



## MSys makes its ISV partner SOC 2 compliant with DevSecOps

### About Client

The client is an Independent Software Provider in the US, employing over 1000 people. The client had a strong user base across the globe with annual revenue of over 900 Million US dollars in 2019.

### Enabling digital for insurance solutions

The client is a well-known name globally for creating top-notch software products and enterprise solutions. Their software solutions cater to multiple industries globally for its emphasis on innovation and technology to create an edge for its customers' business. The client has a niche in delivering innovative software solutions for the insurance sector. The client has been successful in generating operational excellence and customer-centricity for its customers in the insurance sector.

### An overhaul of processes in the Insurance software

The client planned to implement a long term business strategy that required them to reprocess key software functionalities and refactor their architectural designs. They invested heavily in next-gen processes, tools, and technologies to enable their digital transformation. They completely moved their workloads to the cloud and implemented Microservices architectural design functions. Further, the client's technical team build Continuous Integration and Continuous Development (CI/CD) pipelines for faster release and cross-team compatibility.

## Security for cloud-scale Microservices – the bone of contention

With heavy investment in new tools and technologies, the client also was mindful of security. It was undoubtedly a treacherous task for them to protect new Microservices' orchestrated cloud-scale architecture. Further, the software products for insurance sectors are subjected to several regulations due to data's sensitive nature.

The client fell short of supporting an end-to-end security hook to avoid non-compliance of the SOC 2 and maintain transparency throughout the digital transformation process. Also, they were struggling to automate security procedures.

*\***Soc 2**, pronounced "sock two" and more formally known as Service Organization Control 2, reports various organizational controls related to security, availability, processing integrity, confidentiality or privacy.*

## MSys' DevSecOps via Open-Source paved the way

The client partnered with MSys Technologies for finding a solution to its security problem. MSys' previous DevSecOps services made us gain the confidence of the client. We proposed client open source tools and technologies combined with AWS to uncover and remediate issues through the SDCL that otherwise would have created irrecoverable losses.

## AWS Lambda – a rightful solution implementation

MSys DevSecOps expert thought through the solutions – they wished to do away even with a single computing infrastructure footprint. This means they were in no mood for any virtualization. Therefore, AWS Lambda was their natural choice. It helped them impart a powerful force of computations while derisking threats associated with infrastructure, servers, or containers. This helped simplify the security frameworks and create a secure and streamlined delivery of the software. The scalability and low cost of the AWS Lambda ensured that the compute services are compliant with SOC 2 policies.

AWS Lambda remediated violations in the policies by facilitating recurring schedules. This it did by

1. Attaching TLS - Transport Layer Security certificates to ELB - Elastic Load Balancers (ELB)
2. Enabling CloudFront distributions or removing too permissive security group rules.

AWS Lambda helped achieved

- Custom tagging
- Encrypting S3 buckets and EFS instances
- Applying ACL rules to VPC subnets
- Rotating EC2 instances when off-hours

MSys experts further leveraged Cloud Custodian tool to enforce configuration standardization with the help of YAML DSL. This helped us write specific policies for the configuration of the resources per the client's business requirements. These policies were executed on event-driven based architecture. Further, MSys experts also wrote the Logs and Metrics in the Lambda function to AWS CloudWatch. Violations of security remediated by AWS Lambda were notified leveraging Slack.

MSys DevSecOps engineers leveraged AWS back services to ensure backup for

- Amazon Elastic Block Store (EBS)
- Elastic File System (EFS)
- Relational Database Service (RDS)
- DynamoDB instances

Other Technical Details

- MSys provided the client with a build automation workflow that utilizes some of the popular CI/CD tools in the market, such as Git, Gerrit, Jenkins, Razor, Chef
- Provisioned bare metal physical server using Razor
- Single view dashboard for several deployment workflows
- MSys built company-wide policies for optimal CD workflows Management insight was delivered using build-release dashboard across several CD pipelines
- Configuration input to spring could is stored in segregated Gerrit repositories.
- Sensitive configuration is further encrypted with signing keys provided by Spring Cloud
- Deployments can only happen after Service Desk change tickets are approved and during the deployment window



# Business Benefits

- Smooth digital transformation journey with DevSecOps
- SOC 2 compliant processes – Zero errors
- Up to 70% reduction in engineering efforts towards security operations
- More than 33% increase in the process efficiency
- 90 percent early case detection of vulnerabilities
- Direct cost saving of above 40%

For any DevOps consultation or support,  
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## About MSys Technologies

MSys Technologies is a reliable partner for product engineering services and digital transformation projects for its Enterprise and Silicon Valley clientele. We design, develop and manage modern distributed systems and complex ecosystem integrations with open source, proprietary, cloud-native and containerized technology expertise and outcome-based pricing.



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