Python on BlueMix Setting up your first Web Server

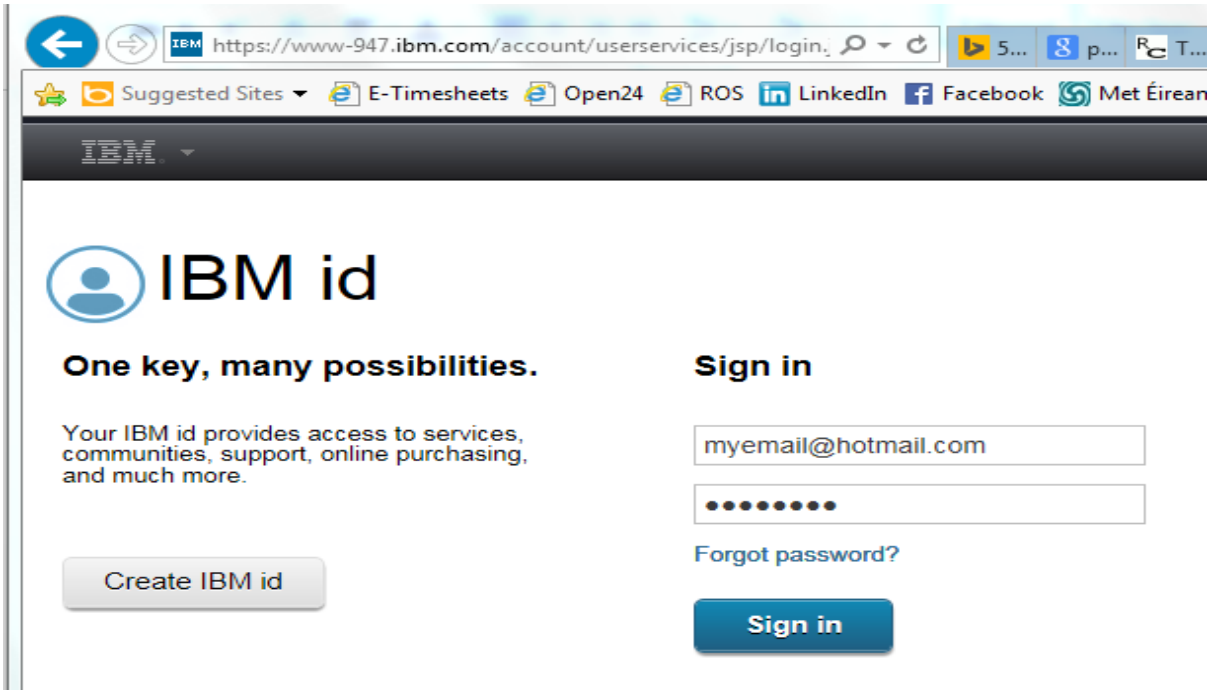
This Sushi Card is based on the excellent instructions from Rene Svendsen at:

http://thoughtsoncloud.com/2014/08/getting-started-python-ibm-bluemix/

Please refer to Rene's tutorial if you want more information on any of the steps below.

Step 1: Log in to IBM Bluemix.

Use your IBM id and password to login to Bluemix (create an IBM id if you don't have one yet – you will use your IBM id for Bluemix and for other IBM sites such as the DevOps Services developer site at hub.jazz.net):



Step 2: Install the Cloud Foundry command-line interface.

1. Go to https://github.com/cloudfoundry/cli
2. Scroll down to the Downloads section of the `README.md` file, and then select and download the installer for your operating system.
3. Extract and install `cf_installer-windows-386.zip`
4. Open a command line on your operating system and use the `cf -v` command to verify that cf is working. You should see something similar to this:

```
$ cf -v

cf version 6.2.0-c9d4aaa-2014-06-19T22:04:01+00:00
```

Step 3: Write the code.

1. Make up a name for your Python web server. For example, you could use your initials followed by something like `pythonsrv`. For this card we will use the name `jkpythonsrv` for our server.

2. Now, create a new folder for your server project (you can use the name of the server as the folder name to keep things simple). We used `jkpythonsrv` as the name of our server project folder.

3. In your server project folder, create a file named `server.py` containing the basic web server code that serves files relative to the current directory.

```
import os
```

```
import http.server
import socketserver

PORT = int(os.getenv('VCAP_APP_PORT', '8000'))
Handler = http.server.SimpleHTTPRequestHandler

httpd = socketserver.TCPServer(("", PORT), Handler)
print("serving at port", PORT)
httpd.serve_forever()
```

4. Now create an empty file named `requirements.txt`. The file should be empty because this application does not have any dependencies that need to be installed.

5. Finally, create a file named `runtime.txt` containing the Python version you wish to use as runtime.

   ```
   python-3.4.1
   ```

Step 4: Deploy the sample application.

1. Open a command line on your operating system and navigate to your server project folder.

2. Using your IBM Bluemix id and password, login using the following cf commands:

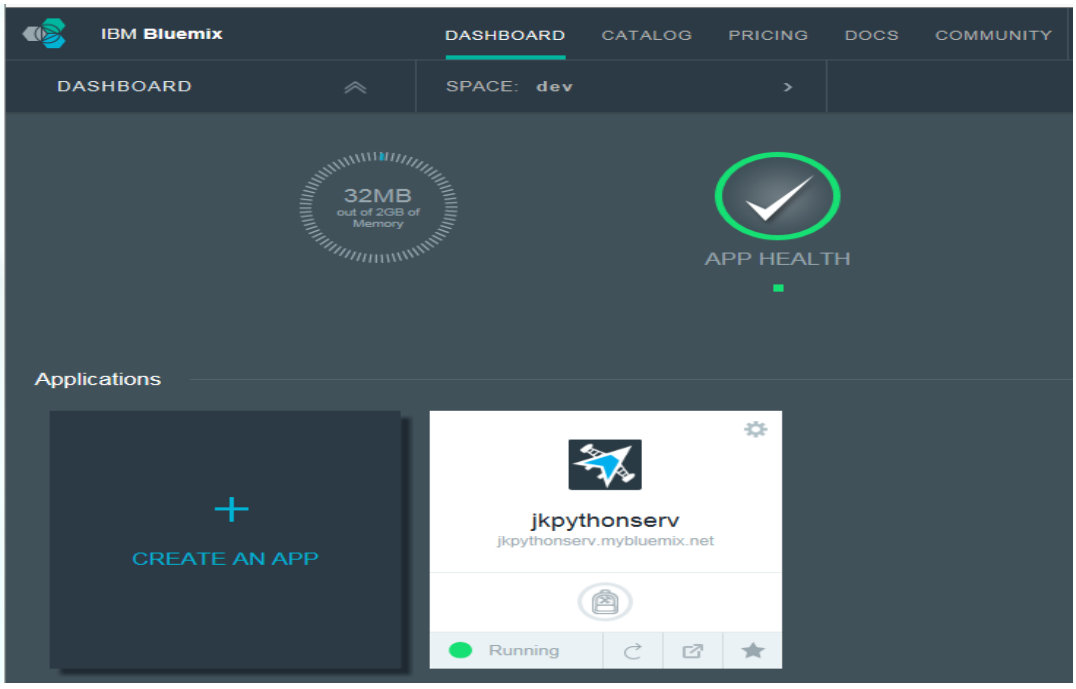
   ```
   $ cf api https://api.ng.bluemix.net

   $ cf login
   ```

3. Push a basic Python web server to the Bluemix runtime environment using the following command (Remember, `jkpythonsrv` is the name of our python server – you can use any name you want for your own server!):

   ```
   $ cf push jkpythonsrv -m 32M -b https://github.com/cloudfoundry/cf-buildpack-python.git -c "python server.py"
   ```

Step 5: Verify that your application is running.

1. Navigate to your web browser and locate the IBM Bluemix welcome screen.
2. On the IBM Bluemix dashboard, assuming you did not get any errors when you pushed the basic Python server, you should see a `jkpythonsrv` application running.



This means that your server is up and running! Note the URL for your server. The final web page should look very similar to this when you browse to your server's URL (recall that this very basic, but still very real, web server simply serves the files found in its own root folder – do you recognize some of these files?):