

PETER LEONARD PAUL ASIRVATHAM

Cloud Architect | AIOps & SRE Observability | AWS Migration & Data Engineering | GenAI

20+ years • AWS Certified Generative AI Developer – Professional • AWS Certified Data Engineer – Associate • AWS Certified AI Practitioner

Alpharetta, GA | 470-917-8932 | asir.peter@gmail.com

peterasirvatham.com | linkedin.com/in/peterasirvatham | github.com/peterasirvatham

PROFESSIONAL SUMMARY

Cloud Architect with 20+ years designing and delivering enterprise platforms across mortgage finance (Fannie Mae, Freddie Mac), fintech payments (FleetCor), banking (ABN AMRO), electronic trading (Merrill Lynch) and eCommerce. Architects AIOps for SRE observability at the Freddie Mac Global Operations Center: ADOT/OpenTelemetry, Amazon Managed Prometheus and Grafana, anomaly detection, SLOs and error budgets, and runbook auto-remediation. Has led migrations of web and batch applications to AWS with cloud-native rewrites (ECS Fargate, Lambda, Step Functions), built event-driven and data-processing pipelines, and delivered full-stack Java/Spring and Angular systems end to end.

CORE COMPETENCIES

AIOps & SRE: Architects AIOps with OpenTelemetry standards, anomaly detection and adaptive baselines, alert correlation and noise reduction, SLIs/SLOs with burn-rate alerting, runbook automation and incident correlation to cut mean time to detect and resolve (MTTD/MTTR).

Full-Stack Development: Hands-on full-stack engineer who has owned the entire software development life cycle, from requirements and design through build, testing, deployment and production support, delivering Java/Spring Boot services with Angular front ends.

Cloud Migration & Modernization: Led and delivered migrations of enterprise web and batch applications to AWS, re-architecting key components as cloud-native services on ECS Fargate, Lambda and Step Functions.

Migration Strategy: Applies the 7 Rs (rehost, replatform, refactor and more), AWS Migration Acceleration Program (MAP) practices, AWS DMS and wave planning to sequence and de-risk application and database moves.

Event & Message Pipelines: Architected and built production event-driven and message-based pipelines and scheduled batch jobs using SNS/SQS, EventBridge, IBM MQ, AWS Batch and AutoSys, with monitoring and failure handling.

Data Engineering: Designed and orchestrated batch and file-driven data pipelines with Step Functions, Glue, S3 triggers, Spring Batch and AWS Batch, ensuring data integrity and consistency.

Resilience & DR: Designs for high availability with multi-AZ deployments, backup and restore strategies and RTO/RPO-driven disaster recovery.

GenAI / LLMops: Builds GenAI solutions on Amazon Bedrock (Knowledge Bases, Prompt Management, Prompt Flows) with RAG and vector databases, including evaluation and guardrails.

TECHNICAL SKILLS

Observability: AWS Distro for OpenTelemetry (ADOT), OpenTelemetry, Amazon Managed Service for Prometheus (PromQL), Amazon Managed Grafana, CloudWatch (Anomaly Detection, Application Signals), AWS X-Ray, Prometheus, Grafana, Datadog, Dynatrace, Splunk; Systems Manager Automation, Incident Manager

AWS: EC2, ECS, Fargate, EKS, ECR, Elastic Beanstalk, AWS Batch, API Gateway, SQS, SNS, EventBridge, Kinesis Data Streams, S3, CloudFront, RDS, Aurora, DynamoDB, Redshift, Glue, Athena, Lambda, Step Functions, DMS, KMS, Secrets Manager

Generative AI & Vector DBs: Amazon Bedrock, Amazon SageMaker, Amazon Textract, RAG, embeddings, prompt engineering, ChromaDB, Pinecone, pgvector

Infrastructure as Code (IaC), CI/CD & Containers: Terraform, AWS CloudFormation, AWS CDK, Docker, Kubernetes, GitHub Actions, Jenkins, GitLab, CodeBuild, CodeDeploy, Maven, Gradle, SonarQube

Languages & Frameworks: Java (1.7, 1.8, OpenJDK 11), Python, TypeScript, JavaScript, SQL; Spring Boot, Spring (MVC, Batch, Security, AOP, Data JPA, Cloud), Hibernate, iBatis, Angular, Flask, FastAPI, Streamlit

APIs & Integration: REST, SOAP, GraphQL, OAuth2/JWT, OpenAPI/Swagger; MuleSoft, IBM MQ, Apache Storm

Data, Servers & Testing: Oracle, PostgreSQL, MySQL, Aurora, DB2, Cassandra, Elasticsearch; Tomcat, WebSphere, WebLogic; JUnit, Mockito, Testcontainers, integration testing, Postman; Bitbucket, AutoSys, Log4j

Methods: Site Reliability Engineering (SRE), Continuous Integration/Continuous Delivery (CI/CD), event-driven and serverless design, microservices, architecture reviews, technical roadmaps, Agile (Scrum, XP), Waterfall

PROFESSIONAL EXPERIENCE

Hexaware Technologies | Alpharetta, GA & Chennai, India

Sep 2017 – Present

Senior Technical Architect (Jun 2022 – Present) • Technical Architect (Sep 2017 – May 2022)

Freddie Mac | AIOps for SRE Observability & Monitoring, Global Operations Center (GOC)

Jan 2026 – Present

Enterprise AIOps platform giving GOC operators end-to-end, correlated visibility into critical AWS services.

Tech stack: ADOT/OpenTelemetry, Amazon Managed Prometheus (PromQL), Amazon Managed Grafana, CloudWatch, X-Ray, Application Signals, Systems Manager (SSM), EventBridge, EKS/Kubernetes

- Architect a unified metrics, logs and traces pipeline to OpenTelemetry standards: ADOT collectors feed Amazon Managed Prometheus, CloudWatch and X-Ray/Application Signals, covering serverless and containerized (EKS/Kubernetes) workloads in Amazon Managed Grafana dashboards.
- Implement dynamic thresholding and anomaly detection with z-score adaptive baselines and PromQL-based signals to surface service degradation early.
- Reduce alert noise with alert-storm suppression, service dependency graphs and time-window correlation, turning alert floods into actionable, correlated incidents.
- Define SLIs, SLOs and error budgets with service owners; automate burn-rate alerting and apply an error-budget policy that prioritizes reliability work.
- Automate runbook-driven remediation with Systems Manager Automation triggered by EventBridge to reduce MTTD and MTTR.
- Integrate alerts with the enterprise incident management platform and apply ML/GenAI to summarize alerts and assist root-cause analysis.

Fannie Mae | Lead Architect, Investor Reporting | Hybrid, Atlanta, GA

May 2022 – Dec 2025

Cloud-native microservices, event-driven workflows and batch modernization for investor reporting, commitment and analytics.

Tech stack: Java, Spring Boot, Spring MVC, Spring Batch, Data JPA/Hibernate, Angular, ECS Fargate, AWS Lambda, Step Functions, AWS Batch, EventBridge, SNS/SQS, DynamoDB, S3, Oracle RDS, CloudFormation, Secrets Manager, KMS, CloudWatch, X-Ray, Jenkins, SonarQube

- Designed Spring Boot microservices and REST APIs on ECS Fargate, SQS and DynamoDB for Investor Reporting.
- **LMFS (Dec 2023 – Dec 2025):** Migrated the Long-term Standby Purchase Commitment interface from legacy ORDB to AWS-hosted ADG for live transaction processing, with high-availability and disaster-recovery design; optimized batch jobs for throughput.
- **Single-Family Analytics (May 2022 – Nov 2023):** Replatformed the PRISM Spring application to ECS Fargate and refactored LSP and Pricing to serverless S3-triggered Lambda, SNS/SQS and Step Functions for the lender and investor analytics platform.
- Engineered event-driven mortgage commitment and pipeline workflows with Lambda, SNS/SQS, Step Functions, EventBridge and AWS Batch, with job monitoring and automated failure handling.
- Secured services with KMS encryption, Secrets Manager, FMSSO single sign-on and role-based access control.
- Instrumented services and data pipelines with CloudWatch metrics, logs and alarms and X-Ray tracing; defined SLIs, SLOs and error budgets to guide releases.
- Partnered with business and architecture teams on design, led Scrum delivery, enforced SonarQube code quality and automated Jenkins CI/CD pipelines.

FleetCor (now Corpay) | Offshore Lead, Vendor & Payment Processing | Chennai, India

Sep 2017 – May 2022

Credit and Vendor Payments: high-volume vendor payment, batch-matching and virtual-card transaction processing.

Tech stack: Java (OpenJDK 11), Spring Boot, Spring MVC, Spring Batch, iBatis, Angular, Apache Storm, IBM MQ, AWS Lambda, SQS, SNS, Step Functions, API Gateway, EventBridge, DynamoDB, ECS Fargate, Elastic Beanstalk, EC2, Docker, CloudFront, KMS, Terraform, DB2, Splunk, Jenkins

- Led offshore delivery of a large-scale vendor payment engine using real-time stream processing (Apache Storm) and Spring Batch, integrated with Spring MVC services over IBM MQ.
- Designed a serverless vendor batch-matching integration (SQS, Step Functions, Lambda, DynamoDB, API Gateway, EventBridge, Secrets Manager) with Lambda consumers for vendor-payment messages.
- Deployed virtual-card and transaction microservices on Elastic Beanstalk and ECS Fargate behind CloudFront with auto scaling, provisioned with Terraform modules.
- Applied PCI-aligned payment security practices, including KMS encryption and managed secrets.
- Built Spring MVC and iBatis services on DB2 and Angular pages, using Spring AOP for audit and transaction logging.
- Drove Jenkins CI/CD, code reviews and Splunk production monitoring; mentored the offshore team and coordinated with onshore architects and stakeholders.

BORN Group | Senior Lead Engineer | Chennai, India

Jun 2014 – Aug 2017

Rodan + Fields | B2B/B2C eCommerce | Integration Lead

Nov 2015 – Aug 2017

Tech stack: Java 8, Spring MVC, SAP Commerce Cloud (Hybris), MuleSoft Anypoint, Okta SSO (SAML/OAuth2), REST/SOAP APIs, MySQL, Tomcat, Maven, Jenkins, Git/Bitbucket, JUnit

- Architected API-led integration (MuleSoft) between SAP Commerce Cloud and third-party systems; owned Hybris backend integrations.
- Implemented identity federation with Okta single sign-on across the storefront.
- Integrated tax calculation services to automate taxation workflows.
- Led code reviews and Jenkins releases; mentored offshore developers and supported production.

Greenlee (Textron) | B2B/B2C eCommerce | Full-Stack Developer **Jun 2014 – Oct 2015**

Tech stack: Java 7, Spring MVC, SAP Hybris, SAP PI, Avalara AvaTax, JSP, JavaScript/jQuery, MySQL, Tomcat, Maven, Jenkins, Git, JUnit

- Designed and built the MyAccount module across front-end and Hybris service layers.
- Implemented SAP PI order integration with SAP back office and Avalara automated tax calculation.

Thomas Pink | B2C Online Apparel Store | Senior Java Developer **Jun 2014 – Aug 2017**

Tech stack: Java 8, Spring Boot, Hibernate, SAP Hybris, Stripe API, TypeScript, REST APIs, Oracle, IBM WebSphere, Maven, Jenkins, GitHub, JUnit

- Customized the Hybris store for the vendor catalog; built order management and fulfillment with Hibernate.
- Designed the Spring Boot REST API architecture consumed by reusable TypeScript components.
- Integrated the Stripe payment gateway and implemented Jenkins CI/CD to IBM WebSphere.

Servion Global Solutions | Technical Lead | Chennai, India **May 2013 – May 2014**

Hilton Hotels | Interactive Voice Response (IVR) | Architect **May 2013 – May 2014**

Tech stack: Java 7, Spring MVC, Hibernate, REST, VXML, Avaya Orchestration Designer, Oracle, IBM WebSphere, Maven, Jenkins, SVN, Log4j, JUnit

- Architected a three-layer Spring IVR for hotel booking and reservations with REST service integration.
- Designed call-flow menus using OOAD and Avaya Orchestration Designer.
- Built Hibernate persistence and payment integration; automated Maven/Jenkins builds to WebSphere.
- Led code reviews and JUnit testing and worked with client stakeholders on requirements.

CGI (formerly Logica) | Project Lead | Amstelveen, NL; Copenhagen, DK; Cardiff, UK **Nov 2008 – May 2013**

ABN AMRO Bank | IVR Banking | Offshore Lead **Mar 2012 – May 2013**

Tech stack: Java 6, J2EE, Spring, EJB 3, VXML, SOAP, XML, JDBC, DB2, WebSphere, WebLogic, SoapUI, Maven, SVN, Log4j, JUnit

- Architected a 3-tier Spring/EJB IVR banking solution, documented with UML diagrams.
- Developed VXML modules and Spring services for banking transactions over SOAP/XML and DB2.
- Tuned Servlet and EJB performance and resolved production issues.

PostNord | Travel Route Planner | Migration Lead **Feb 2009 – Mar 2012**

Tech stack: Java 6, Spring, Struts MVC, Hibernate, JSP, Servlets, JDBC, Node.js, Cassandra (NoSQL), Oracle, WebLogic, WebSphere, Maven, CruiseControl, SVN, JUnit, Mockito

- Led legacy modernization and migration of a geo-location mail route planner; owned high-level design.
- Integrated Struts MVC/JSP front end with backend services and Node.js microservices on Cassandra (NoSQL).
- Built DAO and service tests with JUnit and Mockito; set up continuous builds with Maven and CruiseControl.

UNFCCC | Kyoto Protocol Carbon Trading | Lead **Nov 2008 – Feb 2009**

Tech stack: Java 5, J2EE, Struts MVC, Hibernate, JSP, Servlets, JDBC, Oracle, IBM WebSphere, Maven, Ant, CVS, JUnit

- Developed APIs and backend integration for carbon-unit trading and target tracking.
- Contributed to high-level design; configured data sources and WebSphere deployments.

Merrill Lynch (now Bank of America) | Team Lead | Mumbai, India **Sep 2007 – Oct 2008**

Merrill Lynch | Electronic Trading System | Java Developer **Sep 2007 – Oct 2008**

Tech stack: Java 5, multi-threading/concurrency, J2EE, JDBC, relational database, messaging, XML, Ant, CVS, Log4j, JUnit

- Engineered low-latency, multi-threaded Java enhancements to the core trading and order-management framework.
- Developed NSE and BSE exchange-specific add-ins and trading rules, validated with JUnit.

Aspire Systems | Senior Software Engineer | Chennai, India & Florida, USA **Mar 2005 – Aug 2007**

Biz-2-Me | Biz Apollo Rewards Engine | Sr Java Developer **Mar 2005 – Aug 2007**

Tech stack: Java 1.5, J2EE, Struts 2, WebWork, Hibernate, JSP, Servlets, JavaScript, MySQL, Tomcat, Ant, CVS, JUnit

- Built core rewards and incentive engine modules with Struts 2, Hibernate and WebWork views.
- Drove database normalization and data-model optimization during onshore implementation.

CERTIFICATIONS

- **AWS Certified Generative AI Developer – Professional** **May 2026**
- **AWS Certified AI Practitioner** **Feb 2026**
- **AWS Certified Data Engineer – Associate** **Apr 2025**
- **Previously held:** AWS Solutions Architect – Professional (2023), – Associate (2021); MuleSoft Developer (2021); SAP Commerce Cloud 6.7 (2019); SAP Hybris 6.2 (2018)

EDUCATION

- Master of Computer Applications (MCA) and Bachelor of Computer Science, MK University, Tamil Nadu, India

LEADERSHIP & RECOGNITION

- Hexaware MVP and Learning Ambassador; recognized by Hexavarsity Americas (2026) for mentoring; led offshore teams at FleetCor and ABN AMRO.