Assignment 2 COSC349
‘World Time Zone Converter’

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For Assignment two, we decided to build on our application that we used for Assignment one, a ‘World time zone converter’. The application is to be used so that a user can specify an hour of the day in New Zealand time, and convert it to another time around the world. We used two Ubuntu Xenial virtual machines to run the application, and as storage we are using the RDS (Relational Database Service) running a MySQL server instead of a third virtual machine.

Our two virtual machines are deployed to AWS from a Vagrantfile, using our AWS credentials to upload them as EC2 instances. When ran, everything in the web servers is setup automatically with the exception of changing a variable in one of the PHP files based on what website link is generated for the EC2 instance (variable is named $ip at the start of the file). The RDS MySQL server is setup manually on the AWS website. The majority of the Vagrantfile was completed on assignment 1, so there aren’t many git pushes on the creation of this file.

To access the timezone converter in the cloud, use the link; http://ec2-34-207-131-28.compute-1.amazonaws.com/index.php. This will take you to the PHP file on the first website. To interact, a user can select a time (including AM or PM) and choose which time zone they wish to convert it into. After you have selected all the options you would like, simply click the ‘Convert’ button and our VM’s will do the conversion, and display the result to the user. Here is a short 20 second youtube video showing how a user would interact with our application: https://www.youtube.com/watch?v=v58X6VHrZWI.

For our cloud service we used the Relational Database Service (RDS) instead of a SQL server VM. RDS offers different types of SQL servers, and we chose to stick with MySQL as we did in assignment 1. We use this database to store user preferences, so that when they return to the website what they last used will still be up. We store the time entered, whether it was am or pm and what timezone they converted it too. The first VM PHP server connects to the database to store and access the information.

The main bug we found when going from the local vagrant files to EC2 instances on the cloud, was to do with permissions. When using web servers, we found we would get ‘Permission Denied 403’ rather than our web page displaying. The way around this was to give the files permission to read and write after being deployed on the cloud. We also found that we had to leave the RDS server open to everyone and make it fully public for it to work with our EC2 instances, which wouldn’t be safe if this was a real website.