



nClouds | AWS Case Studies

M.J. Engineering and Land Surveying, P.C.

nClouds Helps M.J. Engineering and Land Surveying, P.C. Achieve Scalable and Efficient Infrastructure on AWS

Benefits Summary



Streamlined Scalability



Increased Cost-Effectiveness



Introduced Reproducible Environments



Enhanced Development Productivity

About M.J. Engineering and Land Surveying, P.C.

[M.J. Engineering and Land Surveying, P.C.](#) is a company specializing in 3D laser scanning and 360-degree photography. The company collects data through scanning and photography and has developed a web application that allows users to virtually explore different locations, similar to Google Street View or Matterport's real estate virtual tours. With a focus on data-heavy operations and the need for scalability, M.J. Engineering decided to migrate its infrastructure from on-premises to the cloud.

Industry

Software

Location

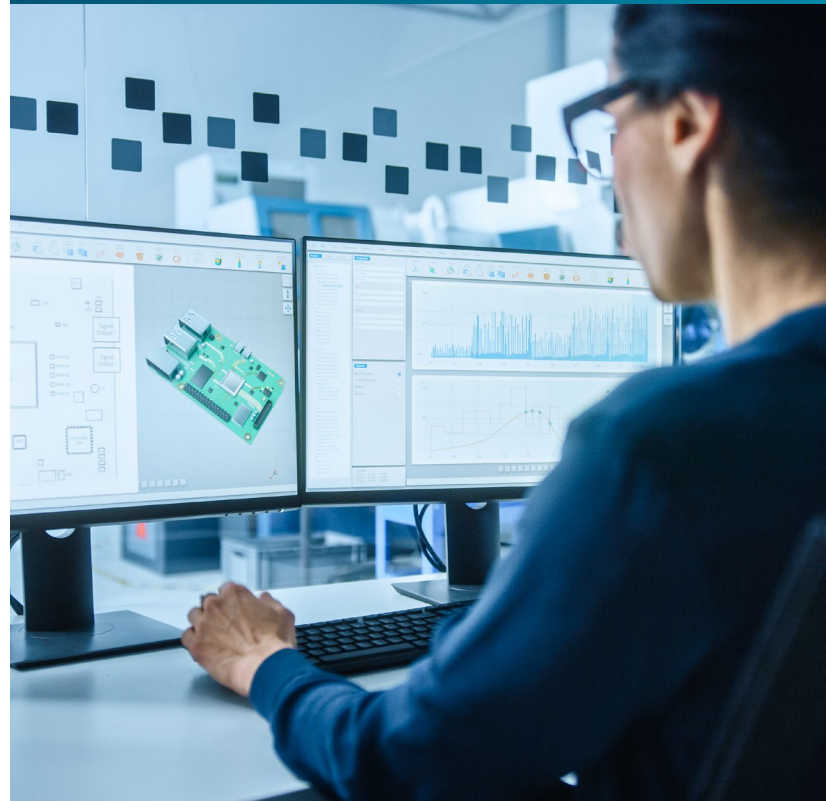
United States

Challenge

Need for expert guidance for AWS cloud-native setup after migration

Featured Services

AWS Well-Architected Review, Managed Services, Migration, DevOps



"The nClouds team was not only technically competent but also had excellent communication and soft skills. They understood that our application had unique needs and tailored their solutions accordingly. Working with nClouds was not only a positive experience on the technical front but also in terms of their professionalism and commitment to excellence."

—**Michael Pianka**

Associate | Director of Software Development at M.J. Engineering

CHALLENGE

Need for a Cloud-Native Infrastructure to Facilitate Future Development and Scalability

M.J. Engineering had been building its web application for a few years, using on-premises hosting. Its application was data-heavy, involving the collection and processing of large amounts of data. M.J. Engineering recognized the need for a cloud-native infrastructure to facilitate future development and scalability, so it decided to migrate its infrastructure to AWS. It required expert guidance to ensure a smooth migration process and address the complexities involved in setting up its infrastructure in the cloud.



Why AWS and nClouds

M.J. Engineering's journey with nClouds began with an already architected core application running in two AWS environments. Seeking further expertise and scalability, it engaged nClouds for an AWS Well-Architected Review and the development of infrastructure-as-code (IaC) templates. The goal was to automate the creation of a third environment, allowing for streamlined deployment processes.

The decision to migrate to AWS was driven by M.J. Engineering's need for scalability and the robust features offered by the AWS cloud platform. With a data-heavy application, it required a highly scalable and cost-effective solution, making AWS the ideal choice. nClouds, recommended by AWS as a key consultant, proved its expertise in AWS solutions and provided the necessary guidance and support for a seamless migration and setup process, solidifying the partnership for future growth.

M.J. Engineering Leveraged Several Key Amazon Web Services

- **AWS Lambda:** AWS Lambda enables the company to run code without the need to provision or manage servers.
- **Amazon Route 53:** Amazon Route 53 is a scalable domain name system (DNS) web service designed to route end-user requests to endpoints.
- **AWS Web Application Firewall (WAF):** AWS WAF is a web application firewall that helps protect web applications from common web exploits and attacks. It filters malicious traffic for M.J. Engineering and allows only legitimate requests to reach the application.
- **Amazon CloudFront:** Amazon CloudFront is a content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency and high transfer speeds.

SOLUTIONS

nClouds Solution Architecture for M.J. Engineering and Land Surveying, P.C.

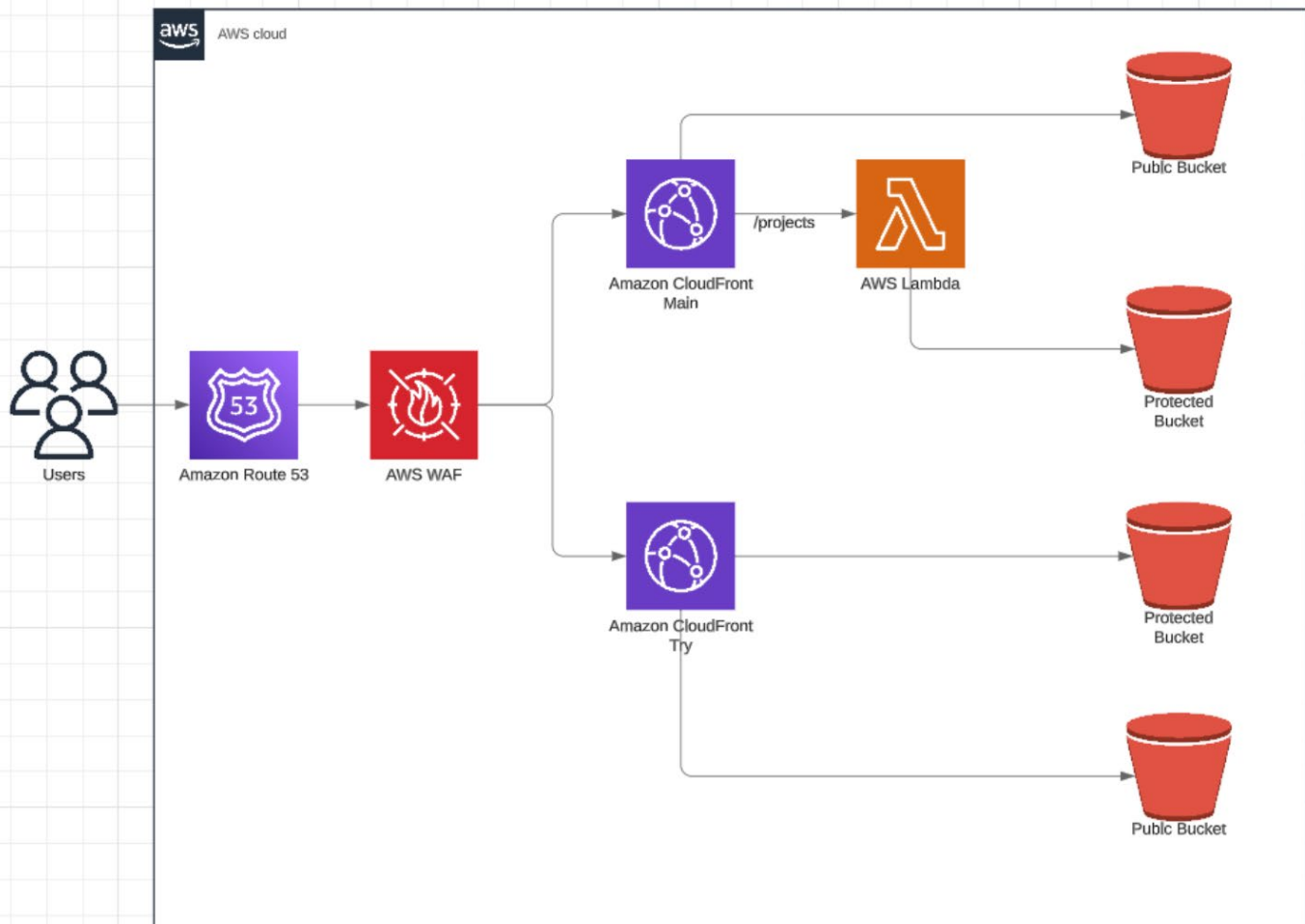
M.J. Engineering engaged with nClouds to assist it with its migration to AWS and to provide ongoing consulting services. The nClouds team worked closely with M.J. Engineering for two months to complete the necessary setup and configuration. nClouds conducted a comprehensive review and provided a list of best practices and security recommendations to strengthen M.J. Engineering's infrastructure. As a result of the partnership with nClouds, a new staging environment was successfully created, enhancing the development process.

The nClouds team helped M.J. Engineering design an architecture that was highly scalable and efficient, given the data-intensive nature of its application. The solution focused on a stateless and serverless approach, eliminating the need for long-running server instances. Large data files were cached in AWS and distributed through a content-delivery network (CDN) to ensure

quick access from various geographic locations. Interactive components of the application were handled by AWS Lambda functions, which were triggered only when requested, minimizing costs when the function was idle.

To replicate the infrastructure across three environments (development, staging, and production), the nClouds team implemented infrastructure as code (IaC) using configuration code files. This approach allowed for easy replication of environments, streamlined disaster recovery, and enhanced documentation. Additionally, the team set up automated deployment pipelines, enabling efficient code changes and infrastructure updates across the different environments. By using IaC and automated deployments, M.J. Engineering achieved consistency, ease of use, and enhanced development productivity.

MJELS Infrastructure



BENEFITS

Increased Business Efficiency

With nClouds' expert guidance, M.J. Engineering achieved a successful migration to AWS and positioned itself for future growth and innovation.



Streamlined Scalability

The AWS infrastructure provided by nClouds allowed M.J. Engineering to handle its data-heavy application efficiently. The architecture design ensured that the system could easily scale up or down based on demand, providing a seamless experience for users.



Increased Cost-Effectiveness

With a serverless and stateless approach, M.J. Engineering minimized costs by only running functions and resources when required. The use of CDN and efficient caching improved performance and reduced the need for additional infrastructure resources.



Introduced Reproducible Environments

The infrastructure-as-code implementation enabled M.J. Engineering to easily replicate environments, ensuring consistency across development, staging, and production. This approach also served as comprehensive documentation for the entire infrastructure.



Enhanced Development Productivity

Automated deployment pipelines facilitated smooth and quick code changes and infrastructure updates. Developers could push changes to the environments easily, ensuring rapid feedback and efficient development workflows.

About nClouds

nClouds is a certified, award-winning provider of AWS and DevOps consulting and implementation services. We partner with our customers as extensions of their teams to build and manage modern infrastructure solutions that deliver innovation faster. We leap beyond the status quo.

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