AWS Proposal for FishTank Ltd

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Overview

AWS (Amazon Web Services) is the most widely used cloud platform in the world, with millions of businesses trusting the AWS with their data. Given the nature of FishTank Ltd as business, we believe migrating to AWS will bring numerous benefits, which will be laid out in the following proposal. We will also provide a set of short, medium and long-term goals to provide a timeline for the migration process.

The Benefits of AWS

- **Performance and Scalability**
  - With AWS, services can be easily scaled up in order to match demand at any given time. The availability of this additional computing power will enable services and applications used by FishTank Ltd to respond to rapidly fluctuating demand.
    - This scalability means no performance compromises when more computing power is demanded, and removes the need for suspending other projects to free up resources.
  - The near unlimited computing power available on AWS provides room for longer-term growth and the ability to match increased demands
  - The large number of AWS Regions available will enable low latency and strong performance wherever FishTank is operating. Servers can be set up in new regions whenever required.
    - At the time of writing, AWS has 23 separate Regions across the North America and APJC territories, promising conveniently located databases, strong performance and low latency should FishTank Ltd move into these areas.
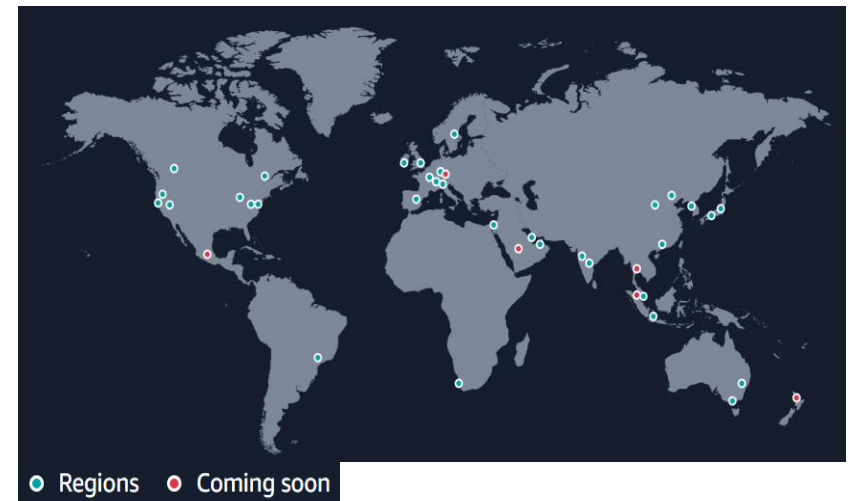

Figure 1 – Current AWS Regions

- **Reliability**
  - AWS Regions are designed to reduce the risk of failure and data loss. As a result FishTank Ltd could maintain its reputation as an organisation that consistently achieves its targets whilst setting up in new areas.

- o The near instant scalability reduces the risk of failure caused by overloaded servers.
- o Data can be automatically replicated in order to further lower the probability of data loss with no additional cost.

- **Cost**
  - o Migrating to AWS would mean only paying for the computing power, storage and other resources that you use. As a result, the underutilisation of available resources is no longer an issue.
  - o Various pricing options enable organisations to minimize costs without impacting service availability. Pricing options can also be selected for specific services, further increasing the potential for cost optimization.
    - ▪ Pricing options vary from on-demand pricing, where cost is directly derived from compute capacity utilized, to longer term savings plans. However, it is important to note that no long-term contract is necessary in order to access AWS servers.
  - o With AWS, no rental payments are required for database housing. This would free up funds previously allocated to third party datacentre rental costs.
  - o The potential for automation of processes in AWS is large, reducing time spent on repetitive tasks and increasing business productivity.

- **Security**
  - o AWS offers a wide range of features to help organisations with their security:
    - ▪ Permissions
      - Permissions enable businesses to manage is able to access different services/privileges. As a result the risk of accidental harm to services is greatly reduced.
    - ▪ Storage tenancy options
      - Businesses can choose to further protect data more using isolated hardware. This doesn't need to be the case for all data.
    - ▪ Encryption
      - AWS contains services that enable encryption of data to add an additional layer of protection.
    - ▪ Virtual Private Clouds
      - Operating within Virtual Private Clouds (VPCs) enables businesses to isolate themselves from outside, reducing the risk of access from the outside.

Migration Strategy

In this section we present suitable short, medium and long-term goals were FishTank Ltd to decide to migrate to AWS.

Short-term (0 - 3 months)

- Produce a detailed plan
  - Establish main business objectives with which migration can assist. What FishTank Ltd wants to achieve out of the process will serve as the basis for the migration strategy
  - Establish the order of migration. Identify non-critical applications that can be migrated first
  - Calculate server requirements based on current resource usage
  - Identify potential security risks and develop strategies to minimise these risks
  - Create defined picture of the migration end goal. Establish what the FishTank Ltd's infrastructure should ultimately look like in AWS
- Preparation
  - Conduct an in depth assessment of current infrastructure to identify areas not ready for migration. These must be addressed
- Communicate with staff
  - Present the migration plan to staff
  - Highlight the benefits AWS can provide and respond to concerns staff may have (e.g security). Include examples of other businesses that have benefited from AWS migration
    - This stage is vital for ensuring staff are on board with the process, and reduces the probability of objections later on
    - This will also enable a better understanding of any cultural issues relating to migration
- Begin staff AWS training
  - Whilst many of the skills IT professionals at FishTank Ltd are applicable to AWS, some specialist skills training is still required
  - At this stage we will begin upskilling staff in order to familiarise them with AWS and its services.

Medium-term (4 - 12 months)

- Test security and data recovery
  - Take advantage of AWS services to test data security and recovery to enable confidence in the safety of the process
  - Simulate failures on test data to ensure recovery services as functioning as intended
  - Implement privileged access management system to prevent unwanted access and accidental infrastructure damage
- Begin migration process

- o Commencing with the non-critical applications previously identified, begin migration to AWS
- o Test non-essential migrated application performance prior to continuing the process. This will prevent any disruption to more important applications that could impact customers or the ability to deliver results
- Complete staff training
  - o Staff should have the knowledge and skills required to confidently use AWS. A full handover will take place in this period

Long-term (>12 months)

- Complete migration process
  - o Finish migrating all data and applications to AWS, including vital processes
  - o End use of third party datacentres in Poland and Mexico City
  - o End use of applications made redundant by AWS migration
- Optimisation of processes
  - o Continue to enhance efficiency through the automation of time consuming processes
  - o Identify further cost saving opportunities
  - o Identify new services that could benefit your business through adding insight or improving productivity
- Continue scaling
  - o Continue to expand environment in AWS in order to anticipate and match increasing demand
  - o Develop cloud infrastructure in new AWS Regions as FishTank Ltd continues to expand into new markets

Our Support

It is our goal to make the AWS transition process as smooth as possible. In addition to assisting FishTank Ltd throughout the planning and preparation stage, we will support the businesses with comprehensive AWS training for staff to ensure they are capable of extracting the full benefits that AWS services can provide. We will also oversee the early stages of resource migration in order to ensure disruption is minimalised and best practices are being adhered to.

It is common for objections and concerns to arise throughout this process, and as a result we will maintain an open line of communication at all times. We hope you will consider our services. If you have any further questions do not hesitate to contact me at benwierszycki@gmail.com.