

Developing Lake Charles

[Case-Study]

History

Developing Lake Charles is an online resource promoting new business developments throughout the Acadiana area. “Founded by one, but driven by many,” **Developing Lake Charles’s** mission is to inform the community about new business developments while assisting the new businesses in using technology to promote their offerings and connect with their local audience.

Challenge

Like many small businesses, **Developing Lake Charles** found itself in an all-too-common dilemma. As an online news organization, it needed a website to serve content to viewers, most of whom came from a large social media following, but **Developing Lake Charles** wasn’t large enough to require or support a full-time development and operations team. Aware that the cloud was supposed to offer the best of both worlds in terms of cost efficiency and scalability, **Developing Lake Charles** pursued a solution. An AWS account was quickly created, and a Bitnami WordPress AMI was found and launched on a single EC2 instance, in the default VPC. Almost immediately, **Developing Lake Charles** recognized scaling and security concerns. This is the reason for the AWS Partner Network, and where Infascination came in to help.

Solution

Without a dedicated operations team, it was evident that **Developing Lake Charles** needed a solution that was not only extremely scalable and highly available, but also fault tolerant. If that weren’t enough, the solution needed to be as automated as possible while still being able to be modified, updated, and resistant to human errors. Enter CloudFormation.

AWS CloudFormation is an “Infrastructure-As-Code” tool that enables developers to script out infrastructures. A simple web server to an entire enterprise can be defined in templates written in human-readable JSON or YAML format. Armed with this new tool, an updated infrastructure was templated with CloudFormation and deployed. This time it used CloudFront to serve dynamic content to **Developing Lake Charles’s** many viewers, and an Elastic Load Balancer to distribute traffic to multi-AZ auto-scaling groups.

All this done while emphasizing security by practicing the principle of least privilege. Now, having an entire infrastructure in a text file, it was time for our Infascination team to hand the keys back over to **Developing Lake Charles**. The CloudFormation templates, decoupled into easy-to-maintain modules, was uploaded into **Developing Lake Charles’s** existing Bitbucket account where it could be stored, managed, and versioned. Using some robust features of CloudFormation such as a built-in template validator, change-sets to conduct “dry runs”, and stack policies as well as termination protection to safeguard against accidental deletions, **Developing Lake Charles** now had everything it needed to continue to grow and maintain its infrastructure without fear.

Success Metrics

We measure success based upon multiple key performance indicators including, client feedback, acceptance testing, internal validation and quality controls. **Developing Lake Charles's** new solution has been operational without incident since launch in January 2018.

Lessons Learned

System reliability is critical to operational excellence for web-based businesses and AWS CloudFormation provided ideal solution for deploying and maintaining **Developing Lake Charles's** business infrastructure on AWS.

Conclusion

By following best-practices for infrastructure-as-code deployments via CloudFormation, cloud-native design patterns for high-availability of mission critical business applications can be templated, deployed and updated with ease.