



nClouds | AWS Case Studies

Finexio

Finexio Streamlines Payments Processing:
nClouds Delivers Secure, Scalable AWS
Infrastructure



Benefits Summary



Secured infrastructure,
protecting against threats.



100% Increase in Deployment
Visibility for Production
Environments.



20% Increase in
deployment efficiency.



5% cost reduction through
automated workflows
and intelligent resource
management

Finexio

About the Customer

Finexio simplifies accounts-payable payments for medium and large corporations by digitizing manual paper checks. Finexio's comprehensive accounts payable payments-as-a-service (PaaS) solution leverages proprietary analytics and robotic process automation to drive maximum conversion rates of suppliers to electronic payments.

Industry

FinTech

Location

Orlando, FL

Featured Services

CI/CD, Containers, Database Administration,
Message Queue Integration, Security
Enhancements

Service Page Links

- [Security and Compliance](#)
- [DevOps Services](#)
- [Containers](#)



Challenge

Finexio faced several technical challenges before working with AWS and nClouds. Ensuring robust cloud security was a top priority to protect sensitive financial data and maintain compliance standards. The company also needed to find ways to save on costs while optimizing cloud performance. Finally, deploying and maintaining AWS Cloud Development Kit (CDK) stacks efficiently was essential for streamlined infrastructure management and scalability.



Why AWS and nClouds

AWS (Amazon Web Services) and nClouds were the natural choice for Finexio's needs. AWS offers a vast array of cloud architecture solutions, and nClouds' expertise in AWS solutions provided Finexio with tailored, secure, and cost-effective answers to its specific business and technical challenges. nClouds' track record of success in AWS implementations and commitment to crafting customized solutions ensured Finexio received a comprehensive and trusted partnership.

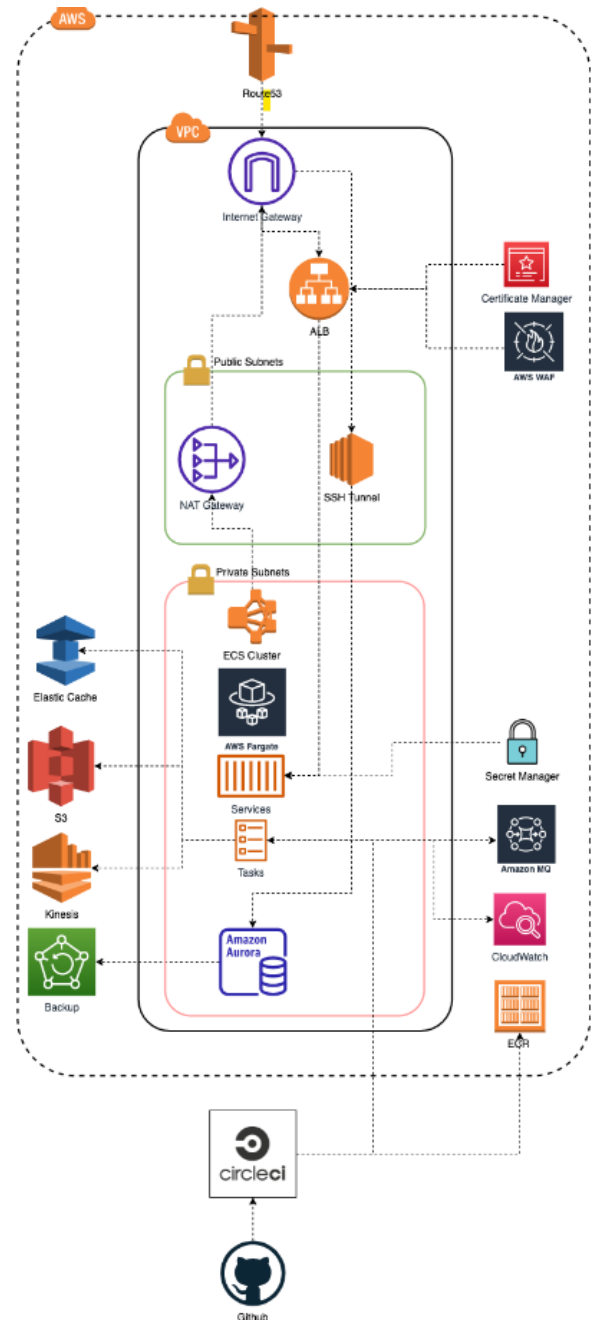
nClouds offered an end-to-end service, handling everything from design and implementation to ongoing management and support. This allowed Finexio to focus on its core business while nClouds managed the intricacies of its AWS infrastructure. AWS's seamless integration between its services ensured that all components of Finexio's infrastructure worked together smoothly, streamlining development and deployment processes.

Strategy and Solution

nClouds designed a multifaceted solution addressing Finexio's key challenges:

1. Enhanced Security: Implemented automated security measures to improve Finexio's security by barring malicious sources from infiltrating Finexio's systems, including AWS Web Application Firewall (WAF) and automated IAM user audits, significantly reducing vulnerabilities.

- Container Security Improvements:
 - ◇ Implemented read-only file system configurations for all ECS services
 - ◇ Limited container access to only specifically defined mount points
 - ◇ Disabled public IP assignments for ECS tasks, reducing attack surface
- Traffic Control and Protection:
 - ◇ Implemented IP whitelisting on AWS WAF to restrict access to critical services
 - ◇ Deployed specialized WAF rules to identify and block bot traffic
 - ◇ Created layered defense approach to protect sensitive financial data





2. Cost Optimization: Introduced automated workflows that reduced costs in lower environments when system usage was at its lowest, resulting in significant savings without sacrificing performance.

- Implemented scheduled resource management for non-production environments
- Created specialized Lambda functions to automatically:
 - ◇ Stop RDS and DocumentDB instances during weekends
 - ◇ Suspend unused EC2 instances during off-hours
 - ◇ Scale down ECS services during periods of low utilization
 - ◇ Resume all services automatically on Monday mornings

3. Streamlined Deployment: Introduced automation to ensure rapid and reliable infrastructure deployment:

- nClouds introduced a streamlined and automated process using AWS CodeSuite and GitHub triggers to speed up the implementation of AWS CDK stacks.
- nClouds developed an automated recovery system using AWS Lambda and CloudWatch events to monitor CircleCI pipelines.

4. Improved User Management: A custom solution was delivered to automatically create SSH users from Secrets Manager whenever new users were added or updated, streamlining user management tasks via SSM Automation Documents.

5. Enhanced Control and Agility: Additional pipeline features were introduced, enabling Finexio to dynamically enable or disable releases, providing it with greater control and flexibility over its software delivery processes, including implementing comprehensive Slack notifications for CircleCI pipelines, providing real-time alerts on deployment status.



Results and Benefits

Teaming up with Finexio, nClouds enabled several key benefits through AWS that cut costs and sped up the company's time to market.



Enhanced Security: The introduction of AWS Web Application Firewall (WAF) and automated IAM user audits ensured a secured infrastructure, protecting against threats.



Increased Release Velocity: The implementation of flexible pipeline management empowered Finexio to dynamically enable or disable releases, granting it precise control over software delivery, and gaining a 100% Increase in Deployment Visibility for Production Environments.

- Before: No notification system in place, resulting in delayed awareness of deployment success or failure.
- After: Immediate team notifications for all deployment events, enabling faster response to issues.



Simplified Maintenance: Automation and custom solutions made infrastructure maintenance and updates easier, reducing operational overhead and enhancing system reliability, and providing a 20% Increase in deployment efficiency.

- Before: Failed workflows required manual identification and restart, creating operational delays
- After: Automated system detects failed workflows and triggers re-runs without human intervention, reducing downtime and operational overhead



Cost Savings: Achieved 5% cost reduction through automated workflows and intelligent resource management

- Before: Resources ran continuously regardless of usage patterns
- After: Resources aligned with actual business hours and usage requirements

Finexio's collaboration with nClouds showcases the power of a strategic partnership to achieve robust security, operational efficiency, and faster time to market. By leveraging nClouds' AWS expertise and proactive approach, Finexio successfully modernized its infrastructure and accelerated its growth. Contact nClouds to learn how we can help your organization achieve similar results.

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.



Business Benefits

The business benefits of this solution are multifaceted and contribute to improved compliance, operational efficiency, and data security:

- AWS Config conformance packs offer a simplified view of compliance status for various frameworks, aiding audit preparation.
- AWS Control Tower allows for centralized governance, ensuring consistent enforcement of security policies.
- The Landing Zone Accelerator (LZA) automates account creation and enables essential services, reducing workload.
- Implementing AWS Backup plans ensures robust data protection and enhances disaster recovery.

Together, these components create a resilient and compliant cloud infrastructure that supports strategic business objectives, reduces operational overhead, and fosters a culture of data stewardship and security.

Technical Benefits

The technical benefits of this solution significantly enhance the security, compliance, and management of cloud environments.

- AWS Config Conformance packs automate compliance checks against standards like CMMC and FedRAMP.
- AWS Control Tower provides preconfigured controls for quick implementation of best practices.
- Centralized logging from services like GuardDuty, Config, and CloudTrail offers a comprehensive view of security and compliance.
- Federated access management through IAM Identity Center enhances security by streamlining user access.
- CodePipeline with LZA simplifies the deployment of changes across multiple accounts.
- Deploying AWS WAF with Load Balancers fortifies applications against web-based attacks.

Overall, this solution fosters a robust, compliant, and secure cloud infrastructure, enabling organizations to efficiently manage their AWS environments.



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