**Slide 1**

Around 4 months ago I decided it would be a good idea to have an internal seminar on database replication / failover – largely because for many it’s one of the more mysterious areas of the product – you can’t experiment with it on your laptop as you need a multi-host environment.

I got interested in the idea of setting these things up on EC2 and discovered that you can create instances programatically via a web service. Alex introduced me to the ‘booster’ script which is a way of setting up a server using a single script – download, install, add licence key, accept conditions, choose password – just one click. Finally a bit of trawling of ‘lists’ found me some scripts that could be use to automate the setting up of clusters.

I decided to do this using Windows instances – the micro instances are free, whereas the linux instances are two cents per hour. Turns out this was false economy, but what doesn’t kill you makes you stronger.

The project ended up growing and it ended up with the goal of being able to set clusters up with no intervention whatsover. Furthermore, keeping clusters up has a cost so I got into the idea of being able to freeze and thaw configurations – you then end up just paying for the disk space which is relatively cheap.

This presentation is about the library I’ve ended up with to create, freeze/thaw and clear down MarkLogic clusters. My hope is that this will be really useful for people – they’ll be able to experiment with the technology themselves, rather than just reading about it, and they’ll also be able to demo it, which I think will be a real win. So here we go

**Slide 4**

Before we get into it, I want to talk about costs. A lot of people think EC2 is potentially really expensive. Well it can be, but it doesn’t have to be.

One problem is that it can be quite difficult to understand the charges, so I’m going to disentangle them for you

**Slide 6**

Elastic IPs are fixed IPs

**Slide 7**

This is actually my invoice for September. This isn’t the way Amazon give it to you! I’ve done this because what they give you is pretty impenetrable. If you took away my usage of large instances ( which I wouldn’t normally use ) and the elastic Ips then I’m down to less than $40 = GBP25 – about the price of a train ticket

**Demo**

* Look at amazon aws console
* Look at log files
* Look at admin console
* Set up top songs
* Note it is distributed
* Show it working
* Set up replica dbs
* Kill a host
* Set up database replication