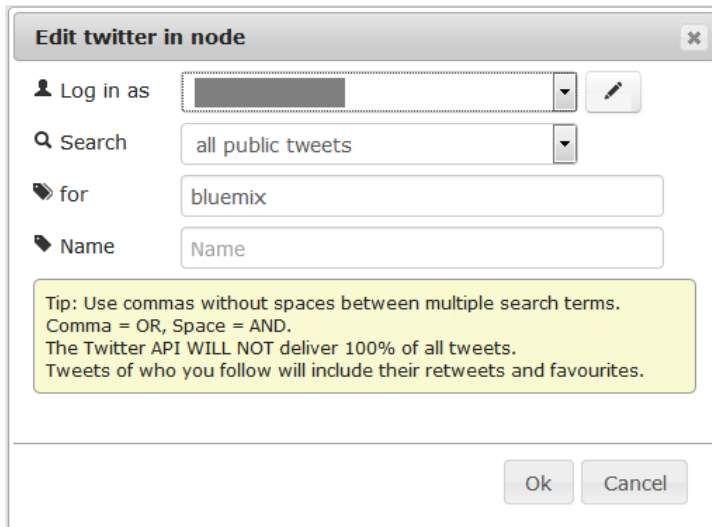
16. Go back to the Node-RED flow editor. Click the "Add" button.

17. In the "Edit twitter in node" window, type a keyword(s) that you want to find in the Twitter messages. In the example below, the keyword used is "bluemix". You may use a different keyword in your application. Click the "Ok" button.

18. In the Node palette, scroll up until you see the "debug" node.
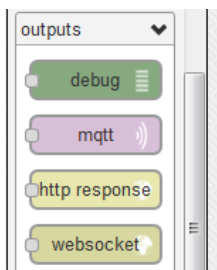
19. Drag and drop a "debug" node to the work area at the right of the twitter node.
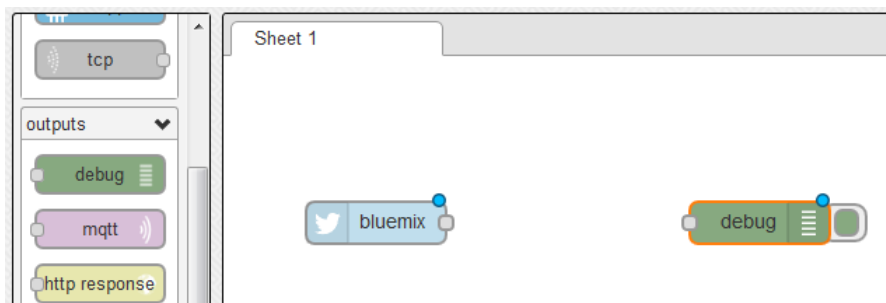
20. Connect the "twitter" input node to the "debug" node. To do this, click (and hold) over the rounded-square symbol ⬜ of the "twitter" input node.   Move the mouse until you reach the rounded-square symbol of the "debug" node. Release the mouse button.

21. Click the "Deploy" button.
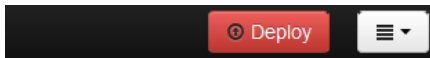
22. Make sure that you see a "Successfully deployed" message.

Successfully deployed

23. In the right pane, click the "debug" tab and wait for Twitter messages to appear.

info   debug

11 Sep 2014 07:14:42.794   [9f1c65b0.f194c8]
tweets/HansB001
Do you wan to edit code from
browser? https://t.co/7MyyXFelqY …
#Bluemix #Devops

11 Sep 2014 07:15:44.350   [9f1c65b0.f194c8]
tweets/HansB001
Here is a step by step guide to build a
game #app with Liberty, Cloudant,
and Single Sign On - http://t.co
/ljDQrOaBXm #Bluemix

11 Sep 2014 07:16:22.126   [9f1c65b0.f194c8]
tweets/armand_ruiz
RT @HansB001: Glad I am in time in
Brussels for the #Bluemix day.,
Heavy traffic, glad I woke up at 5!
Everything is set up and I am ready…

24. Go back to your Bluemix account and click the CATALOG link.

DASHBOARD   CATALOG   PRICING   DOCS   COMMUNITY

25. In the Data Management area, click the MongoLab icon.

26. Fill-up the "Add service" form. In the "App" field, select your Twitter application. In the "Service name" field, type "MongoLab-twitter". Click "CREATE".

27. When asked to restage the application, click "OK".
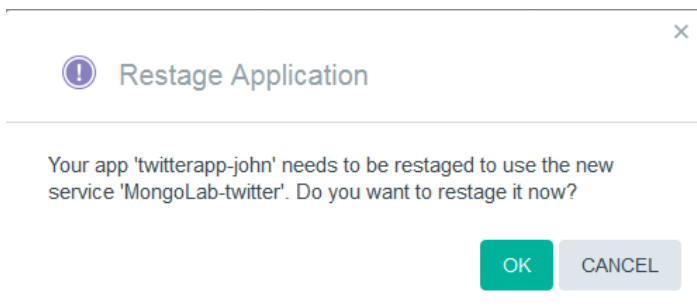
28. Wait for your application to restart.

APP HEALTH

✓ Your app is running.
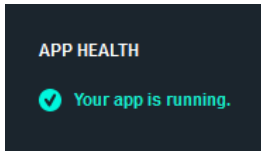
29. Go back to the Node-RED flow editor.

30. In the Node palette, scroll down until you see the "mongodb" output node. Take note that there are two "mongodb" nodes, one is an output and the other one is an input/output.

storage ⌄

cloudant

mongodb

redis

cloudant

mongodb   A simple MongoDB output node. Stores
                 the **msg** object in a chosen collection.
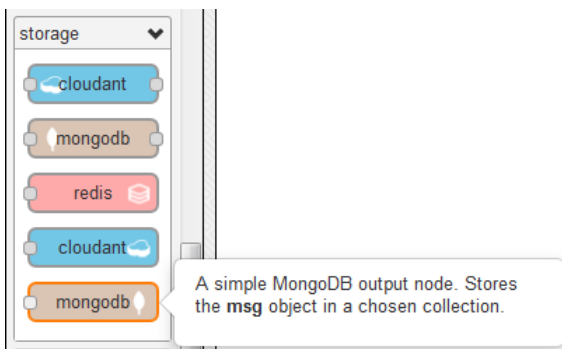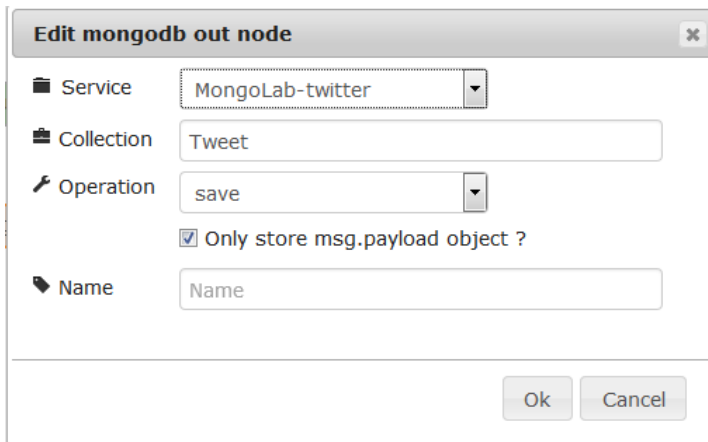
31. Drag and drop a "mongodb" output node to the work area at the right of the twitter node and at the bottom of the "debug" node.

bluemix   debug

mongodb

32. Double-click the "mongodb" output node in the work area.

33. In the "Edit mongodb out node" window , use the following values:
- Service: MongoLab-twitter
- Collection: Tweet
- Operation: save
- Only store msg.payload object: yes

Click "Ok".

Note: I f you do not see the "MongoLab-twitter" service, you may need to refresh your web browser.

34. Connect the "twitter" input node to the "mongodb" output node.
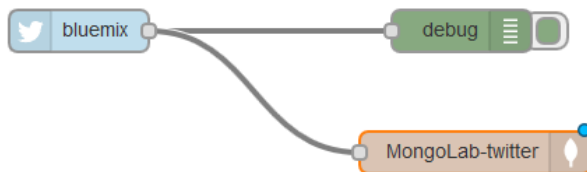
35. Click the "Deploy" button.
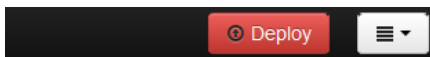
36. All the tweets coming from the "twitter" input node are now being saved to your MongoLab-twitter database through the "mongodb" output node. You can create another Bluemix application to access the contents of the MongoLab-twitter database (refer to Bluemix Tutorial - Uploading and Running a PHP Web Application (with MongoDB) in Bluemix).

Discussed below is an alternative way to view the contents of the MongoLab-twitter database.

37. In the Node palette, drag the following nodes (use the screenshot below as a guide for the position of the nodes):
    - "http" input node
    - "monogodb" input/output node
    - "http response" output node
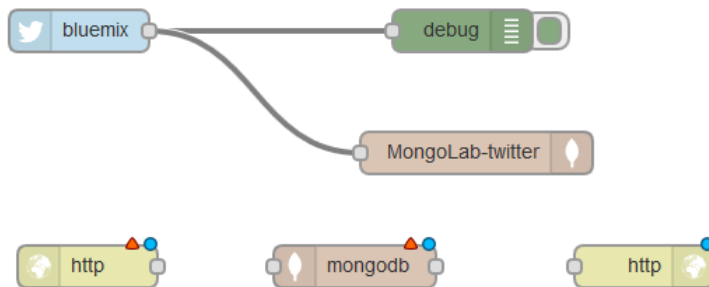
38. Double-click the "http" input node in the work area.

39. In the "Edit http in node" window , use the following values:
    - Method: GET
    - url: /view_tweets
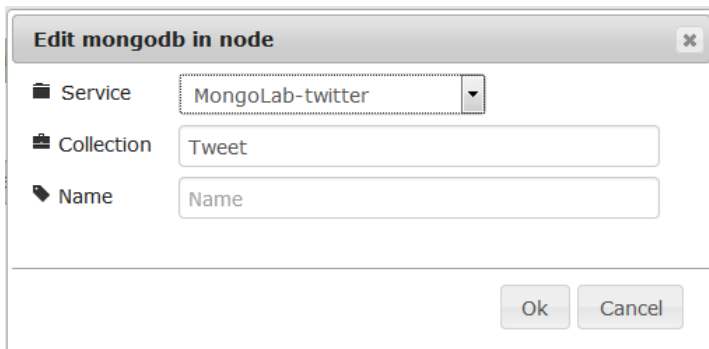
Click "Ok".

40. Double-click the "mongodb" input/output node in the work area.

41. In the "Edit mongodb in node" window , use the following values:
    - Service: MongoLab-twitter
    - Collection: Tweet

Click "Ok".

42. Connect the "http" input node to the "mongodb" input/output node. Connect the "mongodb" input/output node to the "http response" output node.
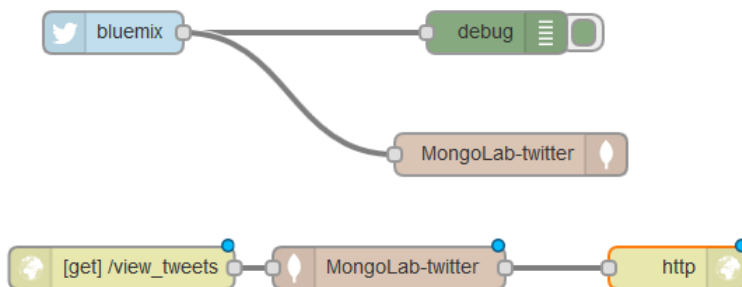
43. Click the "Deploy" button.
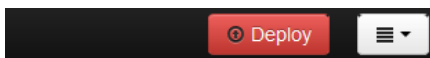
44. Open another web browser window (or tab). Go to the following URL:
    http://twitterapp-<your name>.mybluemix.net/view_tweets

45. You should see the contents of the MongoLab-twitter database.

```
[
    {
        "payload": "RT @HansB001: New Tutorial:: Enhance an Android app with Google+ authentication in 8 Simple Steps!! http://t.co/TvwV0osch2  #Bluemix #Mobil…",
        "_id": "5412d422e5e5eb21004743bd"
    },
    {
        "payload": "RT @HansB001: Performing text analytics with #Bluemix analytics services -- http://t.co/lwlRG68BrY  #BlueMix #IBM http://t.co/0S9jmDja3B",
        "_id": "5412d423e5e5eb21004743be"
    },
    {
        "payload": "RT @HansB001: It's easy to get #appdev quality assurance. Learn how here: http://t.co/FWblqHhUbz   #bluemix",
        "_id": "5412d423e5e5eb21004743bf"
    },
    {
        "payload": "RT @HansB001: by @wimtobback :Another full-house #bluemix session presented by @HansB001 #paas #cloud http://t.co/Wah3Xy8pwT @MichelSplint",
        "_id": "5412d423e5e5eb21004743c0"
    },
    {
        "payload": "RT @HansB001: We expect 240 people at the #IBM #ExtremeBlue Expo in Amsterdam. Keynote from @oscarkneppers @rockstart #Bluemix",
        "_id": "5412d423e5e5eb21004743c1"
    },
    {
        "payload": "RT @HansB001: Performing text analytics with #Bluemix analytics services -- http://t.co/lwlRG68BrY  #BlueMix #IBM http://t.co/0S9jmDja3B",
        "_id": "5412d454e5e5eb21004743c2"
    },
    {
        "payload": "Build an agile SaaS framework for Bluemix and SoftLayer with\n           Node.js: This tutorial shares code an... http://t.co/KMkhzgqQ8Y",
        "_id": "5412d48ee5e5eb21004743c3"
    },
    {
        "payload": "#Bluemix #Cloud Integration and Cast Iron Live Part 3  http://t.co/rfuAl1vttn",
        "_id": "5412d4d9e5e5eb21004743c4"
    },
    {
        "payload": "Code something new today. How to get started with Python on #Bluemix: http://t.co/zOchRSrHK7",
        "_id": "5412d4eee5e5eb21004743c5"
    },
    {
        "payload": "With #Bluemix, you no need to install middleware more, just focus on your code.  https://t.co/9m6oEHLJvU …",
        "_id": "5412d4ffe5e5eb21004743c6"
```