



Franck TOUNGA

Platform & AWS Cloud Architect • Governance & FinOps

13 years of experience • 4x AWS • 3x Kubernetes • 1x Terraform • 1x Prometheus

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🌐 <https://toungafranck.com> 📍 Achères, Greater Paris, France • Freelance

PROFESSIONAL SUMMARY

Platform and AWS Cloud Architect with 13 years of experience, including more than 6 years designing, governing and operating multi-account AWS environments. Currently with CAGIP, the industrial IT operator of Crédit Agricole Group, where I own the group-wide container and cloud platform standards and lead a 5-person CloudOps team running a business-critical AWS data platform. I cover the full life cycle of a cloud platform: Landing Zone and guardrails (AWS Organizations, SCPs, IAM Identity Center), hybrid networking, industrialization (Terraform, Atlantis, GitLab CI, Argo CD), security and DORA compliance, observability and FinOps. Used to regulated, cross-functional banking environments (Crédit Agricole, BPCE, Banque du Luxembourg, Banque de France), I combine architecture leadership with the ability to take over highly technical delivery chains. An experienced teacher (Udemy instructor and author), I put knowledge sharing and architecture reviews at the heart of my role.

TECHNICAL SKILLS

Cloud Governance & Platform

AWS Organizations, Control Tower / AFT, Service Control Policies (SCP), multi-account Landing Zone, IAM Identity Center (SSO), AWS Well-Architected Framework, architecture standards, DORA compliance

AWS Networking

VPC, Transit Gateway, PrivateLink and VPC endpoints, Site-to-Site VPN, Direct Connect, Route 53, ALB/NLB, CloudFront, WAF, networks with no internet egress

Security & DevSecOps

IAM, KMS, Secrets Manager, Security Hub, GuardDuty, AWS Config, Inspector, CloudTrail; CSPM/KSPM posture, policy as code, Prisma Cloud, Cosign, CyberArk Conjur, supply chain security

AWS Services

EKS, EC2, RDS, S3, Lambda, API Gateway, SQS, SNS, EventBridge, ECR, MWAA

FinOps & Cost Optimization

AWS Cost Explorer, AWS Budgets (alerts), Cost Allocation Tags, tagging policy, Savings Plans, Reserved / Spot, rightsizing, per-entity showback

Infrastructure as Code & CI/CD

Terraform (modules, private registry, remote state), Atlantis, Argo CD, GitOps, GitLab CI, Jenkins, Ansible, Git, deployment industrialization

Observability & Operations

Amazon CloudWatch (metrics, logs, alarms, dashboards), CloudTrail, Prometheus, Grafana, ELK, run and maintain, incident diagnosis and resolution

Containers & Orchestration

Kubernetes, Amazon EKS, OpenShift 4.x, Docker, Helm, Harbor, IRSA, admission controllers

Development & Application Architecture

Java / Spring Boot, Angular, REST/Swagger, OAuth2/OIDC, Keycloak, PostgreSQL, ActiveMQ

Leadership & Enablement

Team management, architecture reviews, technical workshops, technical design documents, mentoring, coaching, Scrum, Kanban

PROFESSIONAL EXPERIENCE

CAGIP (Crédit Agricole Group) | September 2026 – Present | Paris, France

Group Platform Architect • AWS CloudOps Lead (Corporate Center)

The industrial IT operator of Crédit Agricole Group, running most of the group's IT production for its subsidiaries and regional banks. Dual mandate: group-wide container and cloud platform standards, and operational ownership of the Corporate Center's AWS data platform. Line management of a 5-person CloudOps team.

Group platform architecture:

- ▶ Defined the group's container and cloud architecture standards, packaged as reusable golden paths (hardened baseline, pipeline, observability, secrets and policy built in): 6 entities onboarded, project environment lead time down from 6 weeks to 5 days.
- ▶ Drove the convergence roadmap of the group's Kubernetes distributions onto a standard OpenShift baseline: cluster inventory, wave-based migration plan and exit criteria.
- ▶ Shaped multi-account AWS governance and the associated guardrails: organization structure, Service Control Policies, documented and auditable exception process.
- ▶ Translated DORA requirements and software supply chain standards into platform design: image signing, SBOM, admission controllers, CSPM/KSPM posture with findings assigned to owning teams; critical findings down 40% in the first quarter.
- ▶ Defined the unified observability standard (metrics, logs, traces), per-entity showback and the FinOps practices of the shared platform.
- ▶ Defined the benchmarking and qualification method for new solutions before roll-out; ran architecture reviews and technical workshops with internal teams.

AWS CloudOps lead • Corporate Center data platform:

- ▶ Took over a business-critical delivery chain at short notice from the previous owner: 18-account AWS organization (Control Tower / AFT, IAM Identity Center, eu-west-3), no internet egress, mixed corporate-routable and CG-NAT addressing, landing zone operated by a third party.
- ▶ Delivered a complete new AWS environment baseline end to end (design, Terraform, review, deployment through the Atlantis pipeline): VPC, Transit Gateway, ALB, EKS cluster, RDS PostgreSQL, S3 buckets, VPC endpoints, IAM and OIDC provider; around 50 resources delivered in 3 weeks.
- ▶ Unblocked the chain on evidence: Kubernetes node join failures root-caused from VPC flow logs (missing return route on the CG-NAT range), and the real scope of Service Control Policies established by cross-account comparison; workarounds deployed and exception formally argued.
- ▶ Extended Terraform and GitOps industrialization: Atlantis autoplan rolled out across all infrastructure repositories, baselines aligned on the internal module registry, staging and production environments propagated, Argo CD chain and cluster platform services taken over and extended; environment lead time cut by 4.
- ▶ Built alerting and observability on a scope that had none, production included: around 30 CloudWatch alarms, operational dashboards, documented runbooks and recovery procedures; time to restore service cut by 3.
- ▶ Hardened the chain: secrets moved out of repositories into Secrets Manager, cross-account access tightened, over-permissive IAM policies reviewed, merge request security scanner findings cleared.
- ▶ Led the CloudOps team: ticket prioritization by impact, merge request reviews, ramp-up of two joiners, architecture mapping produced from the infrastructure code and handed over to the team.

Tech stack: AWS (Control Tower, AFT, IAM Identity Center, EKS 1.34, ECR, S3, RDS PostgreSQL, KMS, IAM, Secrets Manager, Transit Gateway, PrivateLink, Route 53, ALB, MWAA, Lambda, SQS, SNS, EventBridge, ACM, CloudWatch, VPC flow logs), Terraform, Atlantis, GitLab CI, Argo CD, Kubernetes, OpenShift, GitOps, Snowflake, dbt, Airflow.

BPCE-IT | August 2024 – August 2026 | Paris, France

DevSecOps Lead / AWS Cloud & Container Security Architect • SCC project

End-to-end security strategy for AWS Cloud and OpenShift/Kubernetes container platforms: security standards and guardrails, secrets management, image hardening, supply chain security, platform cost control and team enablement.

Key achievements:

- ▶ Provisioned a secure Amazon EKS cluster with Terraform and GitLab CI: VPC networking (private subnets, VPC endpoints, ALB/NLB), least-privilege IAM roles (IRSA), KMS encryption.
- ▶ Optimized EKS platform costs: node group rightsizing, Spot instances for non-critical CI/CD workloads, Savings Plans for steady-state workloads.
- ▶ Industrialized FinOps tagging in the Terraform modules (Cost Allocation Tags per application and environment), AWS Budgets alerts and consumption tracking in Cost Explorer.

- ▶ Rolled out security standards and guardrails across AWS accounts: Security Hub, GuardDuty and AWS Config findings triage, prioritization and remediation with project teams.
- ▶ Managed secrets with CyberArk Conjur (SecretProviderClass, rotation), aligned with AWS Secrets Manager and KMS for AWS workloads.
- ▶ Industrialized secure CI/CD pipelines to patch, harden and publish Red Hat images (UBI8/UBI9) into a standardized internal catalog (BuildConfig, ImageStream, Harbor registry).
- ▶ Supply chain security: Twistlock (Prisma Cloud) across several clusters and image signing with Cosign.
- ▶ Supported project teams: security architecture reviews, IAM, RBAC and NetworkPolicy workshops.

Tech stack: AWS (EKS, IAM, VPC, KMS, Secrets Manager, Security Hub, GuardDuty, AWS Config, Cost Explorer, Budgets), Terraform, GitLab CI, Jenkins, OpenShift 4.x, Helm, Harbor, Prisma Cloud, Cosign, CyberArk Conjur, UBI8/9, SCC.

EDF | July 2022 – August 2024 | Paris, France

AWS Cloud / OpenShift Architect · SENARIO, SYNEMA, CAMERA projects

Migration and modernization of the back office onto a hybrid AWS / OpenShift architecture: cloud infrastructure and hybrid network design, FinOps ownership and application team support.

Key achievements:

- ▶ Designed the hybrid network architecture: AWS Direct Connect with Site-to-Site VPN as backup, VPC interconnection (Transit Gateway, VPC Peering), hybrid DNS resolution with Route 53, exposure through ALB/NLB.
- ▶ Defined the target architecture along the AWS Well-Architected Framework (security, reliability, performance, cost): EC2, S3, CloudFront, EKS, SQS, SNS, Lambda, API Gateway, within the group's AWS Organizations Landing Zone.
- ▶ Built cost optimization in from the design stage: sizing and cost estimates for target architectures, serverless (Lambda) versus EC2 trade-offs, S3 lifecycle policies.
- ▶ Owned FinOps across the three projects: per-project and per-environment tagging for cost allocation, AWS Budgets alerts, monthly Cost Explorer reporting back to project managers.
- ▶ Reduced non-production costs: automated shutdown of environments outside business hours, EC2/RDS rightsizing, Reserved Instances for steady-state workloads.
- ▶ Security controls: CloudTrail, GuardDuty, Security Hub, WAF, KMS, least-privilege IAM.
- ▶ Supported application teams through migration and modernization: containerization, decoupling (SQS/SNS, ActiveMQ), documented REST APIs (Swagger), OAuth2 authentication.
- ▶ Monitoring: CloudWatch (metrics, alarms, operational dashboards) and Prometheus; incident resolution.
- ▶ Wrote the technical design documents and OpenShift manifests; ran architecture reviews.

Tech stack: AWS (Direct Connect, VPN, Transit Gateway, VPC, Route 53, EKS, Lambda, SQS, SNS, WAF, KMS, CloudWatch, Cost Explorer, Budgets), Terraform, Ansible, GitLab, Kubernetes, OpenShift, Prometheus, PostgreSQL, HAProxy, Keycloak.

French Ministry of Justice | May 2021 – September 2022 | Paris, France

Tech Lead / Kubernetes-OpenShift DevOps Expert · PPN project

Digitalization program for criminal proceedings. Led a team of 7 developers on the centralization of case files and the delivery of a rights management console.

Key achievements:

- ▶ Led a team of 7 developers: code reviews, skills development, coaching and training sessions.
- ▶ Designed Jenkins CI/CD pipelines for Kubernetes clusters, Helm packaging and Prometheus monitoring.
- ▶ Promoted Kubernetes best practices: Docker image scanning, validation of deployed versions, NetworkPolicy through admission controllers, persistent volumes, roles and ServiceAccounts.
- ▶ Designed the authentication layer (Spring Security) and a message-oriented middleware architecture with ActiveMQ.
- ▶ Software craftsmanship practices and code quality management with SonarQube.

Tech stack: Kubernetes, OpenShift, Jenkins, Helm, Java 11, Spring Boot 2, Angular 11, Elasticsearch, PostgreSQL, Docker, ActiveMQ, Nginx.

Banque du Luxembourg (BDL) | September 2020 – May 2021 | Luxembourg

AWS Cloud Architect · AWS Landing Zone & EKS project

Design and delivery of a secure, governed and cost-controlled multi-account AWS platform: Landing Zone, security guardrails, FinOps practices and EKS cluster.

- ▶ Designed and deployed the AWS Landing Zone with Terraform: AWS Organizations structure (OUs, accounts per environment, security and logging foundation accounts), IAM baseline, VPCs and security groups.
- ▶ Defined the governance guardrails: Service Control Policies (SCP), AWS Config rules, centralized CloudTrail and GuardDuty enabled across all accounts.
- ▶ Centralized access through IAM Identity Center (SSO): permission sets per profile, least privilege.
- ▶ Delivered an EKS cluster with Terraform: IAM roles, security policies and network integration.
- ▶ Automated provisioning of AWS resources (EC2, RDS, ALB/NLB, S3), configuration of CloudFront, Route 53 and CloudWatch (metrics, alarms).
- ▶ FinOps practices: Cost Allocation Tags, tracking through Cost Explorer and AWS Budgets, rightsizing and Reserved/Spot instances.
- ▶ DevOps mentoring and team training on Terraform, AWS and Well-Architected.

Tech stack: AWS (Organizations, SCP, IAM Identity Center, AWS Config, CloudTrail, GuardDuty, VPC, EKS, RDS, Route 53, CloudWatch, Cost Explorer, Budgets), Terraform, Git, Docker, Kubernetes.

Renault Digital | September 2019 – October 2020 | Paris, France

Analyst & Fullstack Developer · Golden Eye project

- ▶ Designed the OAuth2 authentication layer with Keycloak (OpenID Connect stack).
- ▶ SQL query optimization, Quickperf integration tests and JVM tuning with VisualVM.
- ▶ Deployment and sizing of EC2 instances on AWS, Docker image optimization (multi-stage build), Docker Swarm orchestration.

Tech stack: Java 11, Spring 5, Spring Boot 2, PostgreSQL, Nginx, Docker, GitLab, Git, VisualVM, AWS.

Buyway Services | June 2018 – August 2019 | Brussels, Belgium

Big Data Analyst & Fullstack Developer · PSD2 project

- ▶ Designed the SCA session management middleware, owned the SMS delivery API and the JWT authentication layer (Spring Security).
- ▶ Installed and administered an Elasticsearch 6 cluster on Docker, log monitoring through the ELK stack and dashboard creation.
- ▶ Ran 2 weekly Elasticsearch training sessions for the team.

Tech stack: Elasticsearch, Kibana, Logstash, Java 8, Spring 4, Spring Boot, MySQL, PHP, Apache, Docker, Jenkins, Git.

AXA Group Solutions | March 2017 – June 2018 | Paris, France

Fullstack Engineer · COMRM project

- ▶ Defined the project architecture and engineering practices (versioning, error handling, code review); designed the middleware communicating with a MarkLogic database.
- ▶ Spring Security layer, Spring Boot XML processing batch and Angular 5 front end to drive and test the back office services.
- ▶ Installed and configured Jenkins and Apache (proxy, load balancer, virtual hosts); onboarding and skills development of new team members.

Tech stack: Java/JEE, Angular 5, Spring MVC, Spring Security, Spring Batch, MarkLogic, Unix, Tomcat, Jenkins, Spring Boot, Maven.

Banque de France (French Central Bank) | June 2015 – August 2016 | Paris, France

Software Designer / Developer · FIBRE & Over-indebtedness Portal programs

- ▶ Data access and persistence layer, technical specifications, estimation and development of REST web services.
- ▶ Spring Batch proof of concept and JBeret implementation of CSV ingestion batches; business features (creditor responses, notifications).

Tech stack: Java 8, JavaEE, JAX-RS, Hibernate, AngularJS, JUnit, Oracle, JBoss, CDI, Maven, Git.

BforBank | August 2013 – June 2015 | Paris, France

Software Designer / Developer · LEMON project

- ▶ Developed web business features (cheque and direct debit stop payments) and REST services for the Android and iOS mobile applications.

- ▶ Delivered fixes as part of technical support.

Tech stack: Spring MVC, Spring REST, Thymeleaf, Java 8, Mockito.

EDUCATION & CERTIFICATIONS

Master's Degree in Software Architecture and Design Patterns · University of New Brunswick (Canada), 2013

Engineering Degree in Embedded Systems Electronics · CPE Lyon (France), 2013

Elasticsearch 6.0 Training · Zenika Training Center (Rennes), March 2018

Spring Core 4.3 Training · Zenika Training Center (Rennes), May 2017

ADDITIONAL ACTIVITIES & KNOWLEDGE SHARING

- ▶ Instructor on Udemy: <https://www.udemy.com/user/tounga-franck/>
- ▶ Author of the technical book "Java 8 features and functional programming".
- ▶ Design and administration of the technical blog <https://toungafranck.com> (articles twice a month on IT systems and digital transformation).
- ▶ YouTube channel with video training: Apache, Jenkins, Elasticsearch.
- ▶ Design, administration and deployment of <https://www.ngconsulting.io> on AWS.

LANGUAGES

French · Native

English · Professional working proficiency