Cync Software is a financial solutions company based in Tampa, Florida. They provide comprehensive software solutions for commercial finance companies and banks offering asset-based loans. Their flagship product, the Cync Applications Suite, offers a diverse range of financial solutions that cover account receivable financing, factoring, working capital loans, asset-based lending, and related credit services.

## CHALLENGE:

As a key player in the commercial lending market, Cync Software's primary challenge was to implement an automated delivery mechanism for their diverse software solutions release cycle that could rapidly deploy and scale according to the evolving needs of their customer base. While the team increased the pace at which they developed new capabilities, they struggled to push their code to production at an accelerated rate. As a mature cloud-native application, Cync's Financial Lending software platform needed faster, more secure, and higher-quality release cycles. As they continued to expand and onboard more customers, the increasing requirements meant multiple and frequent releases with continuously changing technology platforms.

To address this, the leadership team hired Idexcel to implement a DevOps pipeline that would better align the software release and development cycles. Cync wanted to ensure they were better positioned to respond to customer requirements in a timely manner.

### Some of the technical challenges included:

- **Cloud Native** – Being cloud-native, the pipeline needed security, self-healing, and seamless cloud integration.
- **Automation** – Deployment and validation processes needed to be automated, including infrastructure provisioning (immutable), code testing, and code deployment.
- **Containerization** – The application was using Docker, so the pipeline had to be capable of triggering deployments within containers.
- **Security** – As the application operated in the financial domain, security was a top priority. Automation for anti-virus checks, static/dynamic code analysis, and SOC2-compliant policy checks needed to be implemented.
- **Tools** – All tools had to be compatible with the AWS platform and fully integrated with each other.
- **Logging** – All events needed to be logged, and real-time and archived logs had to be maintained for a predetermined time period.

## SOLUTION:

Idexcel assigned a team with expertise in development and delivery on the AWS cloud to lead the project. The team understood the intricacies of both application development and system administration. They designed a pipeline that incorporated both AWS services and open-source software.
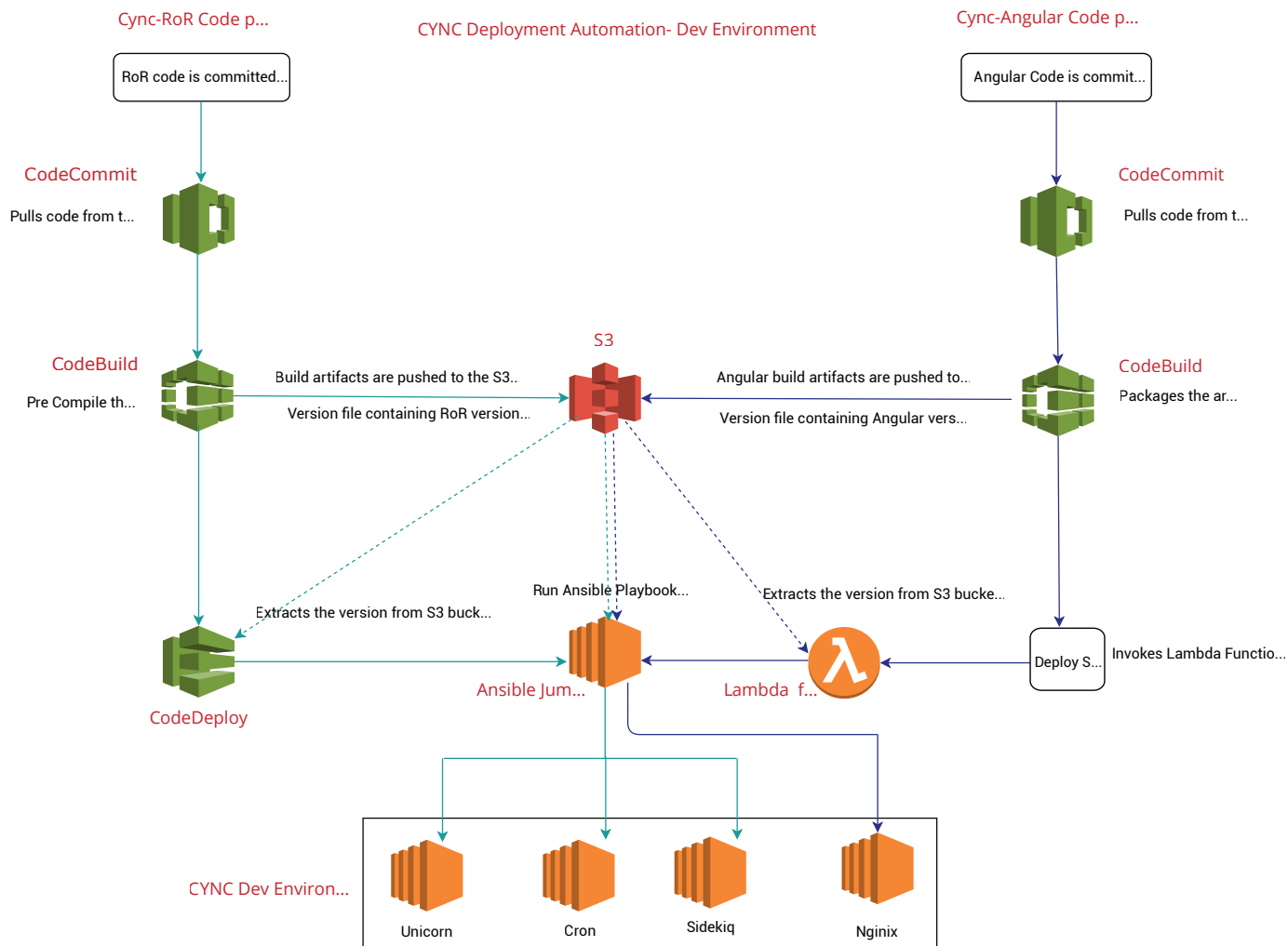
### The Implemented CI/CD Pipeline included:

- **Cloud Native** – The pipeline utilized AWS native services such as CodeDeploy, S3, SNS, CloudWatch, Lambda, and CodePipeline.
- **Automation** – Automated provisioning of infrastructure was achieved using Ansible scripts. Code testing was done using iRAF (Idexcel's QA Automation Framework), and code deployments were handled with OpsWorks and Chef Automate.
- **Security** – A two-fold security approach was implemented using automated scripts. These scripts scanned the infrastructure and code for vulnerabilities and presented a report before deployment.
- **Tools** – The tools identified included: Static/Dynamic Code Analysis: Brakemen (for Ruby on Rails) and AWS Inspector (for AngularJS). Containers: Docker. Infrastructure Scanning: MBSA (Windows), Fortigate (Linux). Configuration Management and Deployment: Chef. Finally, QA Automation: Selenium (Cucumber) and Jenkins.
- **Logging** – " A "Logs & Live Monitoring" approach was adopted. AWS native services, including CloudWatch and Kinesis, were used along with customized SNS notifications for real-time monitoring.

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Cync-RoR Code p...

RoR code is committed...

Cync-Angular Code p...

Angular Code is commit...

CodeCommit

Pulls code from t...

CodeCommit

Pulls code from t...

CodeBuild

Pre Compile th...

S3

Build artifacts are pushed to the S3..

Version file containing RoR version...

Angular build artifacts are pushed to..

Version file containing Angular vers...

CodeBuild

Packages the ar...

Extracts the version from S3 buck...

Run Ansible Playbook...

Extracts the version from S3 bucke...

CodeDeploy

Ansible Jum...

Lambda f...

Deploy S...

Invokes Lambda Functio...

CYNC Dev Environ...

Unicorn | Cron | Sidekiq | Nginix

## BENEFITS:

Cync Software increased the number of product releases by 30% within the first year, with 40% fewer software defects. With the pipeline fully automated and 60% fewer manual steps required, the company reduced labor hours spent on release management by approximately 40 hours per week. When issues did arise, the automated audit log enabled the team to quickly identify and resolve problems with minimal impact.

**Increased Efficiency:**
Commits per day
5 ⟶ 35

**Test Coverage:**
Regression Testing Time
3 weeks ⟶ 9 hours

**Increased Quality:**
Bugs in Production
15% ⟶ < 1%

**Faster ROI:**
Time to market
6 weeks ⟶ 1 week

## OUR AWS COMPETENCIES

**aws**
**PARTNER**

- DevOps Services Competency
- Financial Services Competency
- Migration and Modernization Services Competency

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