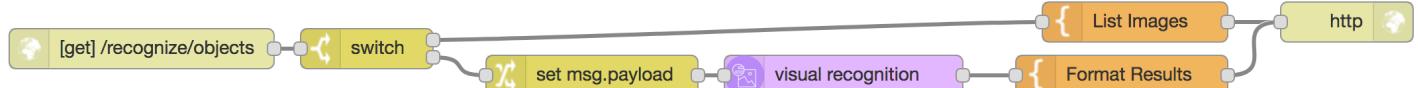


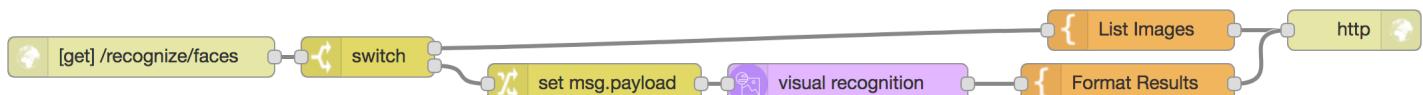
Visual Recognition in Node-RED

Hands-On Lab

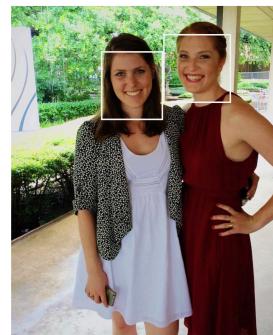
JeanCarl Bisson | jbisson@us.ibm.com | [@dothewww](https://twitter.com/dothewww)



Recognize objects and colors in an image
(see *Recognize Objects and Colors in Node-RED*)



Recognize faces in an image
(see *Recognize Faces in Node-RED*)



default	
Class	Score: Type Hierarchy
baked Alaska	0.609 /food/nutrition/dessert/baked Alaska
dessert	0.753
nutrition	0.753
food	0.895
cinnamon roll	0.604 /food product/bread/bun/sweet roll/cinnamon roll
sweet roll	0.685
bun	0.687
bread	0.77
food product	0.77
drop scone	0.53 /food product/bread/drop scone
whip	0.53 /food/nutrition/dessert/whip
chocolate color	0.999

Gender	Age Range	Location
FEMALE	(0.924 42)	[18-24 (0.395 386) 181.95 114X127]
FEMALE	(0.989 013)	[18-24 (0.509 354) 301.62 125X127]



A digital copy of this lab and code snippets can be found at:
<http://ibm.biz/node-red-visual-recognition>

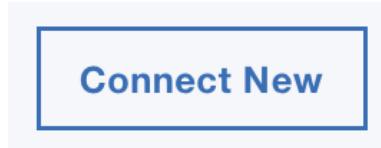


Add Visual Recognition Service in IBM Bluemix

The Visual Recognition service analyzes images and classifies objects and faces. This tutorial uses the Node-RED boilerplate in IBM Bluemix with the Visual Recognition service found under the **Boilerplates** section of the IBM Bluemix catalog.

To get started using the Visual Recognition service, you'll need to create service credentials.

1. Go to the **Connections** tab in the application overview for your Node-RED application in the IBM Bluemix dashboard. Click on **Connect New**.

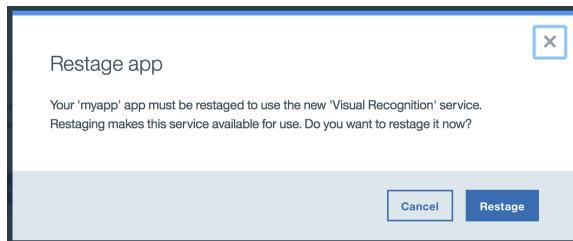


2. Click on the **Visual Recognition** tile under the Watson section. Click on **Create**.

A screenshot of the IBM Bluemix catalog interface. On the left, there's a sidebar with categories like All Categories, Infrastructure, Apps, and Services. Under Services, the Watson category is selected, and the Visual Recognition service is highlighted with a blue callout box. The main area shows various Watson services with their descriptions and creation options (Lite or IBM).

- Conversation**: Add a natural language interface to your application to automate interactions with...
- Discovery**: Add a cognitive search and content analytics engine to applications.
- Document Conversion**: Converts a HTML, PDF, or Microsoft Word™ document into a normalized HTML, plain...
- Language Translator**: Translate text from one language to another for specific domains.
- Natural Language Classifier**
- Visual Recognition**: Find meaning in visual content! Analyze images for scenes, objects, faces, and o...
- Natural Language Understanding**: Analyze text to extract meta-data from content such as concepts, entities, emoti...
- Personality Insights**: The Watson Personality Insights derive insights from transactional and social...
- Speech to Text**: Low-latency, streaming transcription
- Text to Speech**: Synthesizes natural-sounding speech from text.
- Tone Analyzer**: Tone Analyzer uses linguistic analysis to detect three types of tones from...
- Visual Recognition**: Find meaning in visual content! Analyze images for scenes, objects, faces, and o...

3. IBM Bluemix will prompt to restage the application. Click on **Restage**. The application will restart and include the new service credentials in the environment.

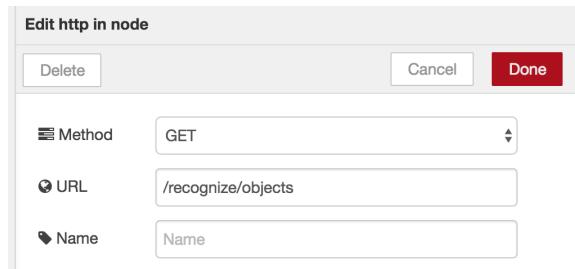


4. When the application has finished restaging, open the Node-RED Flow Editor. If you already have Node-RED open, refresh the page.

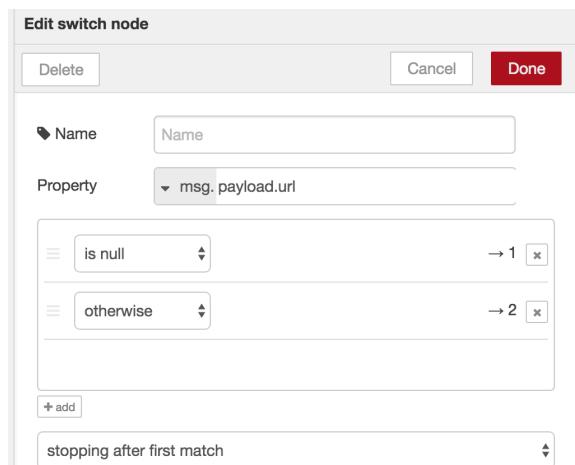
Recognize Objects and Colors in Node-RED

The Watson Visual Recognition service takes either an URL or a file of an image and classifies the objects and colors in the image. In this section, we will analyze an image that is accessible via an URL. Please refer to the **Add Visual Recognition Service in IBM Bluemix** section to create and bind the Visual Recognition service to your Node-RED application.

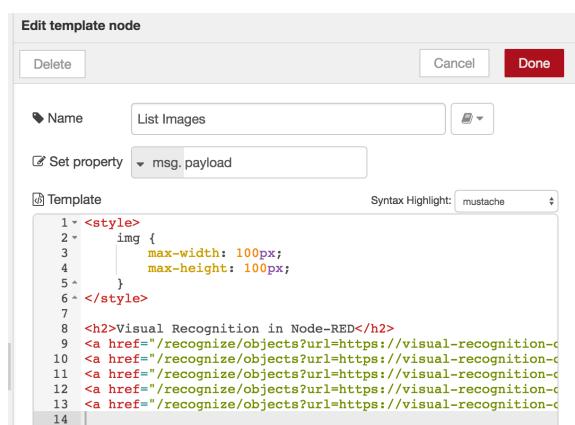
1. Add a  node as shown below.



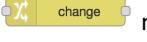
2. We should check if a *url* query parameter is present. If there is no URL, a webpage containing images will be displayed. If there is a URL, the image will be analyzed by the Visual Recognition service and a results page will be displayed. Add a  node as shown below.

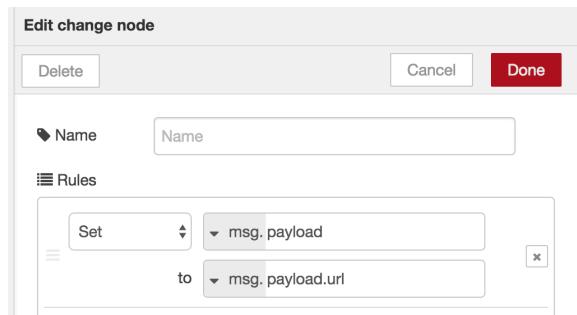


3. For the first case, where there is no URL being passed in, add a  node with the HTML shown below.

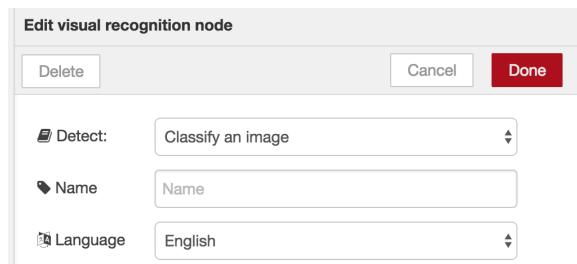


Get the code:
ibm.biz/Bdi3Zf

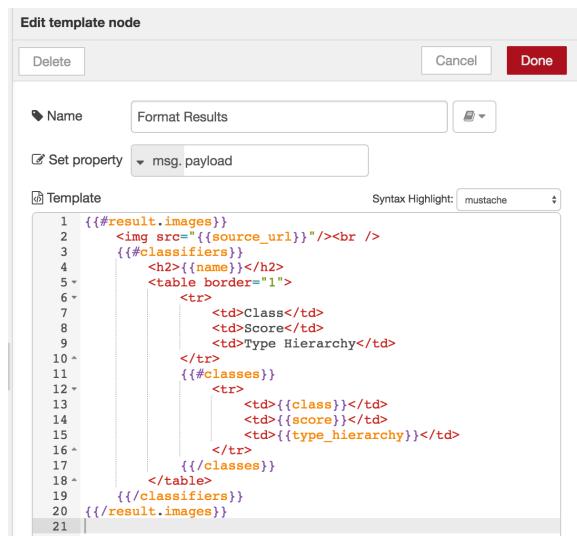
4. For the second case, when a URL is passed in, we need to change the payload value to the URL for the Visual Recognition node to use in the next step. Add a  node as shown below.



5. Add a  node as shown below.

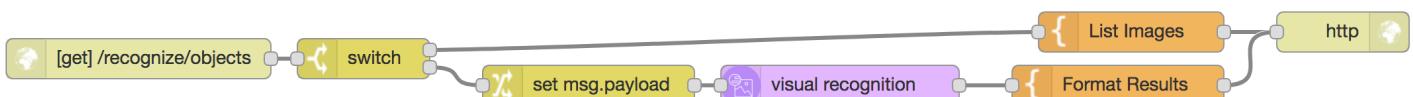


6. Add a  node with the HTML shown below.



Get the code:
ibm.biz/Bdi3ZP

7. Add a  node. Connect the nodes together as shown below.



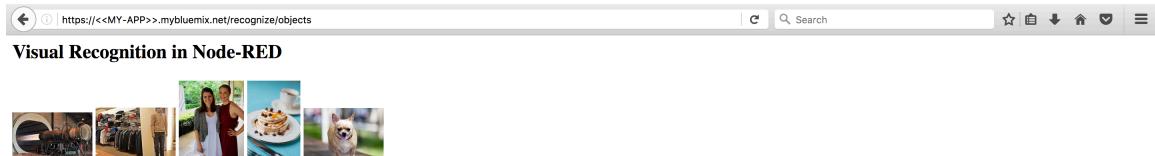
8. Click on the red  button in the top-right corner of the screen to save and deploy your changes.

9. Open a browser tab and visit your application's endpoint, appended with /recognize/objects:

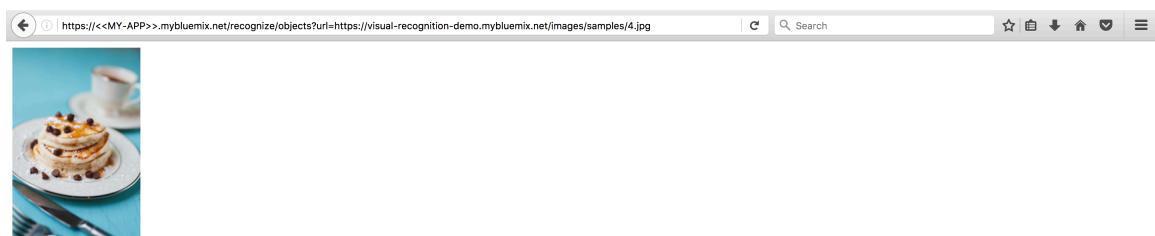
`http://<<MY-APP>>.mybluemix.net/recognize/objects`

- Replace <<MY-APP>> with the host of the Node-RED application you chose.

10. Since no url parameter was passed in the query string, the list of images is displayed. Select an image from the gallery.



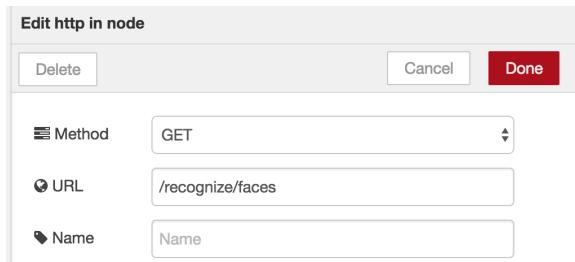
11. Notice the *url* parameter in the query string. Visual Recognition analyzes the image at this URL. The default classifier will return classes and scores, along with type hierarchies of objects in the image. Names of colors are returned appended with *color*.



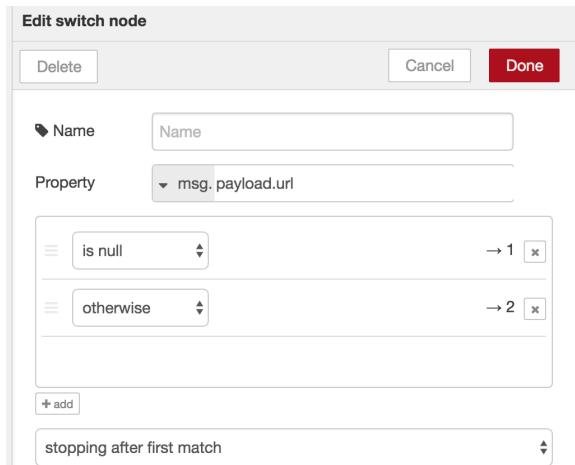
Recognize Faces in Node-RED

The Watson Visual Recognition service takes either an URL or a file of an image and detects faces in the image. In this section, we will analyze an image that is accessible via an URL. Please refer to the **Add Visual Recognition Service in IBM Bluemix** section to create and bind the Visual Recognition service to your Node-RED application.

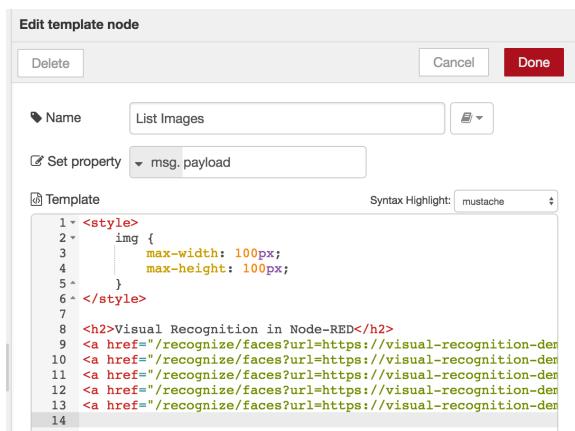
1. Add a  node as shown below.



2. We should check if a *url* query parameter is present. If there is no URL, a webpage containing images will be displayed. If there is a URL, the image will be analyzed by the Visual Recognition service and a results page will be displayed. Add a  node as shown below.

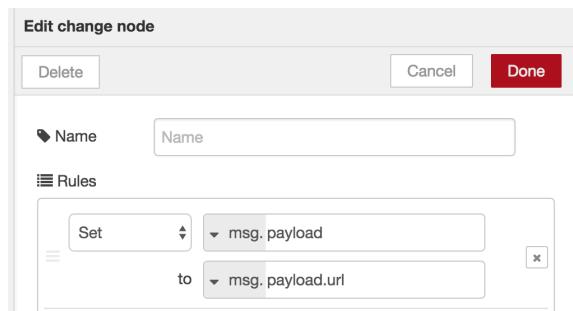


3. For the first case, where there is no URL being passed in, add a  node with the HTML shown below.



Get the code:
ibm.biz/Bdi3Zy

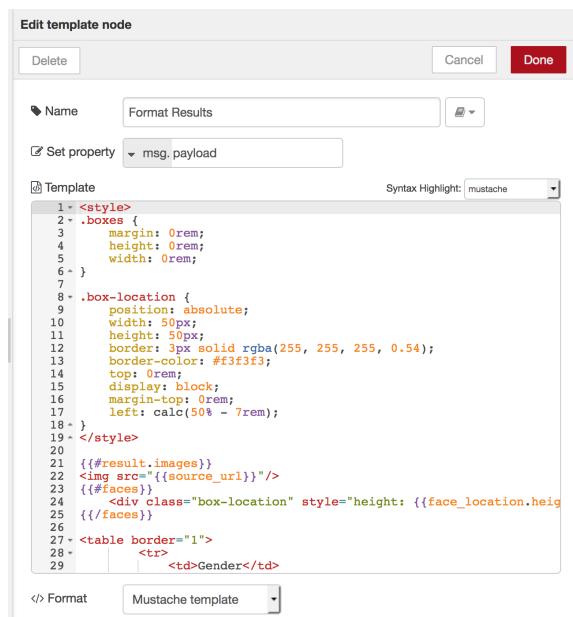
4. For the second case, when a URL is passed in, we need to change the payload value to the URL for the Visual Recognition node to use in the next step. Add a  node as shown below.



5. Add a  node as shown below.

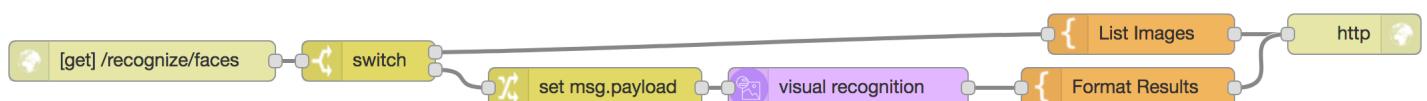


6. Add a  node with the HTML shown below.



Get the code:
ibm.biz/Bdi3ZM

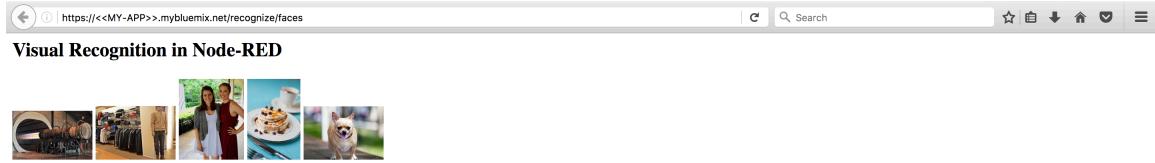
7. Add a  node. Connect the nodes together as shown below.



- Click on the red  Deploy button in the top-right corner of the screen to save and deploy your changes.
- Open a browser tab and visit your application's endpoint, appended with /recognize/faces:

<https://<<MY-APP>.mybluemix.net/recognize/faces>

- Replace <<MY-APP>> with the host of the Node-RED application you chose.
- Since no url parameter was passed in the query string, the list of images is displayed. Select an image from the gallery.



- Notice the *url* parameter in the query string. Visual Recognition analyzes the image at this URL. The gender, age range, and location of each face found in the image is listed. The CSS styles in the HTML template have outlined the faces in the image.

