

## Advanced Software Engineering - Bluemix Deployment Guide

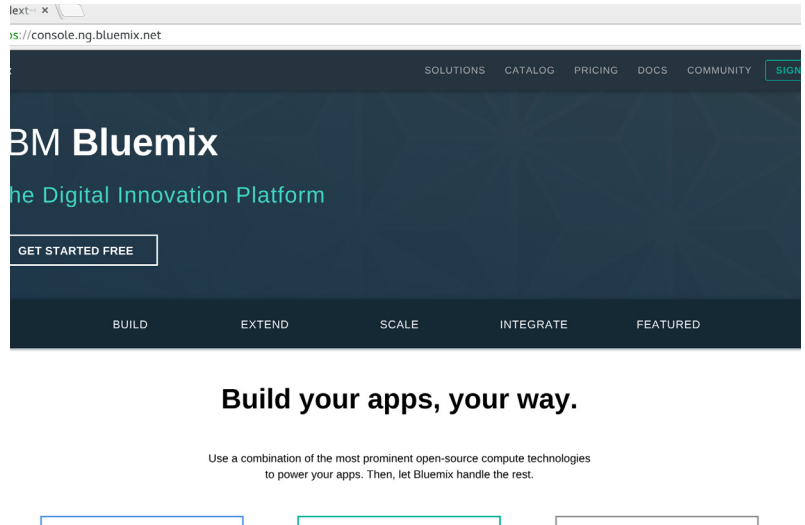
As a prerequisite to deploy on Bluemix, it is necessary to install the CF cli, from the following git repository:

<https://github.com/cloudfoundry/cli>

Then, one needs to have a valid Bluemix account, and an organization / space defined for that Account (done via the website). Subsequently it is possible to either log into the EU or US Bluemix via the correct API url.

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

`$ cf api https://api.eu-gb.bluemix.net`



**Figure 1.**  
Bluemix Start Page

Once the API has been selected, one has to authenticate:

`$ cf login`

Next, we need to create the 4 services our apps use:

`$ cf create-service mongodb 100 sentiment-mongodb`

`$ cf create-service MQLight standard sentiment-mq`

`$ cf create-service Auto-Scaling free sentiment-autoscaling`

`$ cf create-service MonitoringAndAnalytics Free sentiment-monitoring`

When the services are created, it is possible to deploy the applications by changing the directory to the 3 applications (optionally, 4 for the db admin interface) and using `cf push`. However, it is necessary to edit the “`manifest.yml`” before, in order to assign an unique url by changing the “`host:`” line into something different

`$ cd sentiment-twitter`

`$ vi manifest.yml`

`$ cf push`

`$ cd sentiment-frontend`

`$ vi manifest.yml`

`$ cf push`

`$ cd sentiment-analysis`

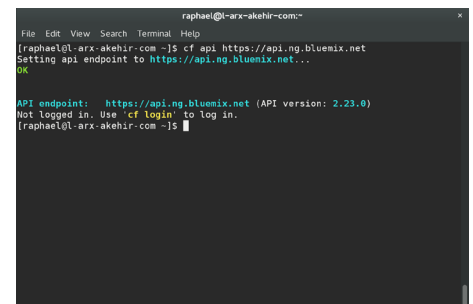
`$ vi manifest.yml`

`$ cf push`

`$ cd sentiment-aggregate`

`$ vi manifest.yml`

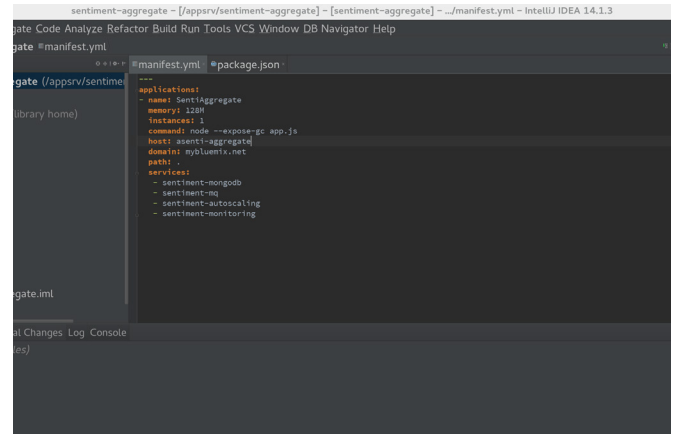
`$ cf push`



**Figure 2.**  
Using the command-line  
to deploy to Bluemix

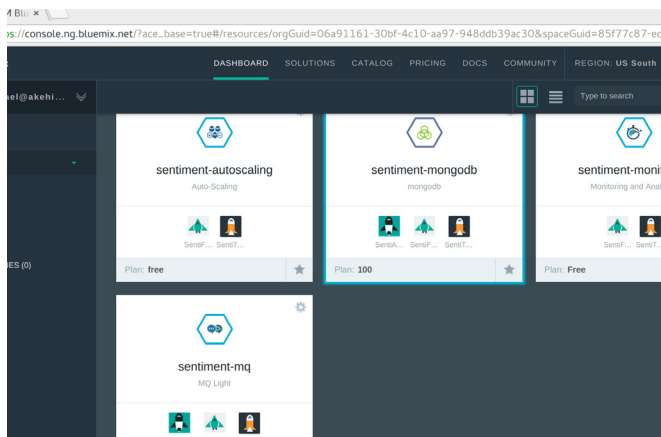
Now the applications should be running and accessible on the previously defined URL's. What's left is to define the autoscaling policies over the service interface in the Bluemix dashboard.

For this, one logs onto the Bluemix Dashboard, selects the correct region and clicks on the Auto-Scaling Service in the overview. In the service, one can edit the auto-scaling policies for every application - in our case it makes sense to automatically scale the aggregator application, the frontend application, and the analysis application.



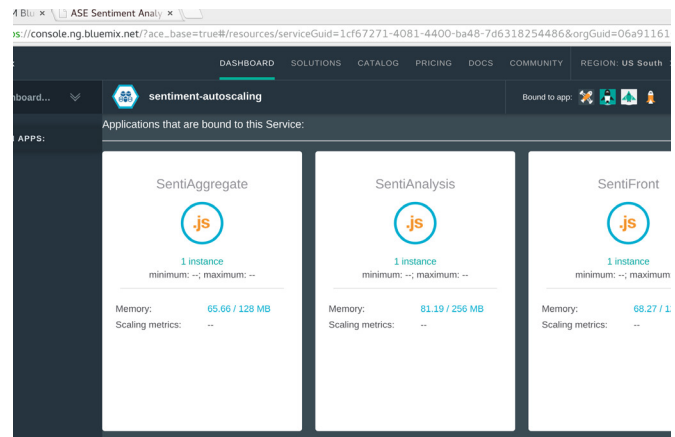
**Figure 3.**

Editing the deployment configuration in the manifest.yml



**Figure 5.**

Bluemix Services Overview



**Figure 4.**

Auto-Scaling Service

This short guide on how to deploy applications to Bluemix demonstrates, how easy it is to deploy applications onto the service: Once an account has been registered, you only require a few short command-line directions in order to have a complex application running and publicly available.