

D O M
I N O
V 1 0

Setting up the right Environment for using the new

Domino v10 NodeRED nodes



WARNING !

This process is ONLY required until the HCL
AppDev pack will be made publicly available
as an NPM installable package

Local Machine settings

Domino v10 NodeRED
nodes



Assumptions

- You have access to the HCL App Dev Pack
- You have node v10 installed on your local machine.
There are problems using V11 !!
In case you run node v11, please downgrade to V10

Check the local NodeJS node path

- We want to install the AppDev pack globally, so that it will be available to all the NodeJS applications running on the local machine
- From your \$HOME directory, enter the command **node**
- Once in the nod application, enter the command **module.paths**
- You may see an output like the following:

```
stefanomac:~ stefano$ node
> module.paths
[ '/Users/stefano/repl/node_modules',
  '/Users/stefano/node_modules',
  '/Users/node_modules',
  '/node_modules',
  '/Users/stefano/.node_modules',
  '/Users/stefano/.node_libraries',
  '/usr/local/lib/node' ]
>
```



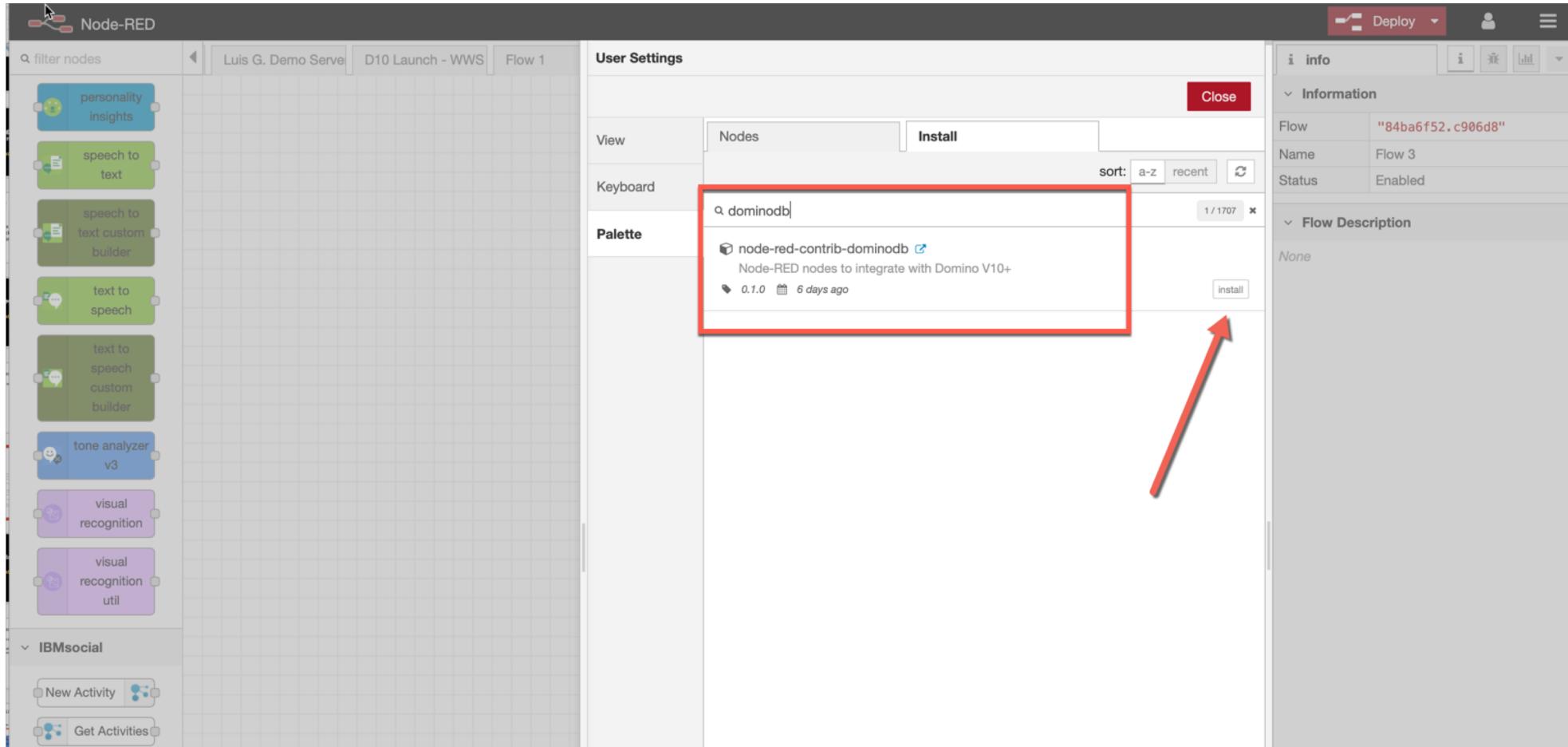
Check the local NodeJS node path – cont'd

- The problem is that the “/Users/node_modules” , “/node_modules” and “/usr/local/lib/node” directories **do not exist !!**
- On my system a /usr/local/lib/**node_modules** directory exist which contains the global nodejs modules available for my local machine
- Exit from the **node** application
- On Mac/Unix, issue the command
`export NODE_PATH=/usr/local/lib/node_modules .`
 - You may also want to set this new environment variable in your shell initialization file !!!!

Unzip the AppDev Pack from HCL

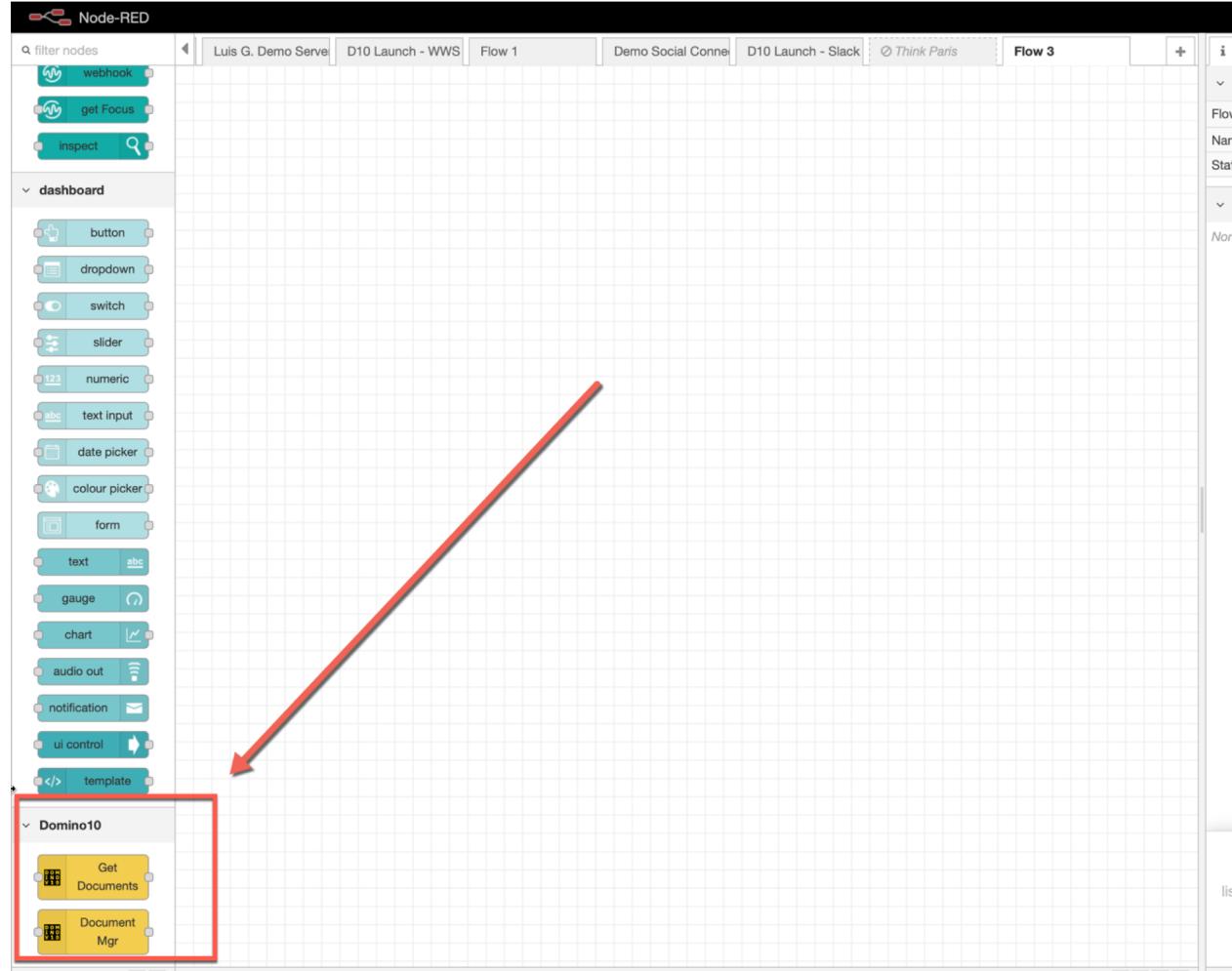
- Unzip the AppDev Pack in a directory of your choice
- Go to the directory which contains the **package** subdirectory
- Issue the command
npm install -g package
- If everything is ok, you will see a new directory being created at a
`/usr/local/lib/node_modules/@domino` directory
 - A `/usr/local/lib/node_modules/@domino/domino-db` subdirectory is also created which is a symbolic link to where the **package** subdirectory is located
 - You may want to avoid the symbolic link and have the content of the **package** directory physically deployed inside the new `/usr/local/lib/node_modules/@domino/domino-db` directory
- Now, the HCL AppDev Pack is installed on your local machine

Open your local NodeRED Editor



Install **node-red-contrib-dominodb** using the standard “Manage Palette” functionality in NodeRed

The NodeRED package is installed and ready to be used



IBM Cloud settings

Domino v10 NodeRED
nodes



Assumptions

- You have an IBM Cloud NodeRed instance already setup
- You have installed the HCL App Dev Pack on your local system
 - The AppDev Pack is available as **@domino/domino-db** on your local system

Go to your LOCAL installation of the AppDev Pack

- Suppose that you installed the HCL AppDev Pack in the **@domino/domino-db** under the **/usr/local/lib/node_modules** directory

```
stefanomac:node_modules stefano$  
stefanomac:node_modules stefano$ pwd  
/usr/local/lib/node_modules ←  
stefanomac:node_modules stefano$  
stefanomac:node_modules stefano$ ls @domino/domino-db ←  
LICENSE README.md REFERENCE.md domino-db.js node_modules package.json src  
stefanomac:node_modules stefano$
```

- Move to the domino-db directory : **cd @domino/domino-db**

```
stefanomac:node_modules stefano$ cd \@domino/domino-db/  
stefanomac:domino-db stefano$  
stefanomac:domino-db stefano$  
stefanomac:domino-db stefano$ pwd  
/usr/local/lib/node_modules/@domino/domino-db
```

“Pack” the AppDev Pack

- From that directory issue the command : **npm pack**

```
stefanomac:domino-db stefano$ npm pack
npm notice 📦 @domino/domino-db@1.0.0 ←
npm notice === Tarball Contents ===
npm notice 1.4kB package.json
npm notice 220B domino-db.js
npm notice 0 LICENSE
npm notice 11.1kB README.md
npm notice 36.2kB REFERENCE.md
npm notice 954B src/constants.js
npm notice 5.8kB src/database.js
npm notice 3.1kB src/document.js
npm notice 317B src/domino-db-error.js
npm notice 7.9kB src/requests/grpc/database.js
npm notice 4.0kB src/requests/grpc/document.js
npm notice 2.0kB src/requests/grpc/generated/domino_grpc_pb.js
npm notice 93.4kB src/requests/grpc/generated/domino_pb.js
npm notice 112.8kB src/requests/grpc/generated/errorcodes.js
npm notice 70B src/requests/grpc/generated/version.js
npm notice 2.0kB src/requests/grpc/index.js
npm notice 4.0kB src/requests/grpc/utils/bulk-document.js
npm notice 6.7kB src/requests/grpc/utils/convert-from-proto.js
npm notice 6.4kB src/requests/grpc/utils/convert-to-proto.js
npm notice 3.3kB src/requests/grpc/utils/grpc-helpers.js
npm notice 114B src/requests/http/database.js
npm notice 114B src/requests/http/document.js
npm notice 684B src/requests/http/index.js
npm notice 112B src/requests/http/server.js
npm notice 3.9kB src/requests/http/utils/das-query-params.js
npm notice 4.2kB src/requests/http/utils/http-helpers.js
npm notice 1.9kB src/requests/index.js
npm notice 4.2kB src/server.js
npm notice 1.9kB src/strings/errors.js
npm notice 117B src/strings/index.js
npm notice 90B src/utils/getter-factory.js
npm notice 121B src/utils/is-dev-mode.js
npm notice === Tarball Details ===
npm notice name:      @domino/domino-db ←
npm notice version:   1.0.0
npm notice filename:  domino-domino-db-1.0.0.tgz
npm notice hashalgo:  sha1 + md5
npm notice unpacked size: 319.2 kB
npm notice shasum:
npm notice integrity:
npm notice total files: 32
npm notice
domino-domino-db-1.0.0.tgz
```

“Pack” the AppDev Pack – cont’d

- A File is generated in the same directory named **domino-domino-db-1.0.0.tgz**

```
stefanomac:domino-db stefano$ ls -lt
total 240
-rw-r--r--  1 stefano  staff  63439 Nov  6 18:47 domino-domino-db-1.0.0.tgz
drwxr-xr-x  50 stefano  wheel  1600 Oct 18 18:15 node_modules
drwxr-xr-x@ 10 stefano  wheel   320 Oct 18 16:19 src
-rw-r--r--@  1 stefano  wheel     0 Oct 26 1985 LICENSE
-rw-r--r--@  1 stefano  wheel  11102 Oct 26 1985 README.md
-rw-r--r--@  1 stefano  wheel  36189 Oct 26 1985 REFERENCE.md
-rw-r--r--@  1 stefano  wheel   220 Oct 26 1985 domino-db.js
-rw-r--r--@  1 stefano  wheel  1401 Oct 26 1985 package.json
stefanomac:domino-db stefano$
```



- Move this file to a temporary directory. We will use it in a moment

Go to IBM Cloud and open your Toolchain

The screenshot shows the IBM Cloud Overview page for a running application. The application details are as follows:

- Buildpack:** Node-RED Starter
- Instances:** 1 (All instances are running, Health is 100%)
- GB Memory per Instance:** 1
- Total GB Allocation:** 3 GB still available

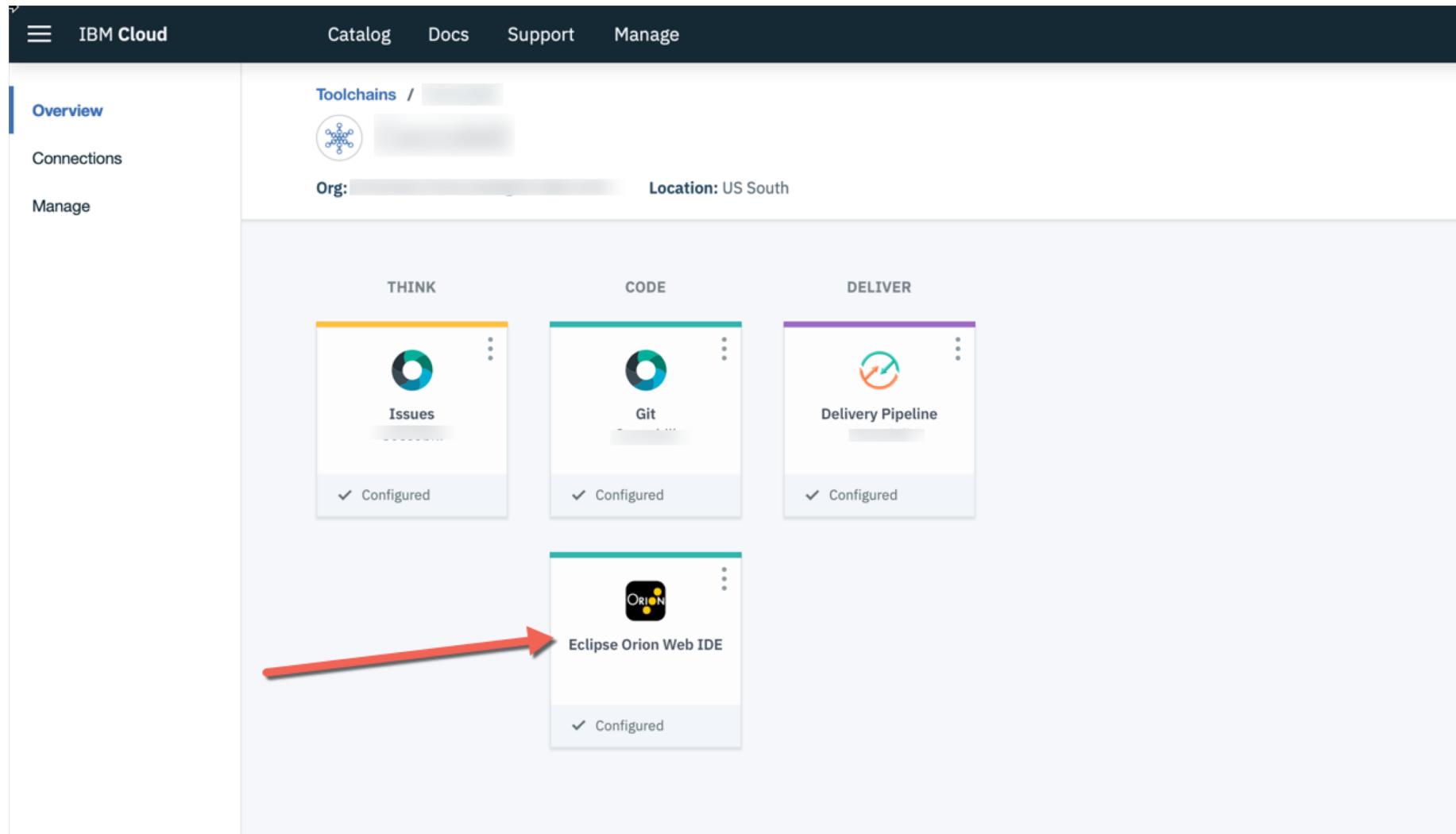
The sidebar on the left lists navigation options: Getting started, Overview (highlighted with a red arrow), Runtime, Connections, Logs, API Management, and Monitoring.

The bottom right section, "Continuous delivery", contains the following information:

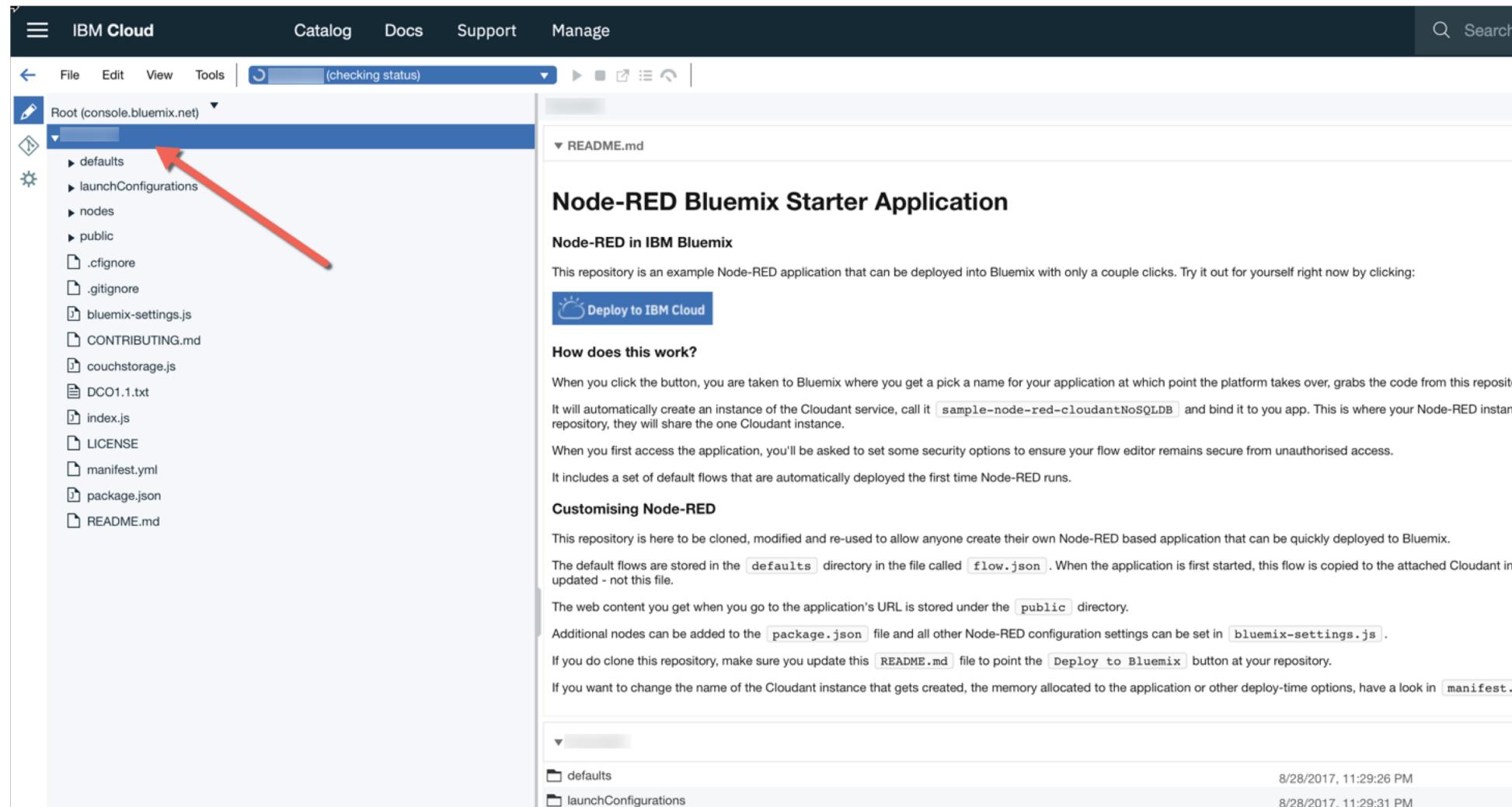
- Current and estimated cost excludes connected services.**
- Runtime cost:** €0.00 (Current charges for billing period) and €10.57 (Estimated total for billing period Nov 1, 2018 - Nov 30, 2018). A "View full usage details" button is present.
- Continuous delivery:** You enabled continuous delivery and have a toolchain. With your toolchain, you can automate builds, tests, deployments, and more. A "View Docs" link is provided.

A red arrow points to the "View toolchain" button at the bottom right of the continuous delivery section.

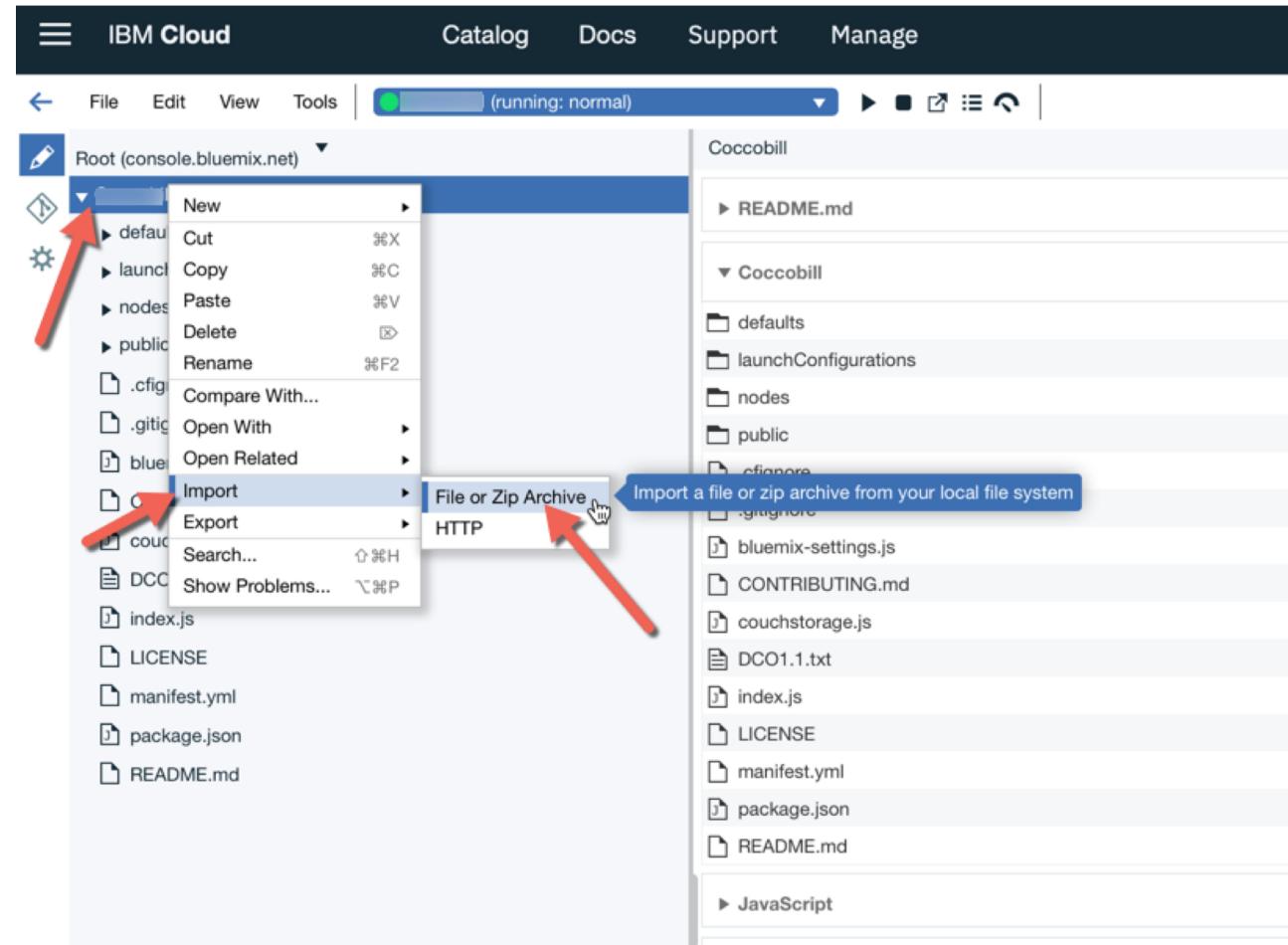
Click on the “Eclipse Orion Web IDE” icon



Expand the Directory Structure

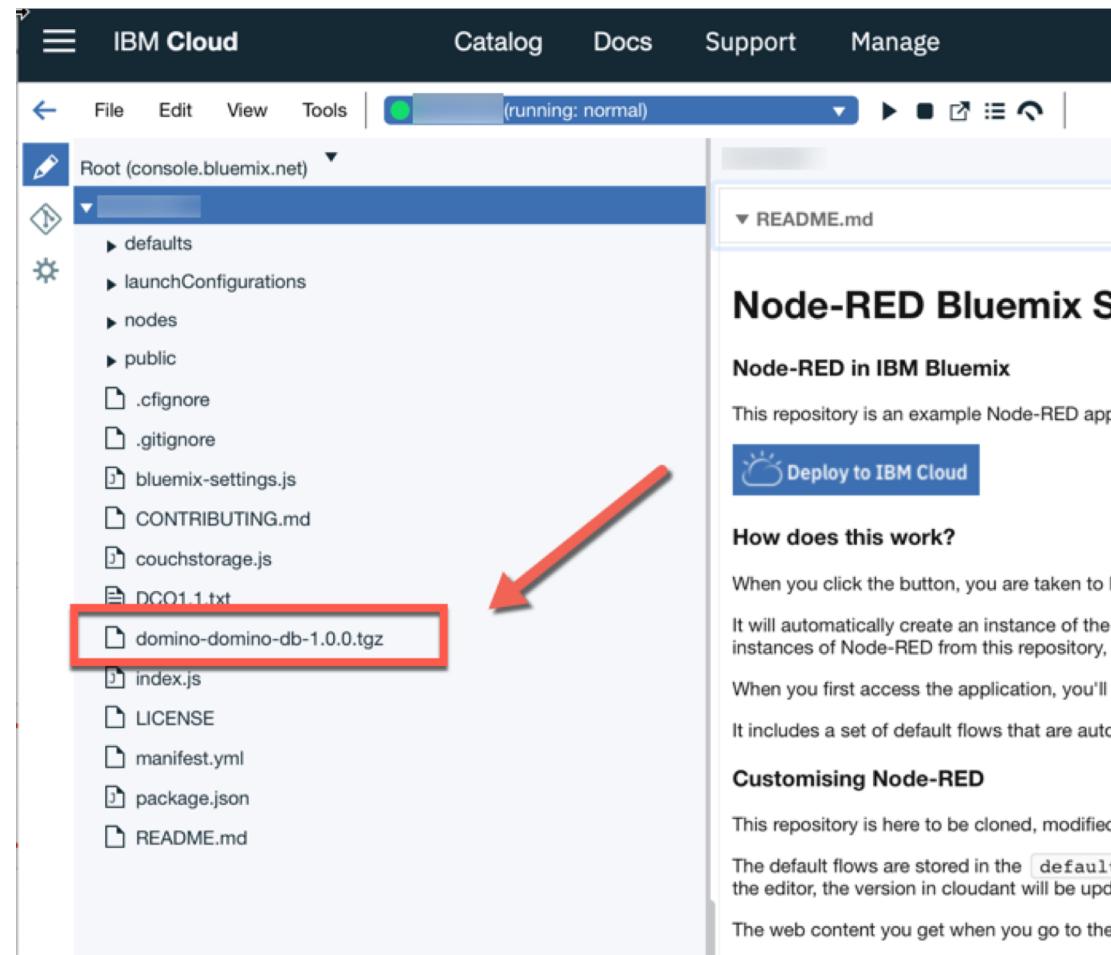


Import the tarball

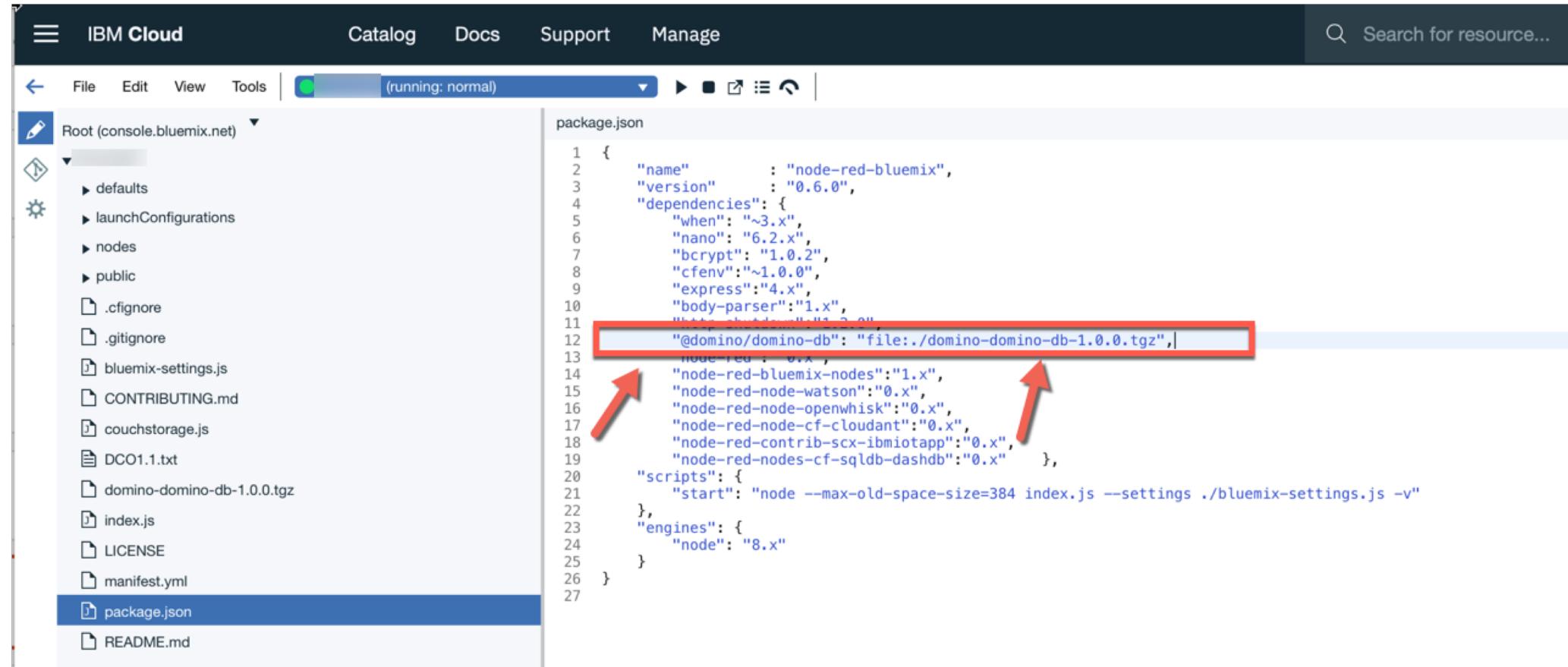


Import the file in the root directory !!!!

Import the tarball – cont'd



Modify the package.json file

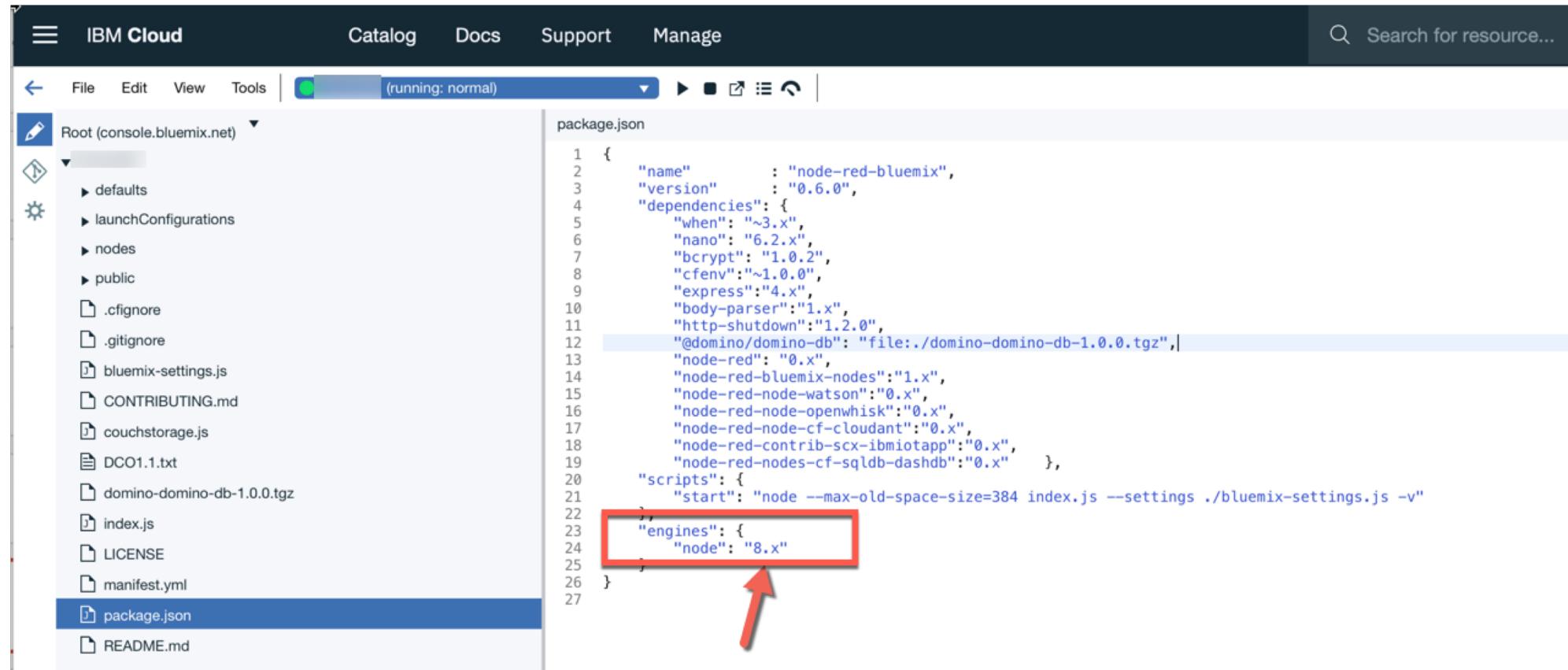


```
1 {  
2   "name"      : "node-red-bluemix",  
3   "version"    : "0.6.0",  
4   "dependencies": {  
5     "when": "~3.x",  
6     "nano": "6.2.x",  
7     "bcrypt": "1.0.2",  
8     "cfenv": "~1.0.0",  
9     "express": "4.x",  
10    "body-parser": "1.x",  
11    "http://bluemix.net:4321"  
12    "@domino/domino-db": "file:./domino-domino-db-1.0.0.tgz",  
13    "node-red": "0.x",  
14    "node-red-bluemix-nodes": "1.x",  
15    "node-red-node-watson": "0.x",  
16    "node-red-node-openwhisk": "0.x",  
17    "node-red-node-cf-cloudant": "0.x",  
18    "node-red-contrib-scx-ibmiotapp": "0.x",  
19    "node-red-nodes-cf-sqldb-dashdb": "0.x"  },  
20   "scripts": {  
21     "start": "node --max-old-space-size=384 index.js --settings ./bluemix-settings.js -v"  
22   },  
23   "engines": {  
24     "node": "8.x"  
25   }  
26 }  
27
```

Add the following line :

"@domino/domino-db": "file:./domino-domino-db-1.0.0.tgz",

Modify the package.json file – cont'd



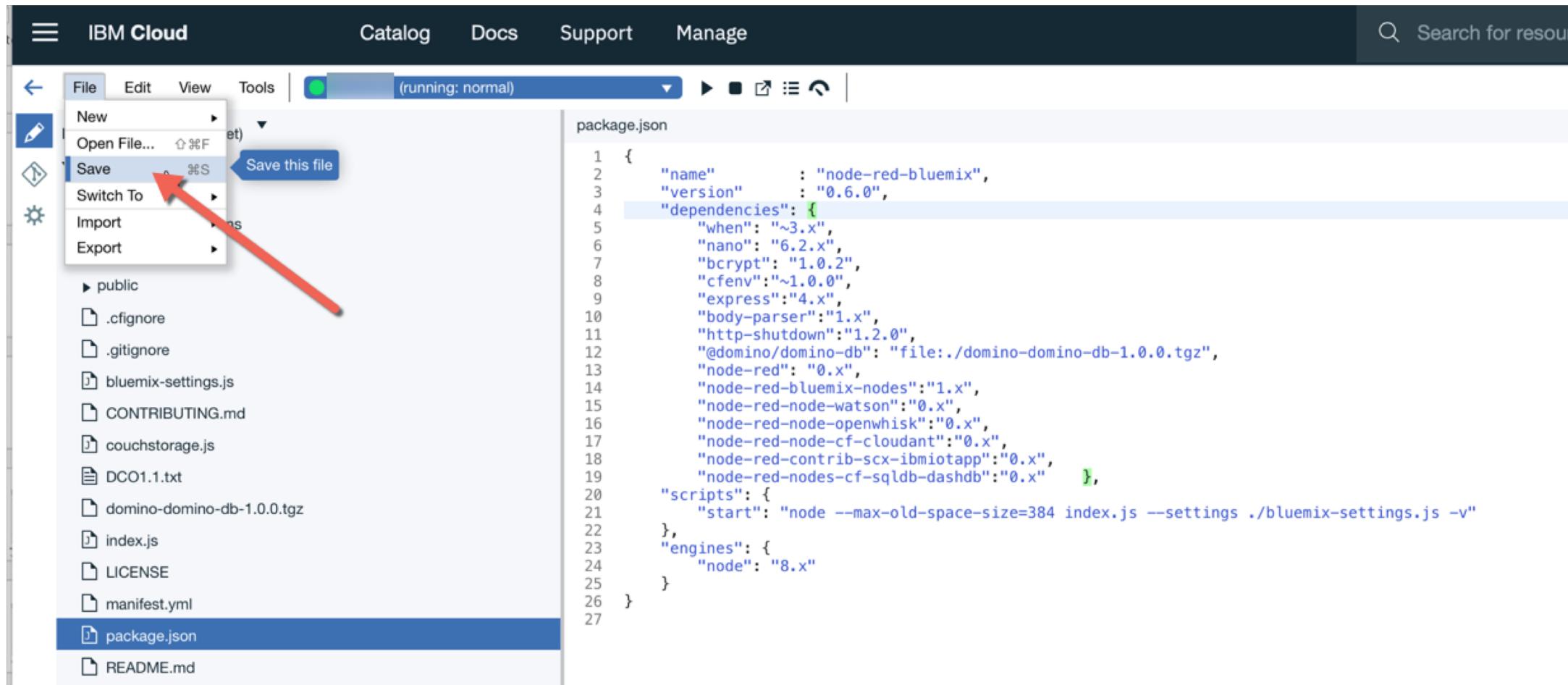
The screenshot shows the IBM Cloud developer tools interface. The left sidebar displays project files including .cignore, .gitignore, bluemix-settings.js, CONTRIBUTING.md, couchstorage.js, DCO1.1.txt, domino-domino-db-1.0.0.tgz, index.js, LICENSE, manifest.yml, package.json (which is selected), and README.md. The right pane shows the contents of the package.json file:

```
1  {
2    "name": "node-red-bluemix",
3    "version": "0.6.0",
4    "dependencies": {
5      "when": "3.x",
6      "nano": "6.2.x",
7      "bcrypt": "1.0.2",
8      "cfenv": "~1.0.0",
9      "express": "4.x",
10     "body-parser": "1.x",
11     "http-shutdown": "1.2.0",
12     "@domino/domino-db": "file:./domino-domino-db-1.0.0.tgz",
13     "node-red": "0.x",
14     "node-red-bluemix-nodes": "1.x",
15     "node-red-node-watson": "0.x",
16     "node-red-node-openwhisk": "0.x",
17     "node-red-node-cf-cloudant": "0.x",
18     "node-red-contrib-scx-ibmiotapp": "0.x",
19     "node-red-nodes-cf-sqldb-dashdb": "0.x"   },
20    "scripts": {
21      "start": "node --max-old-space-size=384 index.js --settings ./bluemix-settings.js -v"
22    },
23    "engines": {
24      "node": "8.x"
25    }
26  }
```

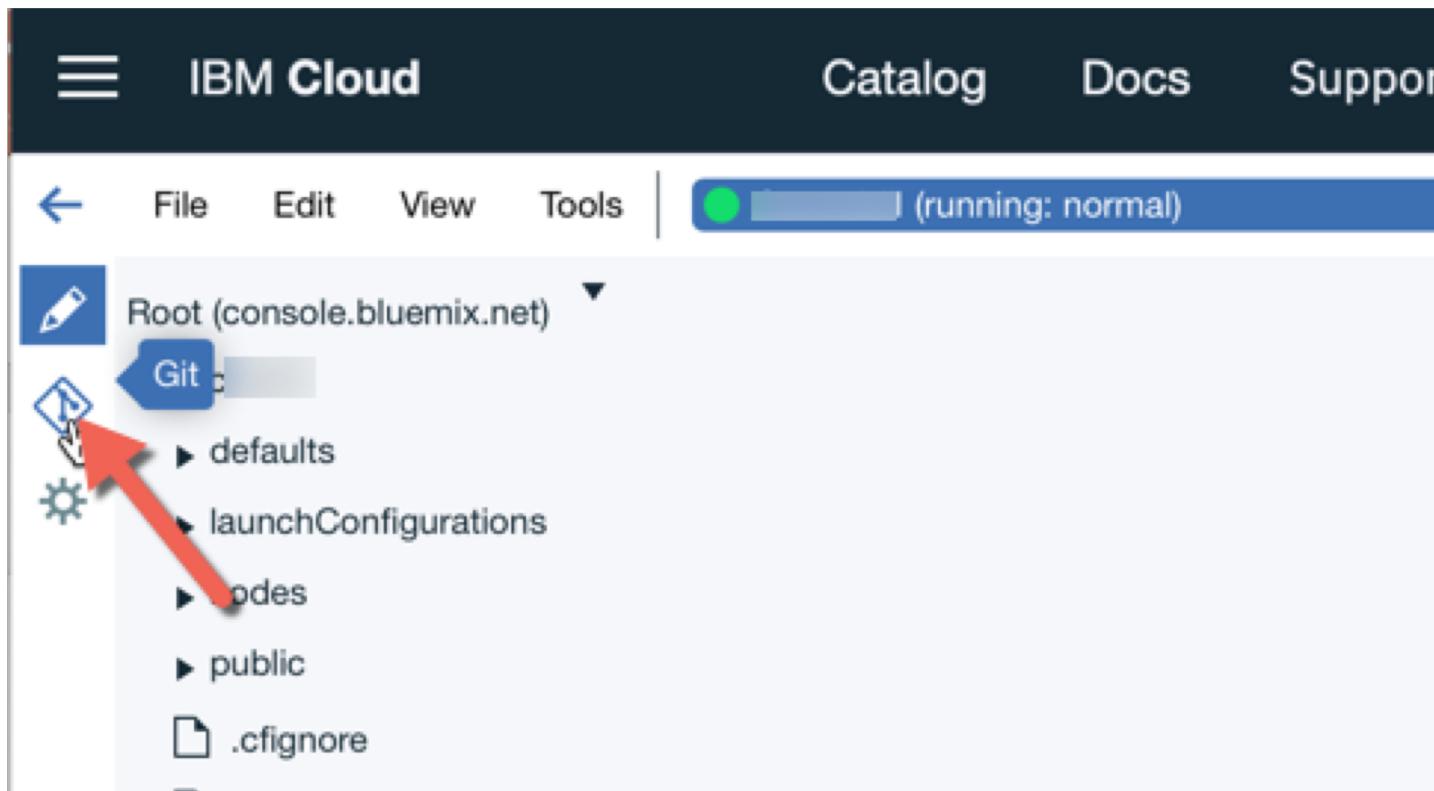
A red box highlights the "engines" section, and a red arrow points to it from below.

Do NOT forget to **modify the NodeJS version** (to Version 8)

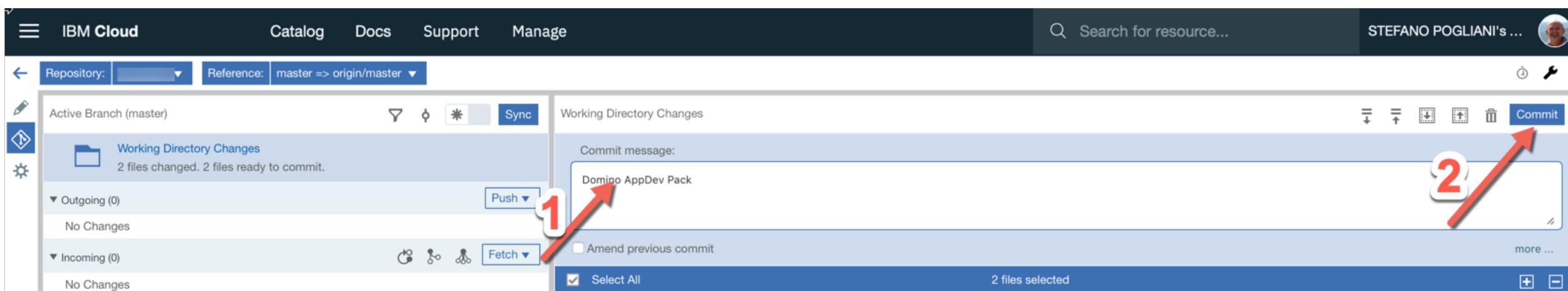
Save the package.json file



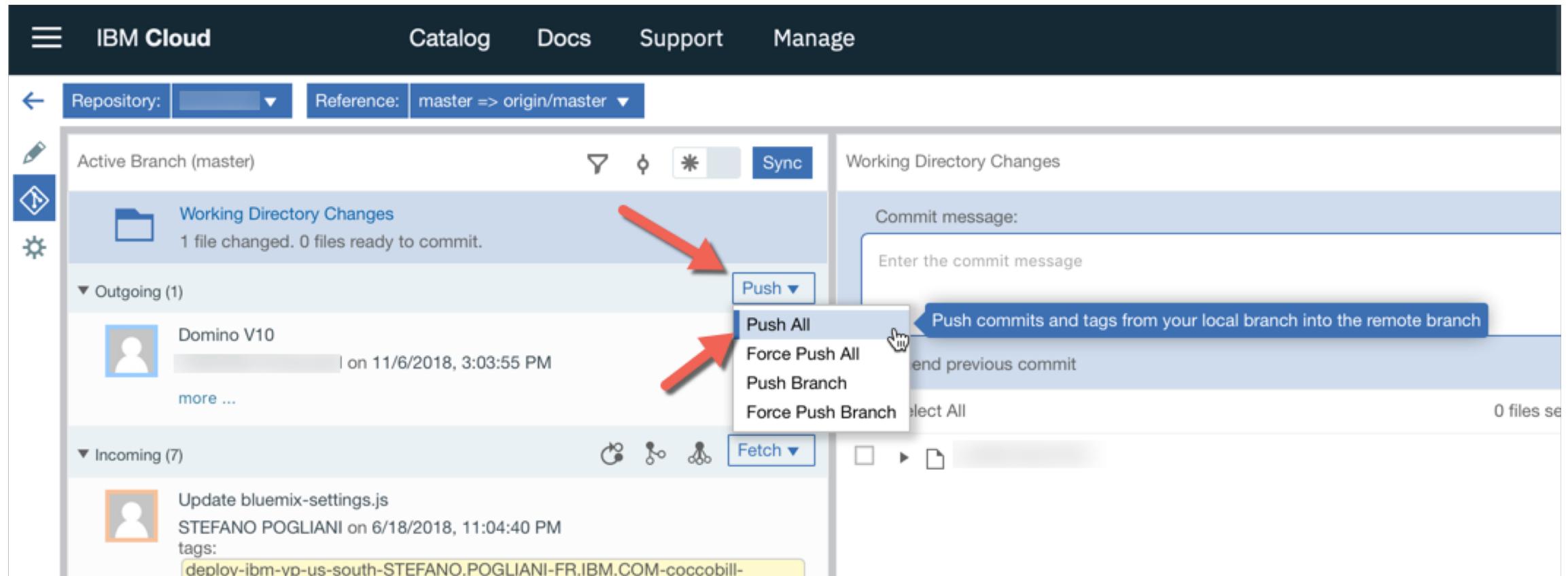
Now go to the GIT tab of your Toolchain



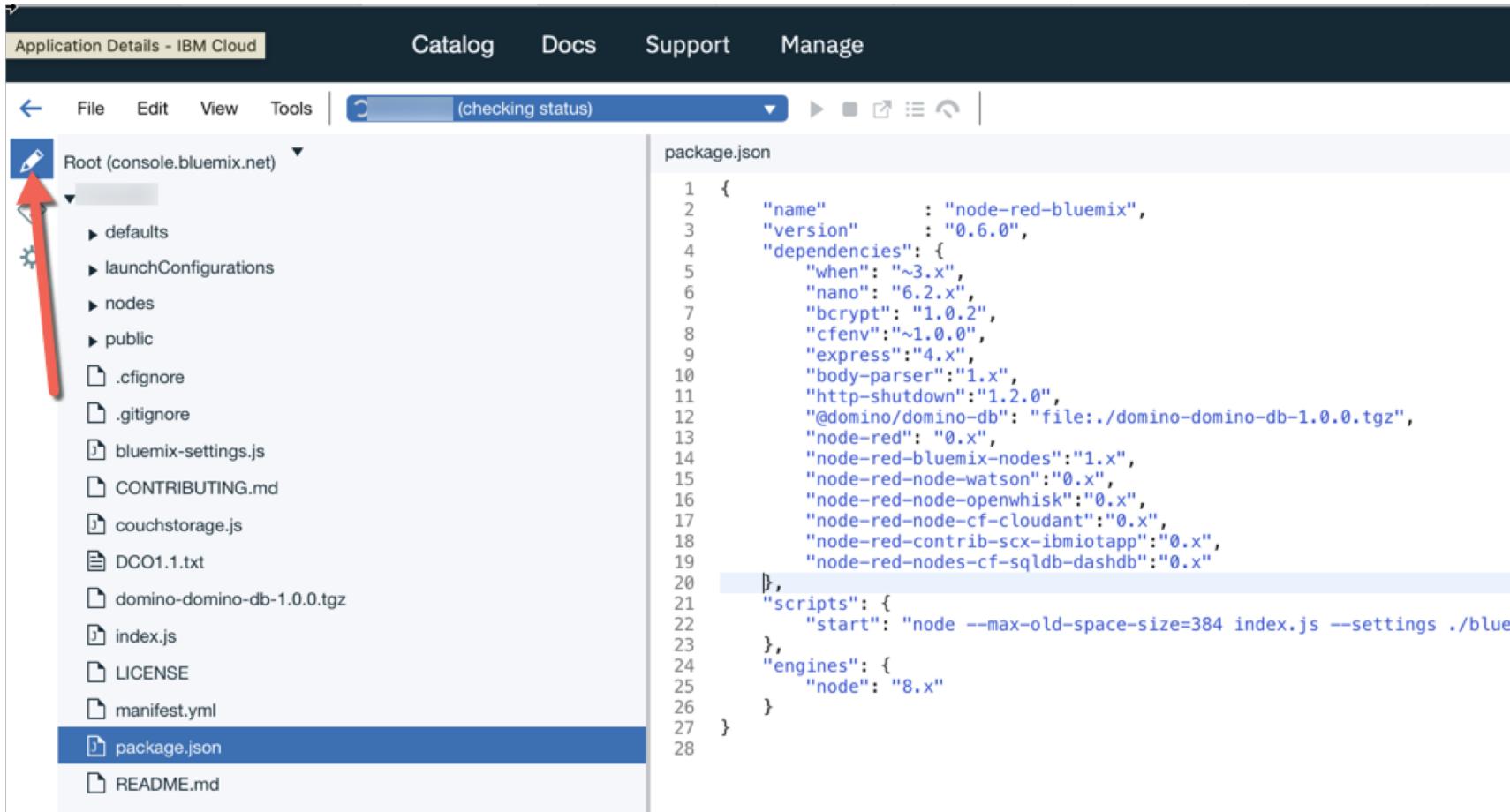
Add a Comment and click COMMIT



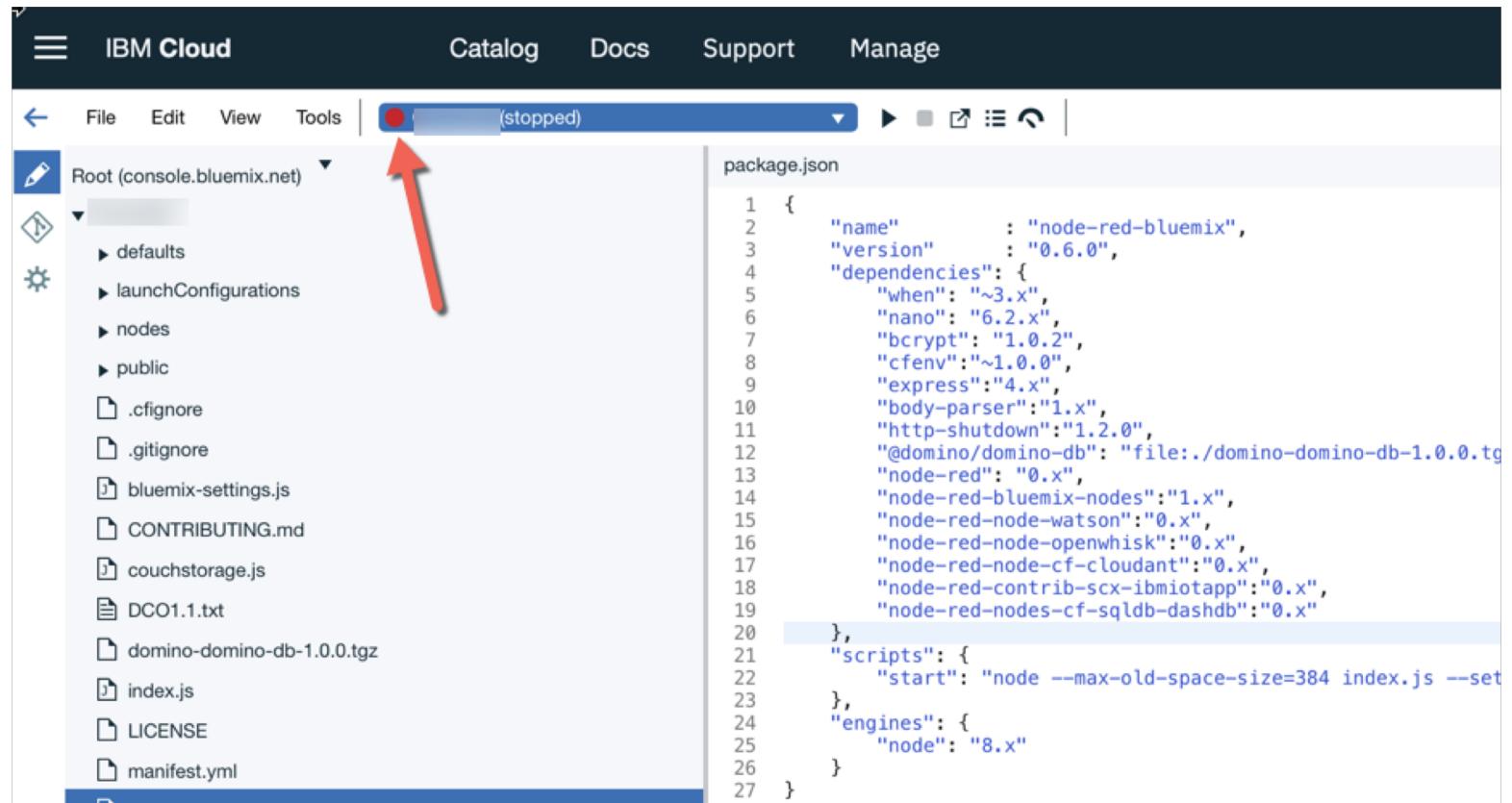
Push All the Changes to IBM Cloud



Going back to the editor, you should see your instance



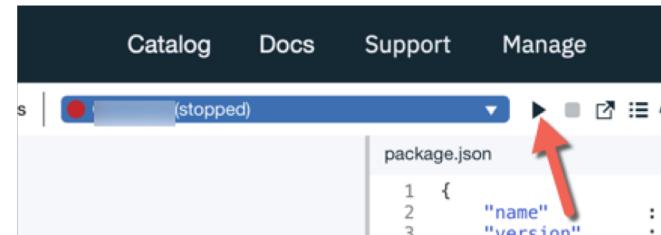
The instance should redeploy automatically



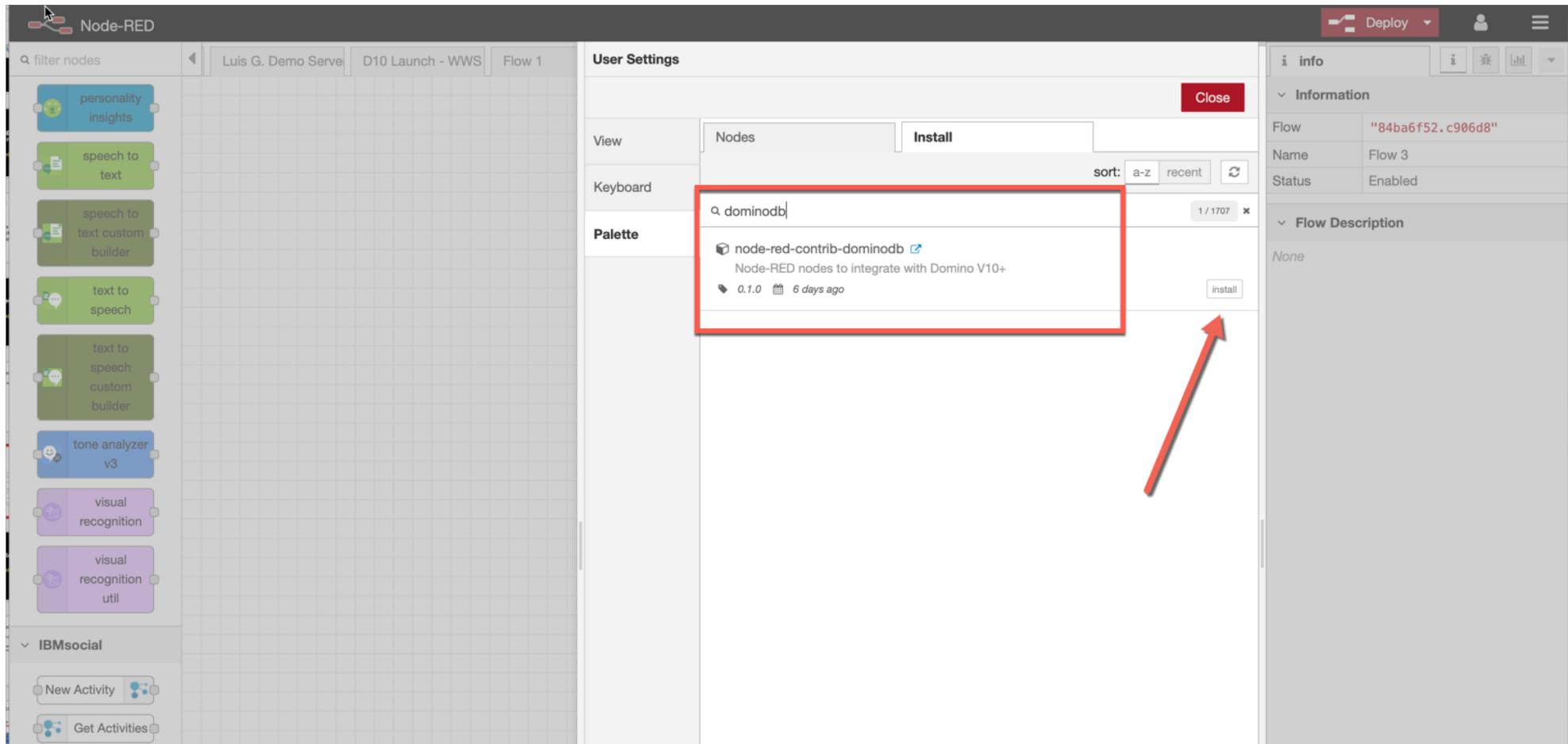
A screenshot of the IBM Cloud application editor interface. The top navigation bar includes Catalog, Docs, Support, and Manage. Below the navigation is a toolbar with File, Edit, View, Tools, and a status indicator showing '(stopped)'. A large red arrow points from the text above to the toolbar's stop button. The left sidebar shows the project structure: Root (console.bluemix.net) containing defaults, launchConfigurations, nodes, public, .cignore, .gitignore, bluemix-settings.js, CONTRIBUTING.md, couchstorage.js, DCO1.1.txt, domino-domino-db-1.0.0.tgz, index.js, LICENSE, and manifest.yml. The main panel displays the contents of package.json:

```
1  {
2    "name"      : "node-red-bluemix",
3    "version"   : "0.6.0",
4    "dependencies": {
5      "when": "~3.x",
6      "nano": "6.2.x",
7      "bcrypt": "1.0.2",
8      "cfenv": "~1.0.0",
9      "express": "4.x",
10     "body-parser": "1.x",
11     "http-shutdown": "1.2.0",
12     "@domino/domino-db": "file:./domino-domino-db-1.0.0.tg
13     "node-red": "0.x",
14     "node-red-bluemix-nodes": "1.x",
15     "node-red-node-watson": "0.x",
16     "node-red-node-openwhisk": "0.x",
17     "node-red-node-cf-cloudant": "0.x",
18     "node-red-contrib-scx-ibmiotapp": "0.x",
19     "node-red-nodes-cf-sqldb-dashdb": "0.x"
20   },
21   "scripts": {
22     "start": "node --max-old-space-size=384 index.js --set
23   },
24   "engines": {
25     "node": "8.x"
26   }
27 }
```

In case it does not, you can redeploy manually using this arrow:



Open your NodeRED Editor



Install **node-red-contrib-dominodb** using the standard “Manage Palette” functionality in NodeRed

The NodeRED package is installed and ready to be used

