CS2013 - Reflective Essay

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Introduction

Our task was to build a solution that will facilitate multiple service applications that have dependencies between them on a distributed system. Docker Compose allows you to run multi container applications. Docker Swarm turns a pool of Docker hosts into a single virtual host and it abstracts the location of containers for the users. Services need to know the addresses of other services in order to communicate with them. We must ensure the services start in order, to ensure the dependencies between them and pass the services information to allow them to communicate. Essentially we are to take the Docker Compose approach and see if it can be applied to Swarm.

Our client is Renaissance Reinsurance of Europe Ltd. who mainly provide property catastrophe reinsurance and specialty reinsurance coverage to insurers and reinsurers, primarily in Europe.

Team work

Throughout this project, we had to work together. From the very start, we had to collectively decide what projects to apply for, and it what order. To do this, we got everyone to list their top ten choices, and then we got an average of them all. I feel this was a very beneficial way to decide.

Our team was then split into two sections - development and management.
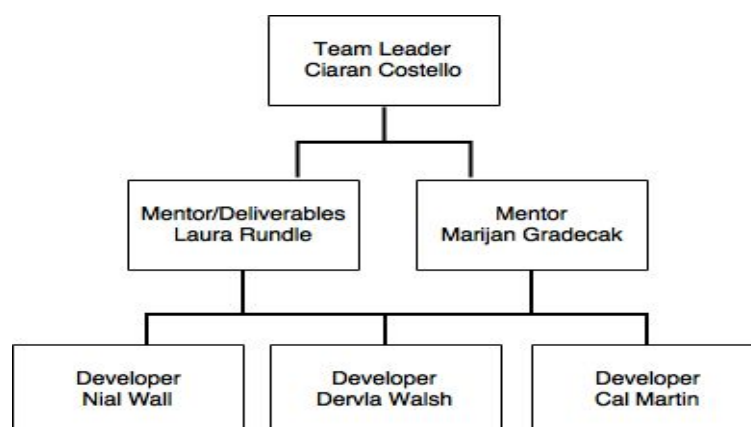
I feel this was a very effective strategy too, as the second years could mainly focus on getting the project working, with the guidance of the third years.

Problems Encountered

One of the biggest problems I faced was getting my head around Docker. I had never come across it before, so it was quite the challenge getting to grips with it. Not only that, but Docker is in active development, so the api was constantly changing throughout the project. A new type of network was introduced, called an Overlay Network, and it took a good few weeks to get our project working with it successfully.

Another problem was making sure everyone had the correct development environment setup, without with our project couldn't run. This took quite a while as we had very different systems between us.

Contributions to the project you are proud of

We used my own servers to get the Docker Swarm setup, and had to keep it running even after many changes in our project. This was a challenge and required constant changes and restarts to the setup. I am happy that I managed to get the overlay network working well and consistently, so that all the nodes, containers and images could communicate reliably.

I am also very glad that our project has turned out very polished and smooth, with all errors being caught and displayed in a nice format.

Realisations about your own working and learning styles

I found that I worked very well with the team, and also on my own. We kept in regular contact and met up weekly. I also found that I am able to pick up a new language very quickly, even after only using it a small amount. This enabled me to get started quickly on the project, rather than spending a large amount of time getting to grips with it.