EPLEXITY

Photobucket Case Study

Project: Migration and Application Modernization
Company: Photobucket
Industry: Technology

About:

Photobucket is the leading independent digital image hosting, sharing, and storage service. For over 16 years, 100 million users have trusted Photobucket to enjoy and preserve their 15 billion images. Photobucket hosts over 30 million unique images across half a million unique websites every day. Members upload hundreds of thousands of images per day from the web and mobile apps. With a sharp focus on digital images, Photobucket provides the simplest solution to instantly publish and share across forums, blogs, e-commerce sites, social networks, instant messaging, and email.

Challenge:

Photobucket has engaged EPLEXITY for a variety projects in the last year to modernize their web application and the supporting infrastructure. Photobucket's outdated infrastructure was unable to support the goals for growth and scaling that the company had set for themselves.Their leadership along with Eplexity and AWS created a phased plan to modernize the application and infrastructure to support those goals.

Photobucket needed to deploy their next gen platform to AWS, and migrate other critical workloads including CDN, Image Optimization, and storage for 15 Billion images from their datacenter. They needed a scalable and self-healing website and backend, a cost-effective way to serve over 1,000 optimized images per second, and an automated process to migrate 5 Petabytes of photos for a live service, all while reducing their costs by half and avoiding further capital

Outdated infrastructure hindered scaling of the company.
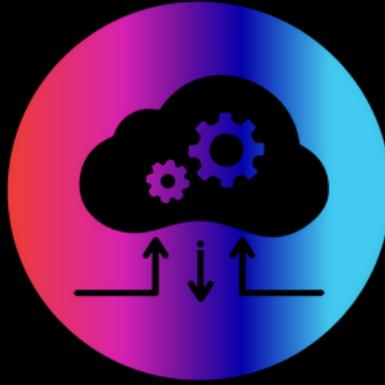
Needed to migrate to AWS.
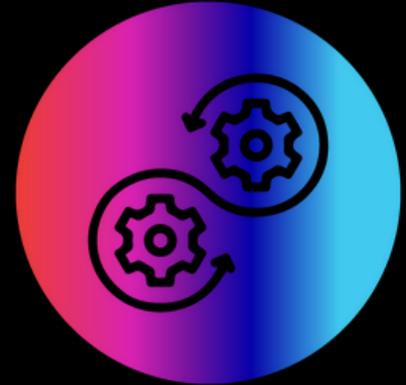
Needed a self-healing website and automated process to migrate photos for a live service.

Solution:

PHASE 1:

Phase one was the creation of an AWS landing zone in order to launch the new web application to support their customers. EPLEXITY created an AWS landing zone and successfully launched the web application in the cloud using cloud native services including, AWS EKS and ElasticSearch with CloudFormation.

PHASE 2:

Once launched, phase two was to implement a Content Delivery Network (CDN), the goal of the CDN project was to provide global scale, high availability and performance of the content intensive services that Photobucket provides to its customers. This was critical to further expansion and infrastructure cost reduction and stability.

PHASE 3:

Upon completion of the CDN project, we launched into Phase three and four in parallel. Phase three was to design and create a Data Lake, replacing their home grown and extremely manual reporting tool. With the deployment of a Data Lake, the Photobucket team can now understand the metrics and data that drive their business. The Data Lake includes marketing data, subscriber data, and financial data. The data is available in real-time and enables timely and informed decision making.

PHASE 4:

Phase four was by far the largest and most challenging project. Photobucket stores all its customer data, images, videos, etc. on premise in an expensive NAS environment. The new web application currently connects to both AWS S3 cloud storage and the on-premise storage environment. The current on-premise storage has a volume of 3-5 petabytes, with 30,000 smaller segments of storage, 80 million customers, and billions of files.

EPLEXITY created a custom solution using ECS with an auto scaling EC2 Spot Fleet utilizing CloudWatch alarms to migrate the storage to the cloud. To move 15 billion images in flight, an automated process was created using AWS Lambda, Athena, and DynamoDB to trigger DataSync tasks to move the images without interruption to the service.
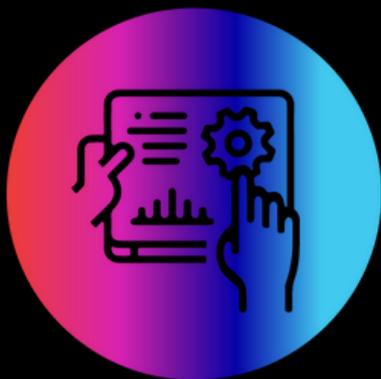
- Creation of AWS Landing Zone
- Launched web application to AWS
- Implemented CDN.

Data Lake provided real time data to enable informed decision making.
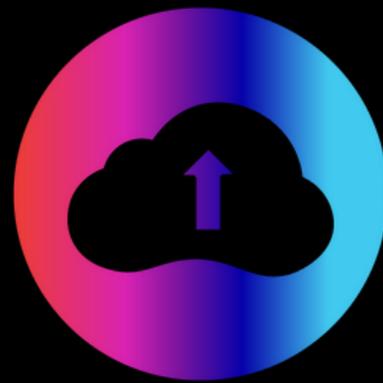
ECS, EC2 Spot Fleet, and CloudWatch used to migrate storage to the cloud.

Outcome:

Prior to EPLEXITY's engagement, the estimation of time to complete the migration alone would have 3-6 months and cost Photobucket $300k-$400k. EPLEXITY was able to complete it in less than three months at a cost of $50,000. Additionally, Photobucket has reduced their infrastructure spend by more than $100,000 in the past year and improved their customer experience significantly.

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