RCK LTD technical proposal for FishTank LTD

Migration of PETRA

Date: 01/02/2014

1. Introduction

Thank you for your invite to make a technical proposal concerning the migration of PETRA to cloud. This proposal has been prepared by RCK LTD with the detail of your soon to be legacy system in mind. The proposal provides a schematic outline of the migration to the cloud and the continued operation of PETRA, and its associated databases, on AWS. It also outlines costs including our services.

We at RCK LTD are glad that you found our initial proposal concerning FIshTank LTDs migration and operation to the cloud and look forward to securing and beneficial long-term relationship. We believe that the initial stages of our work together has been successful and we understand that PETRA is important to your business, and that the application should operate securely and consistently.

1 Proposal

1.1. Technical Overview

The initial stage of the project will be concerning assuring alignment with the feasibility tests that we have already conducted. This includes an outline of the number of staff required to man the successful migration and its ongoing operations.

Your current dependencies have been considered, including the various relationships between your WebServers, AppServers and Database. For instance, we understand that there isn't any extra functionality between the various WebServers and that we can consolidate their operations into a single cloud equivalent. The same is true for your AppServers and Databases. Efficiency and output is maintained by this consolidation and there is the opportunity to plan for a more diverse network if FishTank LTD consider that there should be. We also believe that there is potential for increased performance by taking advantage of the appropriate database hardware, including accounting for the high memory requirements. As such, and according to this proposal, memory would increase by 96 gigs.

The current function of your webservers would be dealt with by an Instance that has 8 CPUs with an output of 8gb, 32gb, and a network performance of up to 5bg. Storage is on demand and can be fine-tuned if you have any forecasts as to what the usage might be.

There are some subtleties in terminology so hereon we will refer to the Instance that serves the same purpose as FishTank LTDs current web servers as WebInstances.

Concerning the various dependencies:

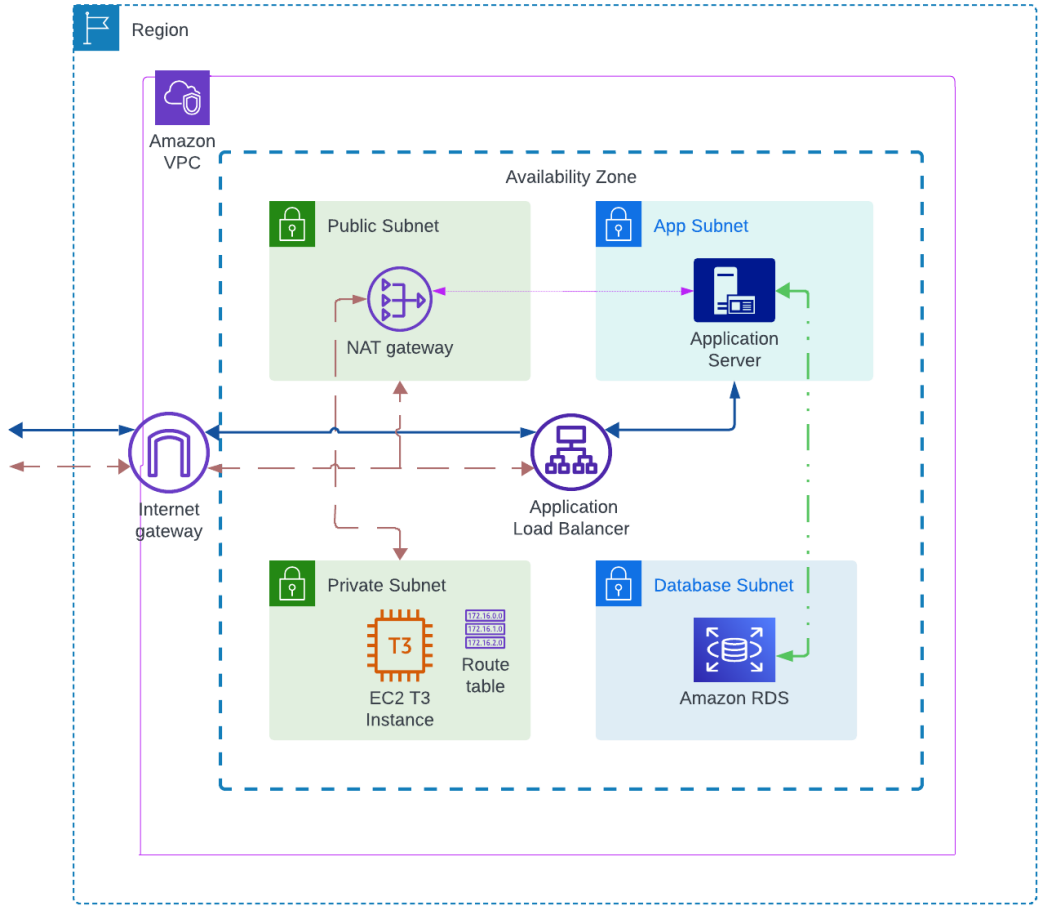
- WebInstances to the internet would be filtered through a Network Address Translation (NAT)
- WebInstnaces to the App would be filtered through a NAT gateway, extra direction can be provided by a route table.
- AppServers to Database is maintained through two subnets.

- WebInstances to the internet for administrative use will be filtered through a NAT with an Identity Based Policies and Network Access Control List Meaning (NACL) for an extra layer of security.
- AppServers to the internet for administrative use will be filtered through a NAT with an Identity Based policy.
- Database to the internet for administrative purposes will be filtered through a NAT with an identity based policy. The load balancer also creates the possibility of API port which, access can be configured by NACL.
- The active directory can be kept in the WebInstance with its route table.

The WebInstance is kept in a private subnet to assure extra security. Unless your specification changes, its booted with Windows or can have different web servers installed on it. Furthermore, the Network Access Control List Meaning can add an extra layer of security with rules that acts like a firewall. This extra layer will be important in securing the operation of PETRA. Furthermore, there is to plan for emergencies and disasters, as was outlined in our initial proposal.

As an initial sketch the network (Diagram 1):

Diagram 1



Having one web server in private subnet and the app server in the app subnet assures extra security. The NAT gateway as route to the internet, matches the functionality of FishTank LTDs current network arrangements. A load balancer can increase accessibility to a database which should satisfy 3389 Database Internet RDP port, for administrators use.

The chosen option for the Database is RDS which means that AWS will manage scaling, database backups, software patches, software installs, and OS patches. One we receive a specification from FishTank LTD we can fine tune the type of control that FishTank want over the database. Service maintenance agreements can be updated according with demand and the initial outline of costs includes an around the clock service, at a limit of 35 hours per week, with one dedicated person at any one time to match the requirements and operation of PETRA.

2.2. Cost

2.2.1 Upfront and Migration Cost

Description	Amount
Planning and Testing Migration – 24/7 Onsite and Remote Service	£6125
Impact Assessment	£4000
AWS Database Migration – maximum of 1 month migration period	£ 809.48
Total	**£10,934]**

2.2.2. Ongoing Monthly Cost

Description	Amount
AWS EC2 (WebInstance) – Windows Server, 32gb, Performance: Up to 5gb	£1153.43
AWS EC2 (AppServer) – Windows Server, 16 CPU, 64gb, Performance: up to 10gb.	£913.05
AWS RDS SQL Server – 16 CPU, Memory: 128 GiB, On Demand Utilization	£ 6600.57
RCK LTD Service Management – On-going management of the service to spec	£6600
Total	**£15,267.05]**

2.2.3. Total Year Cost

Our estimate for the total yearly cost of the migration and operation of PETRA on AWS Cloud, including RCK LTDs services in managing and maintaining the change is **£194,138.60.**

3. Conclusion

Thank you for the opportunity to tender for the contract to migrate and operate PETRA on AWS Cloud. We look forward to further discussions as to specification and timeframes so as to fine tune our service. We look forward to hearing from you.