

Rafael Santiago Silva

Senior Senior Infrastructure & DevSecOps Engineer

SUMMARY

- Certified AWS DevOps Engineer Professional, FinOps Practitioner, Calico Operator; pursuing CKA and a postgraduate in ML/MLOps focused on AI infrastructure.
- 6+ years managing 20+ enterprise AWS accounts with strict multi-tenant isolation using cross-account IAM, External ID, and Transit Gateway.
- Kubernetes (EKS), IRSA, Calico network policies, event-driven architectures (SQS, EventBridge, MSK), and Terraform automation.
- Developed a multi-tenant FinOps portal enforcing tenant isolation via centralized role assumption; operational tooling in Python with boto3.
- Led zero-downtime major RDS upgrades, security hardening at scale, and incident response with root cause analysis and AWS Health triage.

TECHNICAL SKILLS

Main Technical Skills	AWS (6 yr.), Kubernetes (5 yr.), Python (6 yr.), Terraform (4 yr.), DevOps (6 yr.)
Programming Languages	Python (6 yr.)
JavaScript Frameworks	React (1 yr.)
JavaScript Libraries and Tools	Vite (1 yr.)
Data Analysis and Visualization Technologies	Data visualization (6 yr.)
Security	IAM (6 yr.)
Databases & Management Systems / ORM	AWS DynamoDB (1 yr.), ChromaDB, Microsoft SQL Server (3 yr.), MySQL (3 yr.), PostgreSQL (3 yr.), Redis (1 yr.)
Cloud Platforms, Services & Computing	AWS (6 yr.), Azure (2 yr.), GCP (1 yr.)
Amazon Web Services	AWS Amplify (1 yr.), AWS Cloudformation (3 yr.), AWS CloudFront (3 yr.), AWS CloudWatch (6 yr.), AWS Cognito (1 yr.), AWS DynamoDB (1 yr.), AWS EC2 (6 yr.), AWS ECS (Amazon Elastic Container Service), AWS ElastiCache (1 yr.), AWS Elastic Kubernetes Service, AWS Elastic Kubernetes Service (EKS), AWS EventBridge (6 yr.), AWS Fargate (5 yr.), AWS Lambda (6 yr.), AWS MSK (6 yr.), AWS Route 53 (3 yr.), AWS S3 (6 yr.), AWS Secrets Manager (6 yr.), AWS SQS (6 yr.), AWS VPC (6 yr.)
Azure Cloud Services	Azure DevOps (2 yr.)

Deployment, CI/CD & Administration	Active Directory (7 yr.), ArgoCD (1 yr.), DevOps (6 yr.), Helm (5 yr.), Jenkins (1 yr.)
SDK / API and Integrations	Api Gateway (1 yr.), OpenTelemetry (1 yr.)
Scripting and Command Line Interfaces	Bash (6 yr.)
Version Control	BitBucket (1 yr.), Github Actions
Logging and Monitoring	Datadog (1 yr.)
Virtualization, Containers and Orchestration	Docker (5 yr.), Kubernetes (5 yr.), Terraform (4 yr.)
Mail / Network Protocols / Data transfer	firewall, FortiGate (7 yr.), IP Stack (6 yr.), VPN (7 yr.)
Message/Queue/Task Brokers	Kafka, RabbitMQ (1 yr.)
QA, Test Automation, Security	KMS (6 yr.)
Other Technical Skills	AD, Amazon MSK, ArgoCD/GitOps, Calico (1 yr.), cross-account IAM with External ID, egress, Health Sensors (6 yr.), IRSA, Kustomize (5 yr.), MSK, Multi-tenant logical separation, MySQL on, Patch Manager baselines, PGVector, RDS (6 yr.), RDS including major-, security exposure reviews, SQL Server on Linux, SSL/TLS lifecycle, StackSets, Vector Databases

WORK EXPERIENCE

Senior Cloud Operations Analyst | e-Core (AWS Partner MSP)

Sep 2023 – Present

- Operate roughly 20 enterprise AWS accounts across financial services, payments, energy, healthcare and research, with hard separation between tenants enforced by centralized cross-account IAM role assumption with External ID, least-privilege policies and per-account guardrails.
- Support multi-cluster EKS for a financial services client: IRSA for pod-level AWS identity, cross-account Transit Gateway connectivity, Amazon MSK for streaming, and distributed tracing with ADOT and OpenTelemetry.
- Design and operate event-driven integrations on SQS, EventBridge and MSK; run RabbitMQ in production at an energy utility, including version upgrades, backup strategy and enabling the client team, and Redis/ElastiCache across four client environments.
- Harden environments at scale: Systems Manager Patch Manager with custom baselines, CloudFormation StackSets in SERVICE_MANAGED mode across the organization, Secrets Manager and KMS adoption, SSL/TLS certificate lifecycle, and recurring security exposure reviews.
- Build operational tooling in Python with boto3, and designed and shipped a multi-tenant FinOps portal from scratch (React/Vite, AWS Amplify, API Gateway, Lambda,



DynamoDB, Cognito, Terraform) where tenant isolation is enforced by centralized role assumption rather than application logic.

- Run production change windows end to end with validation and rollback plans, including PostgreSQL and MySQL RDS major-version upgrades for different clients with zero unplanned downtime.
- Documented a previously unpublished AWS Backup limitation on AWS re:Post, later confirmed by an AWS Expert, and identified and remediated 723 TB of unmanaged S3 object versions through lifecycle and versioning policy.
- First escalation point for client incidents: daily AWS Health triage, CloudWatch dashboards and alarms built from scratch, root cause analysis and written postmortems.

Cloud Infrastructure Analyst, Propz

Jan 2023 – Sep 2023

- Managed 19 AWS accounts covering provisioning, access control and day-to-day infrastructure change across client-facing and internally owned environments.
- Applied infrastructure changes through Terraform and automated delivery with Jenkins pipelines triggered from Bitbucket; authored reusable Terraform modules for Route 53 and DNS management.
- Acted as the daytime execution point for distributed engineering teams in Russia and Poland, keeping deployment continuity across time zones; operated across AWS and GCP.

Infrastructure Analyst, Bit Pagg → Bit Tech (Payments Fintech)

Sep 2021 – Jan 2023

- Sole infrastructure owner at a 50-person payments fintech, accountable for the entire stack in a regulated environment with no second line of support.
- Provisioned AWS accounts and environments with CloudFormation from scratch; ran application delivery on Azure DevOps and identity on Azure AD.
- Managed the full on-premises side: firewall, Windows Server and Active Directory, DNS, and Red Hat Linux database servers running SQL Server, partnering with developers to unblock hybrid deployments.

Independent IT Consultant | Self-employed

2018 – 2021

- Delivered on-premises infrastructure projects for small and mid-size businesses: networking, Linux and Windows Server environments, physical server builds, firewall configuration and backup routines.

Senior Service Desk Analyst | CBMM

Aug 2015 – Aug 2018

- IT support and shift-based on-call for a global mining operation with subsidiaries in the US and Singapore, supporting SAP ERP and networking in a business-critical context; hands-on production server builds and DLL-level troubleshooting on legacy systems.



IT Sector Manager | Capal Cooperativa

Mar 2011 – Jul 2015

- Led a 3-person IT team and designed multi-branch network infrastructure, including radio links, for environments of 70 to 150 endpoints on Linux and Windows Server.

SELECTED PROJECTS

GitOps Lab – ArgoCD, Kustomize, Kubernetes github.com/tommmdl/argocd-lab

- Reproducible kind-based lab isolating ArgoCD reconciliation behaviour: two Applications with identical automated sync differing only in self-heal, used to compare drift detection, automatic revert and Git-driven change. Documents the Kustomize label and selector immutability trap and the server-side apply requirement for oversized CRDs.

Multi-Tenant FinOps Portal

- Internal platform serving per-client cost and account data with isolation enforced through centralized cross-account role assumption; React/Vite front end on AWS Amplify, serverless back end on API Gateway, Lambda, DynamoDB and Cognito, infrastructure in Terraform.

EDUCATION

- **Postgraduate, Machine Learning & MLOps**
Focused specifically on the infrastructure that runs AI workloads: isolation, security, reliability and cost.
concluding December 2026
- **B.Sc. Information Systems**
UNIARAXÁ

CERTIFICATION

- AWS Certified DevOps Engineer – Professional
- Certified Calico Operator (Kubernetes networking & policy)
- AWS Certified Solutions Architect – Associate
- FinOps Certified Practitioner – The Linux Foundation
- AWS Certified SysOps Administrator – Associate
- NVIDIA-Certified Associate: AI Infrastructure & Operations
- AWS Certified Machine Learning Engineer – Associate
- Manage Kubernetes in Google Cloud – Google Cloud
- AWS Certified AI Practitioner
- Microsoft Certified: Azure Fundamentals
- AWS Certified Cloud Practitioner
- CKA – Certified Kubernetes Administrator
In progress
- AWS Microcredential: Databases for Agentic AI

