

To continue from where the last lecture finished you should be in the terminal window in the directory where your `server.js`, `package.json`, `manifest.yml` and `.cfignore` are located. You also need to be logged onto Bluemix in the `cf` tool. You can verify that you are logged on to the correct organisation, region and space by issuing the `cf t` command

Update **server.js** to use the environment variables set by Bluemix for port and host. Using this syntax also enables the code to run locally if the environment variables are not set:

```

1  var express = require("express");
2  var app = express();
3
4  var serverPort = process.env.VCAP_APP_PORT || 3000;
5  var serverHost = process.env.VCAP_APP_HOST || 'localhost';
6
7  app.get('/', function(req, res) {
8    res.send('Hello Coursera');
9  });
10
11 var server = app.listen(serverPort, serverHost, function() {
12   var host = server.address().address;
13   var port = server.address().port;
14   console.log('Listening at http://%s:%s', host, port);
15 });

```

Save the modified **server.js** code.

Create a new file **manifest.yml** and add the following content changing the name to something unique for your application.

```

1  ---
2
3  applications:
4
5  - name : bi-nodeerver
6
7    instances : 1
8
9    memory : 256M

```

You need to modify the name, as it needs to be unique within your region's default domain. **DO NOT COPY bi-nodeserver**, as your deploy will fail as the name is already in use.

Save the **manifest.yml** file.

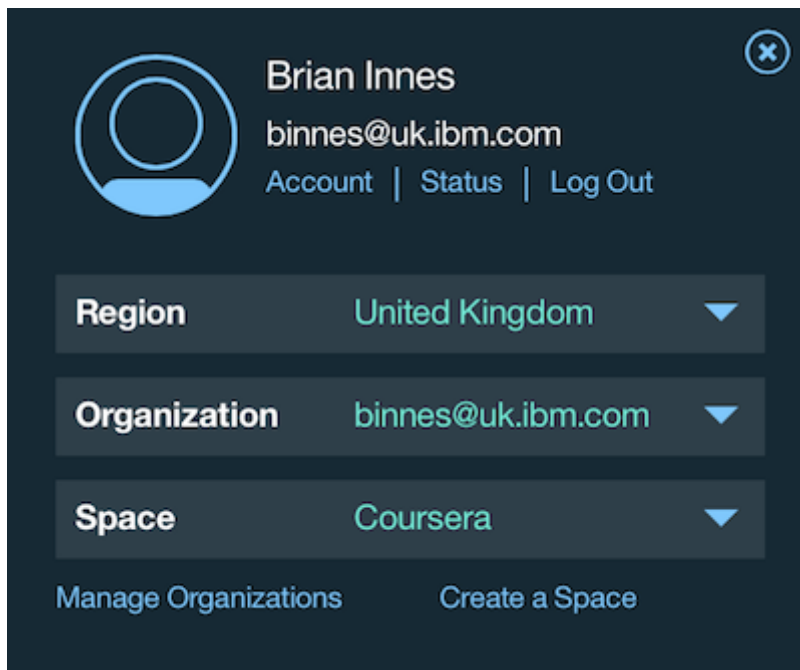
To use the `cf` command line tool you need to login to Bluemix. The first time you use the `cf` tool you should specify the `-a` option to specify the endpoint. After the first time the tool will default to the last used endpoint. You can find the endpoints for each region here https://new-console.eu-gb.bluemix.net/docs/public/index.html#ov_intro_reg

Login to Bluemix using the command:

```
1  cf l -a https://api.eu-gb.bluemix.net
```

Replace the API endpoint to match the region your NodeRED application is running in.

Follow the prompts to complete the login. You must specify the organisation and space that your NodeRED application is running in. To verify what they are click your name in the Bluemix UI, this will show the Region, Organisation and Space you are working in.



To deploy your application to Bluemix enter the command **cf push**. You must run this command in the same directory containing your **server.js**, **package.json** and **manifest.yml** files. After a short while you should get a message your application has started and the url for your application will also be displayed.

Copy the URL into the address bar of your browser to launch the application.

When the **cf push** command is run it sends all the files in the current directory and all subdirectories to Bluemix. To control this behaviour you can use the **.cfignore** file to specify any files or folders you do not want to send to Bluemix. We will create a **.cfignore** file to prevent the **node_modules** directory and subdirectories from being sent to Bluemix, as the deploy process will automatically run the required **npm install** commands for packages specified in **package.json**.

Create a new file and name it **.cfignore** then add a single line containing:

1	node_modules
---	--------------

rerun the **cf push** command

As the application is already running on Bluemix this push command will update the application, redeploying it which will cause it to stop and start.