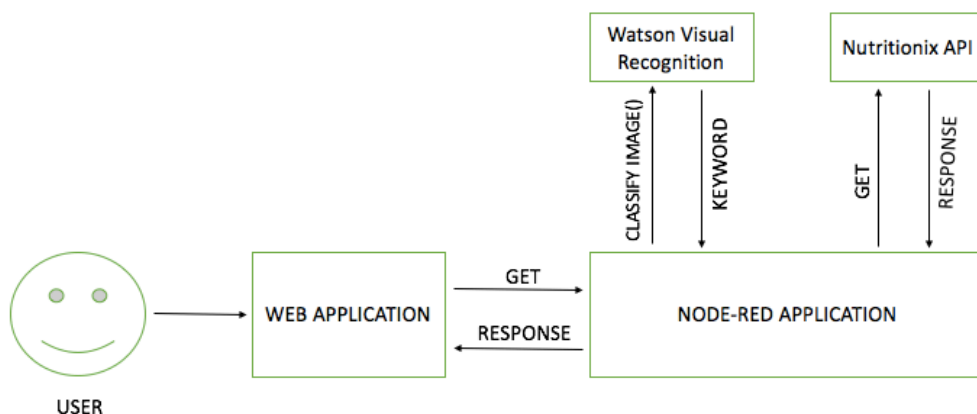


# Calorie Counter App using Watson Visual Recognition

Simplify calorie counting using the power of IBM Watson Cognitive Services. IBM Watson Visual Recognition food model provides a built-in capability for recognizing 2,000+ different foods globally, which is perfectly suited to replace the manual process of food logging with automatic food identification using image recognition.

In this lab, you will create a calorie counter web app using Node-RED, Watson Visual Recognition and Nutritionix API. This web app analyses food images using Watson Visual Recognition service and extract nutritional information of the food analysed using Nutritionix API (The largest verified database of nutritional information).

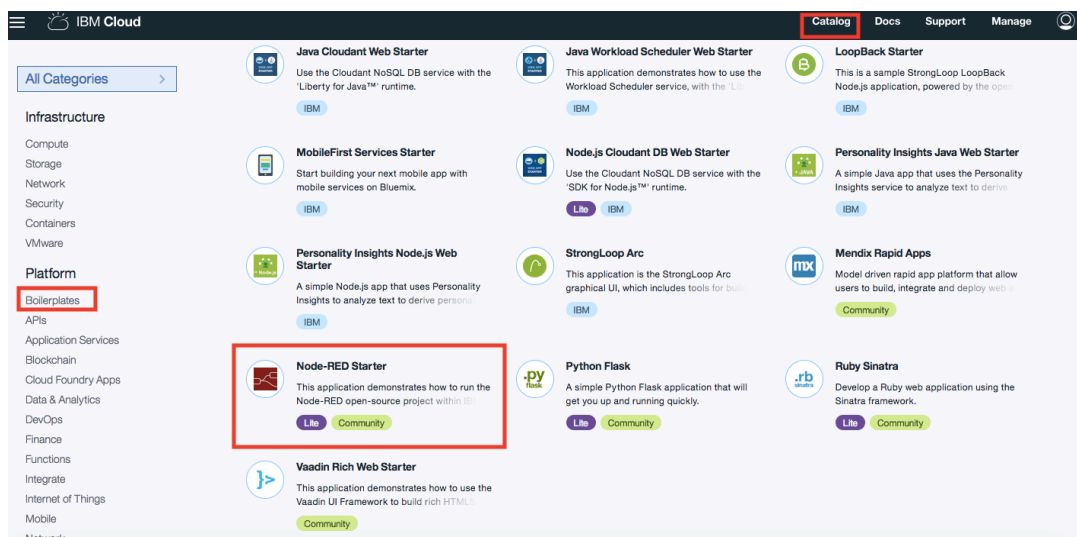


## Pre-requisites:

1. An [IBM Cloud account](#)
2. Nutritionix **App ID and App Key**- Nutritionix data is used to gather nutritional information of an analyzed image. Instructions for obtaining a key can be found at [Nutritionix.com](#)

## Steps:

1. Login to [IBM Cloud Account](#)
2. Create **NODE-RED Starter Boilerplate** from **Catalog**.



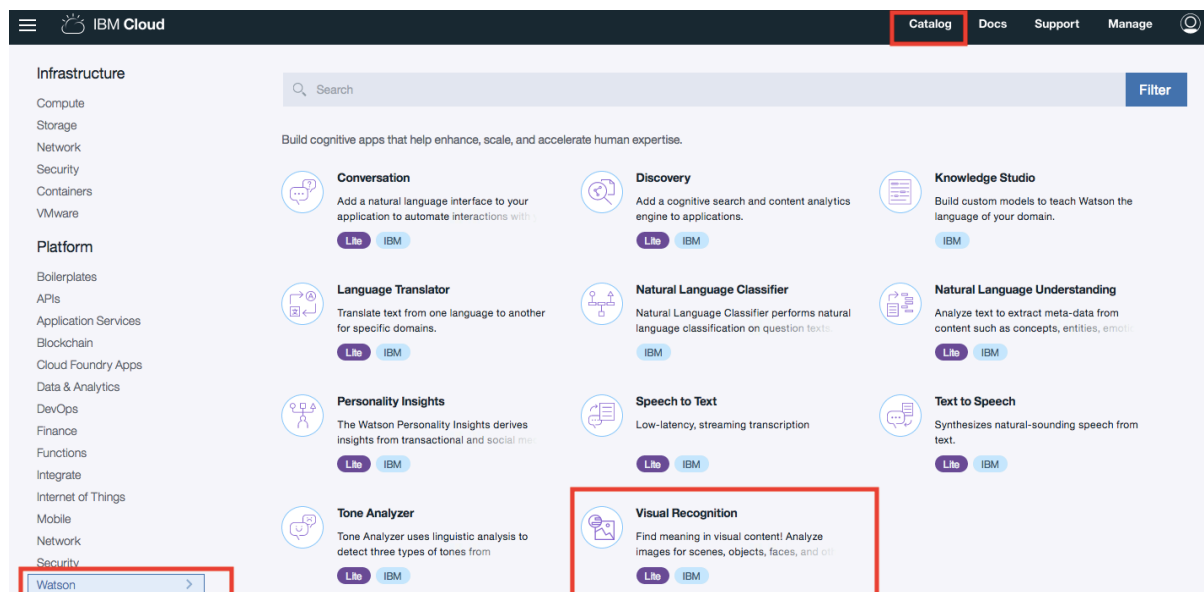
3. Enter **App Name** and **Host name** and click on **Create**.

The screenshot shows the 'Create a Cloud Foundry App' page for the 'Node-RED Starter' application. The page includes a sidebar with 'View all' and 'View Docs' links. The main form contains the following fields:

- App name:** A text input field containing 'caloriecounter-webapp'.
- Host name:** A text input field containing 'caloriecounter-webapp'.
- Domain:** A dropdown menu with 'mybluemix.net' selected.
- Choose a region/location to deploy in:** A dropdown menu with 'US South' selected.
- Choose an organization:** A dropdown menu with 'ryamarc@in.ibm.com' selected.
- Choose a space:** A dropdown menu with 'dev' selected.
- Selected Plan:** A section with two dropdown menus: 'SDK for Node.js™' (Default) and 'Cloudant NoSQL DB' (Lite).

At the bottom of the page, there are links for 'Need Help?' and 'Estimate Monthly Cost', and a prominent blue 'Create' button.

4. While App is staging, goto **Catalog** and **Create Watson Visual Recognition Service**.



← View all

## Visual Recognition

Find meaning in visual content! Analyze images for scenes, objects, faces, and other content. Choose a default model off the shelf, or create your own custom classifier. Develop smart applications that analyze the visual content of images or video frames to understand what is happening in a scene.

**Service name:**  
Visual Recognition-k8

**Choose a region/location to deploy in:**  
US South

**Choose an organization:**  
riyamaro@in.ibm.com

**Choose a space:**  
dev

[View Docs](#)

**AUTHOR** IBM  
**PUBLISHED** 01/16/2018  
**TYPE** Service  
**LOCATION** Sydney, United Kingdom, US South

### Features

- General Model**  
 Generate class keywords that describe the image. Use your own images, or extract relevant image URLs from publicly accessible webpages for analysis.
- Food Model (Public Beta)**  
 Utilize a specialized vocabulary of over 2000 foods to identify meals, food items, and dishes with enhanced accuracy.
- Custom Model**  
 Create custom, unique visual classifiers. Use the service to recognize custom visual concepts that are not available with general model.
- Explicit Model (Public Beta)**  
 Assess whether an image contains objectionable or adult content that may be unsuitable for general audiences.

Need Help? [Contact IBM Cloud Sales](#) [Estimate Monthly Cost](#) [Cost Calculator](#)

**Create**

5. Open your app from Dashboard and click on **Connections**. Click on **Create Connection**.

IBM Cloud

Catalog Docs Support Manage

Getting started  
Overview  
Runtime  
**Connections**  
Logs  
Monitoring  
API Management

Cloud Foundry apps /

caloriecounter-webapp Starting [Visit App URL](#)

Org: riyamaro@in.ibm.com Location: US South Space: dev

Filter items

**Create connection**

CONNECTION NAME	TYPE
caloriecounter-webapp-cloudantNoSQLDB	Cloudant NoSQL DB

6. **Connect** recently created Visual Recognition Service to your application

Getting started  
Overview  
Runtime  
**Connections**  
Logs  
Monitoring  
API Management

### Connect Existing Compatible Service

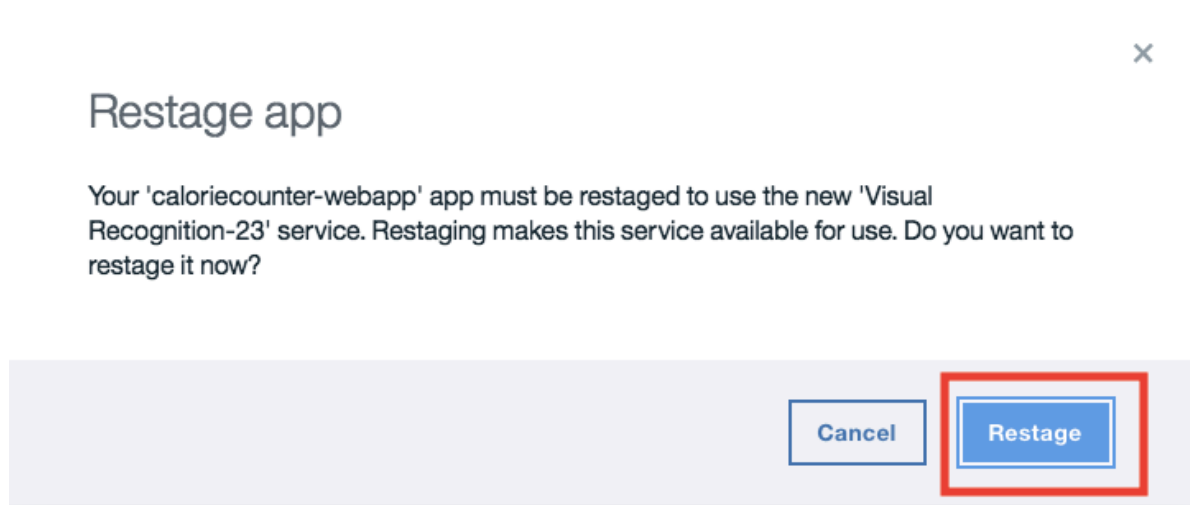
All Resources

Search compatible services

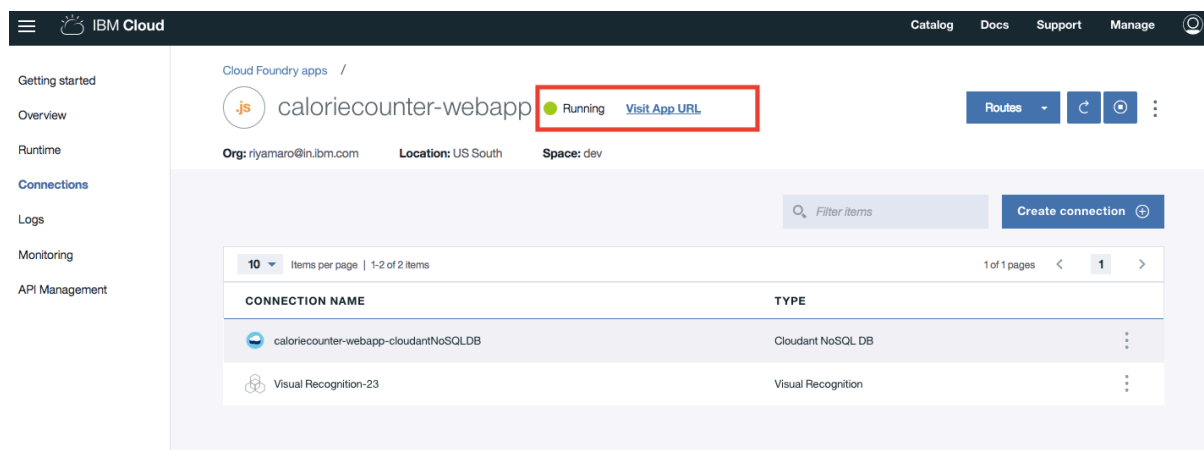
SERVICES	RESOURCE GROUP	PLAN	SERVICE OFFERING
testapi47-cloudantNoSQLDB	--	Lite	Cloudant NoSQL DB
testapps01-cloudantNoSQLDB	--	Lite	Cloudant NoSQL DB
Tone Analyzer-cn	--	Standard	Tone Analyzer
tsmartcampdb	--	Entry	Db2 Warehouse
Visual Recognition-23	--	Lite	Visual Recognition
voucherDB	--	Entry	Db2 Warehouse
WatsonConversation	--	Lite	Conversation

**Connect**

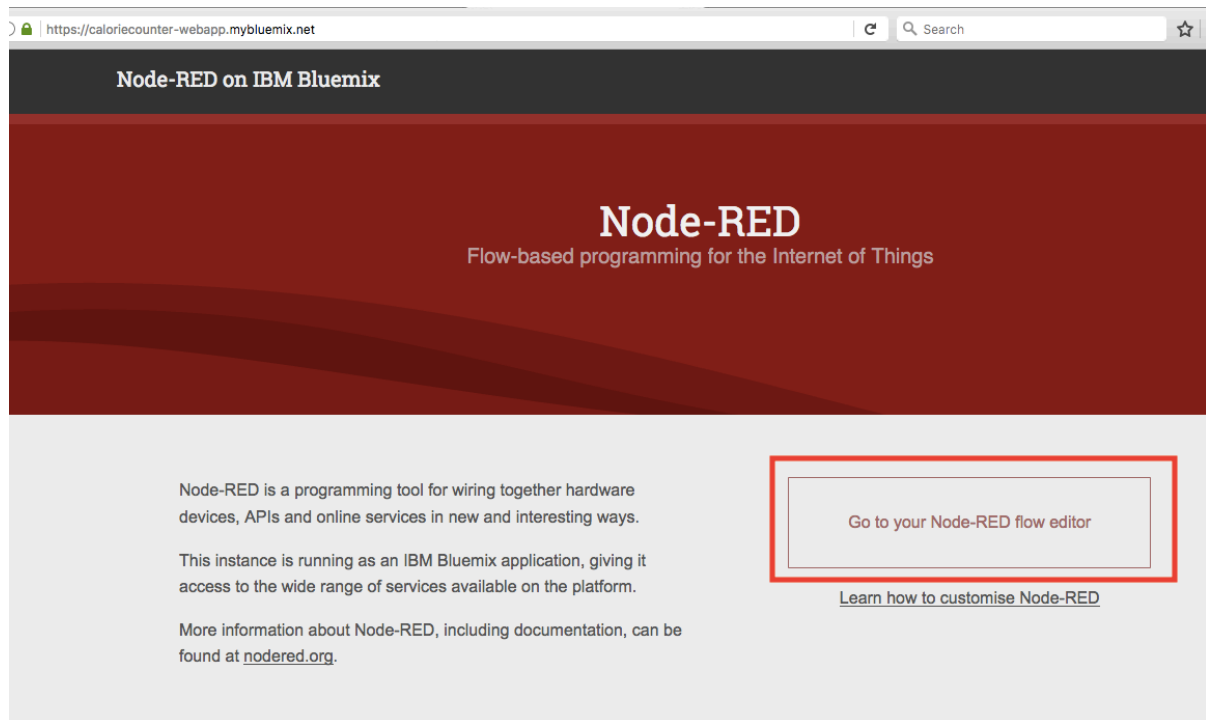
- Click on **Restage** to restage the app with the latest connections and updates.



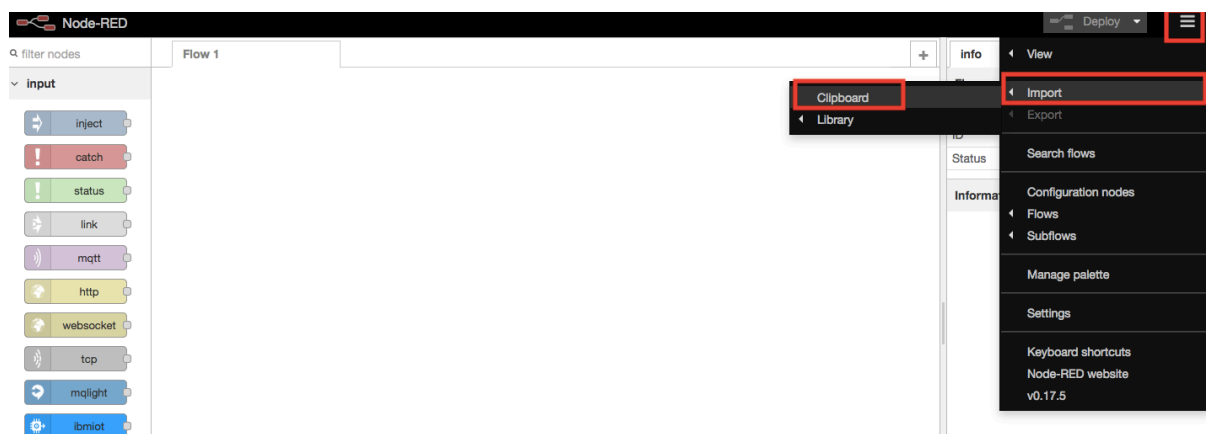
- Open your application URL by clicking on **Visit App URL**.

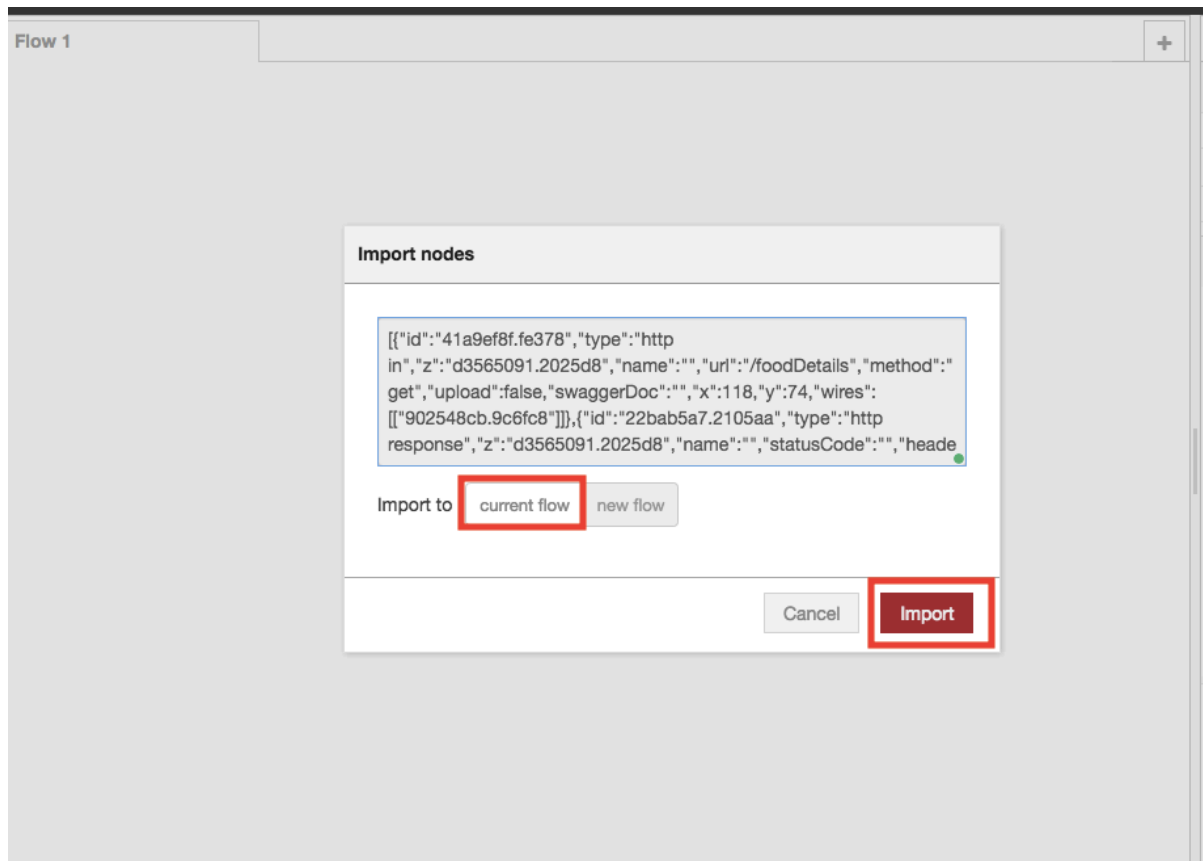


9. Click on **Go to your Node-RED flow editor**. Before this step it might prompt for multiple other steps where you can enter details as prompted for if you want your NODE-RED flow to be secured.

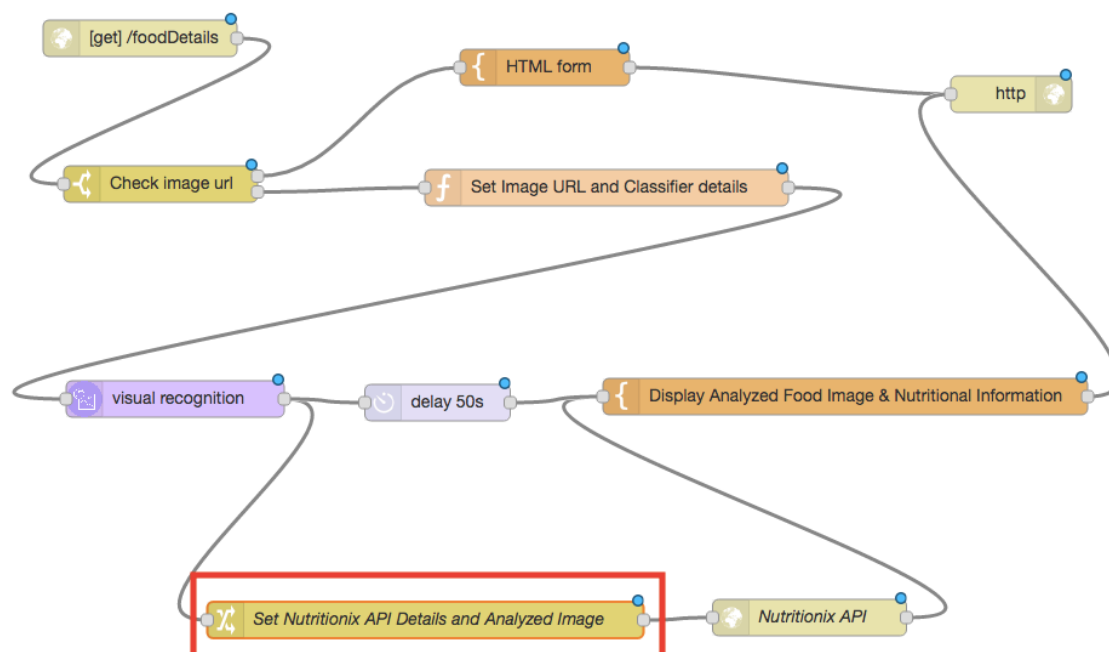


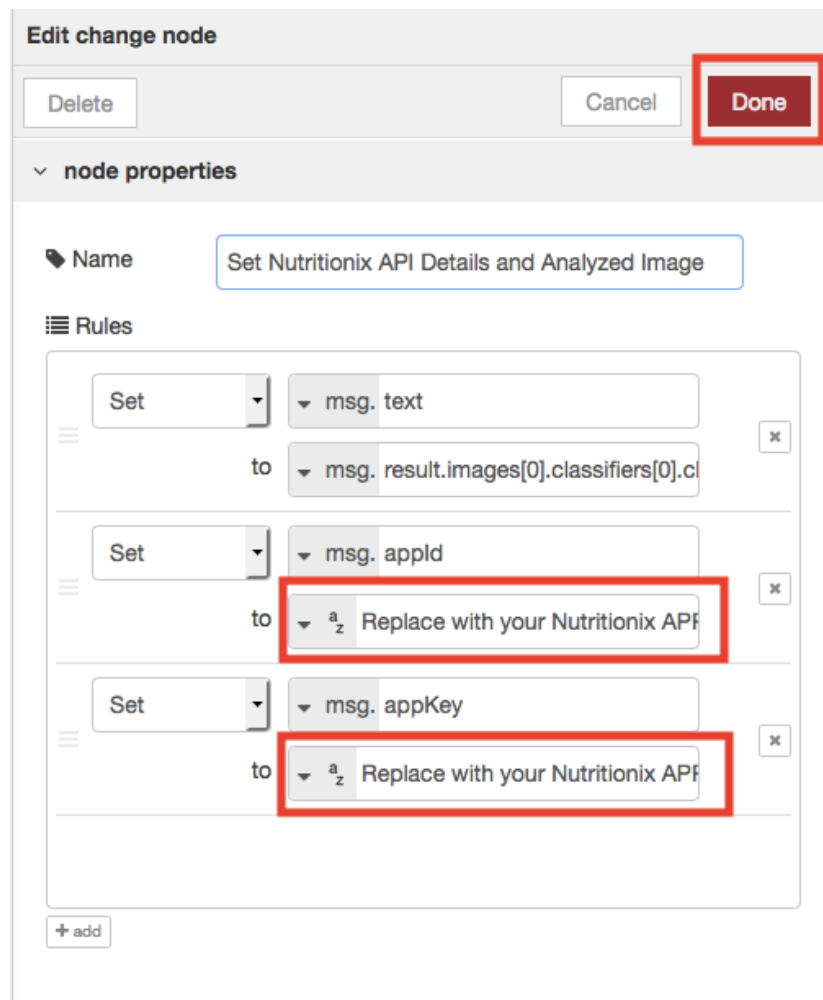
10. Import the NODE-RED flow as shown below from [https://raw.githubusercontent.com/IBMDevConnect/IBMCodeDay-2018/master/Visual\\_Recognition\\_Minilab/calorie-counter-nodered-flow](https://raw.githubusercontent.com/IBMDevConnect/IBMCodeDay-2018/master/Visual_Recognition_Minilab/calorie-counter-nodered-flow)



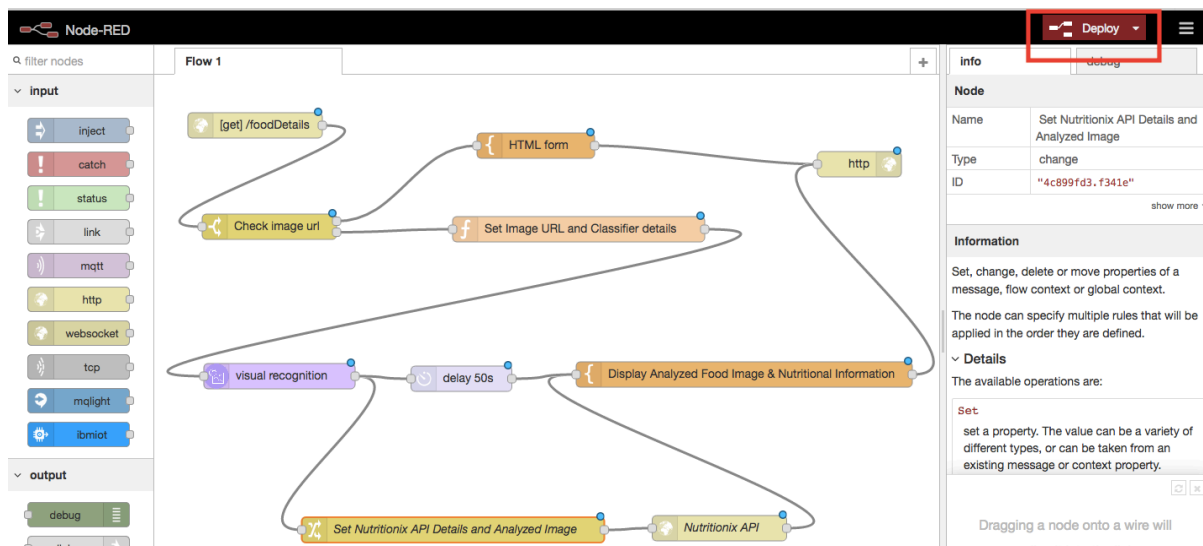


11. Double click on ***Set Nutritionix API Details and Analyzed Image*** and ***Update Nutritionix App ID*** and ***App Key*** with your App ID and App Key that you got after registering in Nutritionix Developer account.





12. Deploy the NODE-RED flow by clicking on **Deploy**



13. In another tab, go to your **Application URL** <your\_host\_name>.mybluemix.net/foodDetails

14. Right click on any image and **copy image location**. Enter image location in text box and analyse the image.

Congratulations, you have now learnt to build a Calorie counter app using Watson Visual Recognition that can track your calorie with just a snap!

## Sample Output:

### Calorie Counter App using Watson Visual Recognition

Simplify your calorie counting using Watson Visual Recognition!



Right-click one of the above images and select Copy image location and paste the URL in the box below OR  
Do an image search for food. After you click on an image, to the right it usually says "View image" click that to get the URL!

Image URL:

### Calorie Counter App using Watson Visual Recognition

Simplify your calorie counting using Watson Visual Recognition!

Analyzed image: <http://www.vegrecipesofindia.com/wp-content/uploads/2009/08/dhaba-style-dal-fry-recipe-0.jpg>



Images Processed: 1

#### Watson Sees..

Classes	Confidence Score
dal tadka	0.784
lentil dish	0.784
vegetable	0.784
lentil soup	0.5
soup	0.511

#### Nutritional Information

ITEM NAME	CALORIES	TOTAL FAT	SERVING QUANTITY	SERVING SIZE UNIT
Dal Tadka	180	6	1	serving
Tadka Dal	108.67	6.9	1	serving



## Related Links:

- <https://developer.ibm.com/code/patterns/create-an-android-calorie-counter-app/>
- <https://www.ibm.com/blogs/bluemix/2016/10/watson-visual-recognition-training-best-practices/>
- <https://www.ibm.com/developerworks/library/cc-sample-code-image-classification-watson-node/index.html>
- <https://visual-recognition-demo.ng.bluemix.net/>
- <https://www.ibm.com/developerworks/library/cc-sample-code-facial-recognition-watson-node/index.html>