Hi Lilly,

Thank you so much for your interest in AWS and reaching out to us.

I have prepared an architecture diagram that can illustrate that how you can apply AWS services to improve your performance and downtime of your server to allow for future growth.

Please find the system architecture diagram attached to this email. We will explain you that why these programs were chosen.

**Route 53 Hosted Zone**

A hosted zone is an Amazon Route 53 concept. A hosted zone is analogous to a traditional DNS zone file; it represents a collection of records that can be managed together, belonging to a single parent domain name.

**Elastic Beanstalk**

Elastic Beanstalk is a platform within AWS that is used for deploying and scaling web applications. In simple terms this platform as a service (PaaS) takes your application code and deploys it while provisioning the supporting architecture and compute resources required for your code to run. AWS Elastic Beanstalk is the fastest way to get web applications up and running on AWS. You can simply upload your application code, and the service automatically handles details such as resource provisioning, load balancing, auto scaling, and monitoring.Billing is based on a combination of the EC2, RDS and ELB that you use:

**EC2 Auto Scaling Group**

Scalable virtual servers. Charged based on resources of the virtual servers (RAM, CPU, storage), per hour. Servers can change their resource allocation but must be restarted to apply them.

**Elastic Load Balancer**

Distributes traffic across application servers, such as EC2, Lambda or Fargate. Can use health checks to know which servers should service requests. Charges are based on the number of hours the load balancer runs and (at a high level) the amount of traffic it services. The actual charging rules can be quite complex.

**Relational Database**

Relational database hosting platform. Charged in the same way as EC2 (i.e. a virtual machine with a set amount of resources). Servers can be resized but must be restarted to do so.

**S3**

Amazon S3 or Amazon Simple Storage Service is a service offered by Amazon Web Services that provides object storage through a web service interface. Amazon S3 uses the same scalable storage infrastructure that Amazon.com uses to run its global e-commerce network. Store objects in the cloud. Charged based on the amount of data being stored, how it’s stored, and for retrieval.

**Multiple Availability Zones**

High availability requires at least two availability zones. The idea is that only one zone will go down at a time: the proverbial backhoe cutting power and network cables. Since Amazon isolates the data centres for each availability zone, that backhoe won't take out more than one AZ. For extra redundancy, services can be deployed across multiple availability zones (AZ). This means that requests can fall over from one AZ to another in the case of infrastructure failure. In general, the cost of a service is multiplied by the number of availability zones it’s in.

**Code Pipeline**

AWS Code Pipeline is a continuous delivery service you can use to model, visualize, and automate the steps required to release your software. You can quickly model and configure the different stages of a software release process. Code Pipeline automates the steps required to release your software changes continuously.

After getting confirmation from your side regarding your feedback for these components, we will

Estimate the cost accordingly.

The concrete pricing differs in each region, however, the method of price calculation is the same. For example, an EC2 instance in Region A may cost more than the same instance in Region B, however, both are billed at an hourly rate.

When we have a better picture of the number of requests you will be servicing,and the resources required for these we will work with you and use the AWS pricing calculator (<https://calculator.aws/>) to get concrete pricing numbers.

For further more information, feel free to reach out to us.

Kind Regards,

Diya Ranaware

 (Solution Architect at AWS)