Nearbuy (Groupon India)

Automated Delivery Pipeline with Significant Cost Reduction in a Short Turnaround Time

#Cloud #DevOps #Big-Data

Summary

TO THE NEW automated the end to end delivery pipeline of Nearbuy, earlier known as Groupon India, and bridged the gap between the Development and Operations teams to simplify complex applications, manage infrastructure, streamline operations, reduce costs and thereby improve the overall application efficiency.

The Client

Nearbuy, earlier known as Groupon India, is India’s first hyper-local online platform that enables customers and local merchants to engage with each other through various offers related to fine dining, spa therapies, city excursions and explorations, and much more. Nearbuy also offers its merchants a strong branding and visibility-led platform that enables customers in and around their establishments to easily discover their businesses. It has a presence in 35+ cities with a merchant base of 50,000+ across 100,000+ unique locations.

Challenges

Nearbuy was facing challenges to maintain the infrastructure for multiple applications with high degree of complexity. There were multiple micro-services spread across a provisioned infrastructure, and monitoring was independent and segregated with almost no notifications.

The Goal

Nearbuy engaged TO THE NEW to automate repetitive tasks, reduce operational & maintenance costs, and provide economical, flexible, and effective solutions for various project and product demands.

Highlights

✓ Reduced overall infrastructure spending from $100K to $40K in a very short span of time

✓ Reduced application deployment time from 20 minutes to 5 minutes

✓ Single window monitoring with escalated notifications

✓ Docker and Amazon EC2 Container Service integration for all micro-services
Key Features

- Improved deployment procedures and simplified application maintenance
- Controlled and streamlined access mechanisms for the working team
- Standardized and rationalized infrastructure components
- Allow Business team to analyse user behaviour and give personalised dashboard & deals
- Provided effective monitoring, implemented security & failover solutions, and maximized automation
- Dedicated DevOps team for maintenance of complex applications
- Industry standard infrastructure control and provisioning

Technical Excellence

- Analysed traffic trends of 30-50 days to decide base minimum infrastructure to support varied demands
- Introduced Horizontal Autoscaling, MultiAZ approach, Chef Configuration Management and Private DNS concept
- Using recommendation engine every users has its own personalised deals & offers
- Scaleable kafka cluster allows huge traffic spikes in case of any marketing campaign
- Implemented Standardized and Automated way of launching, configuring, backing up and decommissioning of application stack
- Single Window Monitoring of Server Resources, Application Performance, and Service Availability, which gives escalated notifications
- Integrated Docker & Amazon Elastic Container Service (ECS) for all micro-services & applications
- Automated deployments, analytics reports and multiple other redundant tasks
- Employed centralized monitoring instead of segregated monitoring

Use of AWS Services

We used various AWS services such as Amazon CloudFront, Amazon EC2, Amazon RDS, Amazon S3, AWS Lambda, Amazon Elastic Container Service (ECS) and Amazon API Gateway. Outlined below are the details of these services:

- All static content is served via Amazon CloudFront
- DNS Management is done via Amazon Route53
- All services all running in high-availability using multiple availability zones and Amazon EC2 auto-scaling
- All DB servers are running on Multi-AZ Amazon RDS for MySQL
- Using Amazon Marketplace’s Wowza subscription for live streaming of videos
- All backups are stored on Amazon S3
- Few static sites served via Amazon S3
- Amazon EMR is used to setup Spark & HBase cluster
- All emails are delivered via Amazon Simple Email Service (SES)
- All old backups are archived via Amazon Glacier
- Load-testing & asynchronous workloads processing is done via Amazon EC2 spot Instances
Technology Stack

**Backend**
- node
- MongoDB
- redis
- PostgreSQL

**Frontend**
- AngularJS

**Cloud Services**
- AWS ECS
- Amazon RDS
- Amazon CloudFront
- Auto Scaling
- elastic

**Other Frameworks & Tools**
- spring
- Docker
- Nagios
- Calm.io
- Bamboo
- Kubernetes

Testimonials

**Snehesh Mitra**
CoFounder and CTO, NearBuy

“TO THE NEW helped us immensely with their DevOps capabilities. They automated our delivery pipeline using Docker & Amazon Elastic Container Service (ECS) and helped reduce the overall cost by more than 50%. Using TO THE NEW’s DevOps capabilities, we could reduce the deployment time to a few minutes. Over and above, the enriched monitoring and centralized log management enabled us to identify root cause most of the time. They have always been proactive in suggesting & implementing solutions for cost & performance optimizations. Thanks for all the support. Job well done indeed!”

Know more about our DevOps offerings

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