BLOGHUB

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CSS 490 - Cloud Computing Program 5 Report

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http://bloghub.us-west-2.elasticbeanstalk.com

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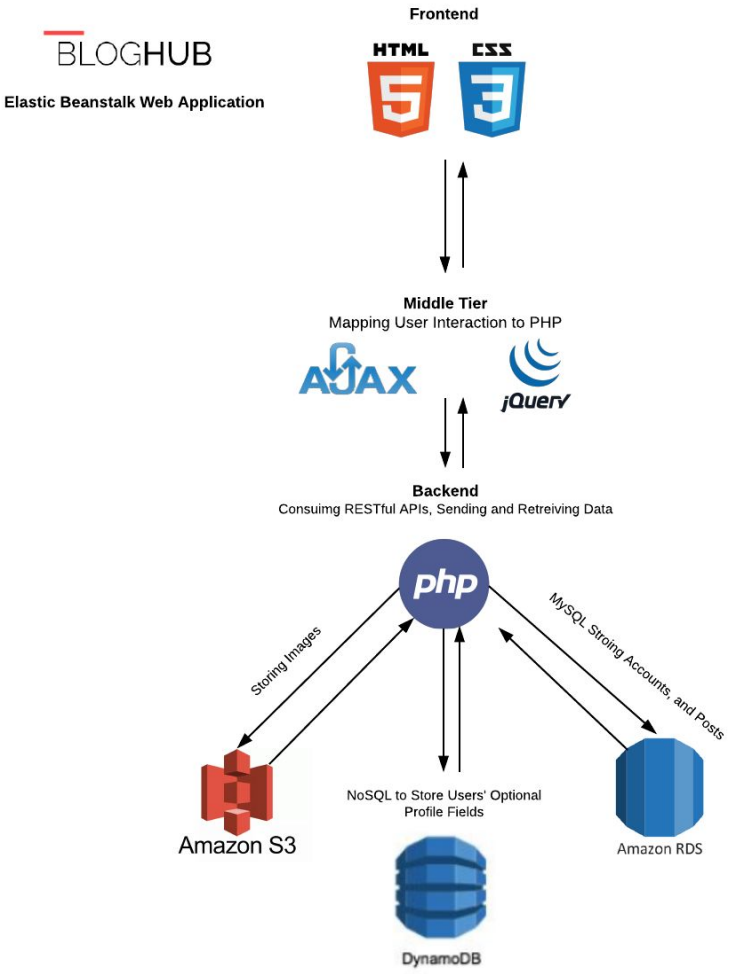
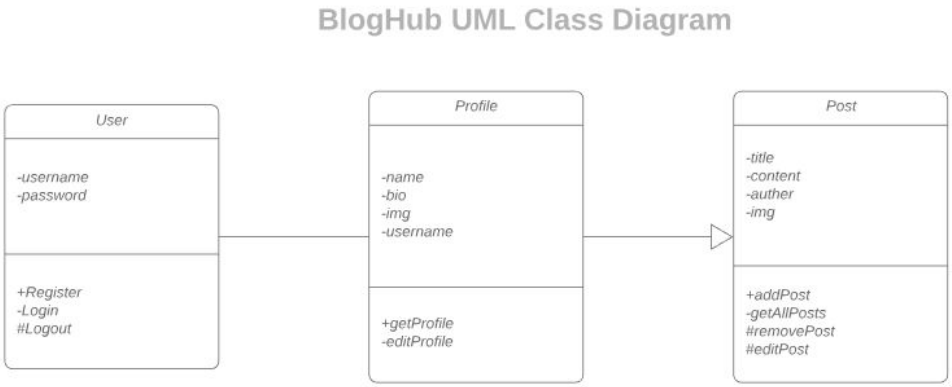
Design Diagrams





URL

http://bloghub.us-west-2.elasticbeanstalk.com

Services Utilized

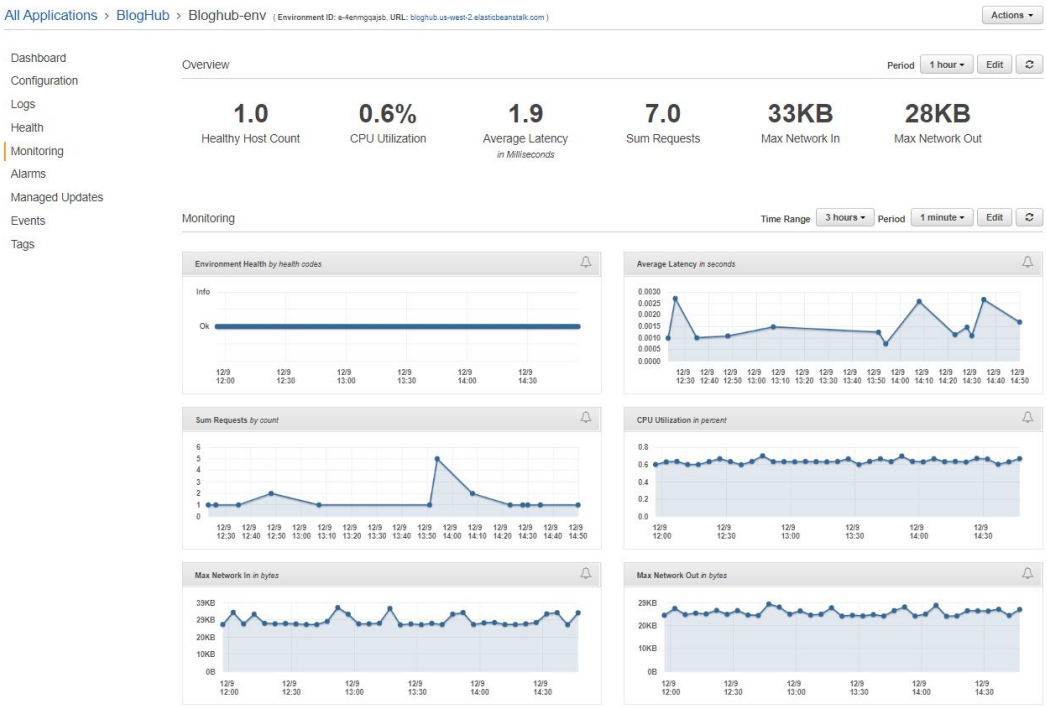
1. AWS DynamoDB for storing information about users (name, bio, etc.)
2. AWS Simple Storage Service (S3) for storing profile pictures and post thumbnails
3. AWS Elastic Beanstalk (EBS) and EC2 for hosting the BlogHub web app
4. AWS Relational Database Service (RDS) for storing user and post data
5. AWS CodePipeline for deployment from GitHub
6. AWS CloudFront (CDN) for delivering media quicker through distributed network

Why AWS

Both Amazon Web Services and Microsoft Azure are considered the world's leaders in cloud services. However we chose AWS because it focuses on one service that does a specific functionality rather than having two services that do the same functionalities. AWS is easy to use because everything is well documented. AWS is flexible because it enables any operating system, and programming languages. Therefore, we could not find PHP support for in Azure CosmosDB. AWS is cost-effective because the free trial for AWS relational databases service lasts for 12-months whereas Azure SQL database is only free for the first month.

Monitoring

AWS Elastic BeanStalk provides developers with reports and metrics that are easy to keep track of. Additionally, we can utilize AWS CloudWatch to monitor and manage our service's usage.



Service Level Agreement (SLA)

AWS EC2 SLA is 99.99% (https://aws.amazon.com/compute/sla/)

AWS RDS SLA is 99.99% (https://aws.amazon.com/rds/sla)

AWS DynamoDB SLA is 99.999% (https://aws.amazon.com/dynamodb/sla/)

AWS S3 SLA is 99.99% (https://aws.amazon.com/s3/)

AWS CDN SLA is 99.9% (https://aws.amazon.com/cloudfront/sla/)

Therefore,the total availability for BlogHub is 99.869%

Scaling

AWS Elastic Beanstalk provides the ability to auto scale our application using a load balancer. As more people use BlogHub and demand increases, our application will scale-out using more EC2 instances spread across multiple availability zones. Additionally, our data storage in S3, RDS, and DynamoDB can be easily scaled across multiple availability zones.