Adam Erickson

Principal Data Architect — Mission-Critical Data Platforms and Production AI at Scale

Remote, USA · +1.719.400.9236 · adam@awre.io · linkedin.com/in/adamre

I lead high-stakes data platform transformations for organizations where failure is not an option — production AI systems in regulated healthcare, statewide election infrastructure, Fortune 100 database fleets, and platforms at the origination layer of cloud and vertical SaaS. Over thirty years I have become the specialist organizations call when the migration must land on time, the system must stay up under load, and the work cannot be learned on the job.

SELECTED ENGAGEMENTS

Grace — Production AI Patient Outreach System

2024–Present

Principal Architect, ChenMed LLC

Architected and built Grace, a fully automated AI-driven patient outreach system that calls and texts patients to check on their wellbeing, scores conversations in real time for clinical risk, and hands off patients-in-need to live staff for immediate follow-up. Designed a novel dialog engine on top of third-party telephony and speech services, operating within HIPAA and clinical-safety constraints. In its first week of operation: 300 calls per hour, 5,000 scored conversations, multiple emergency-room visits prevented, and measurable reductions in hospital admission rates within days of launch — a working example of agentic AI in a regulated, high-stakes clinical environment, at a time when most AI demos never reach production.

High-Risk Disease Detection — Clinical Document Intelligence

2023–Present

Principal Architect, ChenMed LLC

Built a production system for High-Risk Disease Detection across inbound clinical documents from ERs, specialists, labs, fax, and third-party sources. Uses vector embeddings to identify semantic matches against ICD-10, HCC, and high-risk condition taxonomies — cancers, diabetes, cardiovascular and renal disease, and other conditions where early detection materially changes patient outcomes. Strong-match documents are surfaced for clinical review, ensuring the care team learns of new diagnoses from outside encounters in near real-time. Processes approximately 3 million documents monthly across XML, PDF, and scanned TIF formats; in a recent two-week period it surfaced over 12,000 clinical recommendations that would otherwise have been missed or delayed. In a value-based care model, accurate and timely disease identification is foundational to both patient safety and risk-adjusted population health.

Near-Real-Time Change Data Capture for Snowflake

2021–Present

Principal Architect, ChenMed LLC

Designed and built a near-real-time CDC ingestion engine for Snowflake, handling the ordering, idempotency, schema-evolution, and operational concerns that the off-the-shelf vendor ecosystem handles expensively and imperfectly. Replaced commercial CDC tooling across five heterogeneous source systems, now running at 8 million events per day at baseline with peaks exceeding 40 million and end-to-end latency consistently under two minutes. Most Snowflake-using organizations end up buying several third-party systems to move data in and out securely — this work demonstrates that a purposefully-built ingestion layer can replace that stack at a fraction of the licensing cost while handling edge cases the commercial tools cannot.

Amazon “Move to AWS” (MAWS) — Migration Runbook Authorship

2011

Senior Support Engineer, Amazon.com

Authored the internal migration runbook for Amazon's MAWS initiative, the company-wide mandate to move applications and systems from VMs onto AWS infrastructure. Provided the prescriptive mapping of modules and subsystems to the available AWS primitives of the era — predominantly EC2, S3, EBS, and RDS — and served as the designated SME for VM-to-AWS migrations across the Merchants@ organization. The runbook became the foundation for subsequent migrations of both internal and customer-facing systems. This work predates the managed-service ecosystem most AWS engineers now take for granted; the migrations were built from cloud primitives, which required architectural judgment that later abstractions made optional.

Global Server Orchestration — Oracle Fusion SaaS

2015–2018

Senior Principal Consultant, Oracle Corporation

Architected and built a server orchestration abstraction layer managing the full lifecycle — provisioning, patching, configuration, disaster recovery, decommissioning — across 110,000 servers, 20 data centers, and seven regions spanning public cloud, FedRAMP, and private cloud. Designed the APIs, CI/CD pipelines, and SaltStack-integrated automation that enforced security and compliance at federal scale. Co-invented U.S. Patent #15/681,084 for electronic voting security. Three-time recipient of the Fusion Ops Engineering Excellence Award (2015, 2016, 2017).

Statewide Election System Migration — State of New Jersey

2014–2015

Senior Database Architect, Everyone Counts

Led the migration of New Jersey's voter registration system from 24 Oracle 9/10/11 instances to MariaDB 10.1 under a $12M contract, delivered three months ahead of schedule. Designed a 6TB, 13-site, multi-directional, fault-tolerant multi-master replication topology that allowed simultaneous writes across all counties while surviving frequent network partitions. Built custom Perl ETL to migrate Oracle data into the new architecture, converted the platform from Windows to Linux, and trained county SysAdmins and DBAs on the new stack. The platform has since maintained 100% uptime through hundreds of local and state election cycles.

Vertical SaaS Platform for Direct Sales Organizations — Built Twice

2000–2007

Lead Developer and Founding Team Member, Netmark Systems

Architected and led development of a full multi-tenant platform serving the direct-sales industry — CRM, replicated distributor websites, email marketing automation, compensation-plan management, payment processing, ecommerce for both retail and business-opportunity flows, and online training systems. Operated as white-label backend for entire customer organizations, with individual customers running dozens of distinct brands on the platform. Scaled the codebase past 500,000 lines of Perl, managed 25+ Linux servers, and built the marketing automation engine that delivered 22M+ messages daily. Subsequently contracted by a second direct-sales group to rebuild the platform for their organization — two independent commercial deployments of the same architectural pattern, each hosting dozens of downstream businesses. This predates the vertical-SaaS category by nearly a decade; multi-tenancy, white-label deployment, and industry-specific workflow automation were being solved from primitives before the reference architectures existed.

ADDITIONAL PUBLIC-SECTOR ENGAGEMENTS

Further engagements in state and federal civilian public-sector contexts, including systems operating at statewide scale. Details available under appropriate agreement.

CONSULTING APPROACH

Organizations engage me when the work is too consequential to learn on the job — production AI in regulated domains, petabyte-scale data platforms, ingestion and CDC engineering, high-availability database architecture, and cloud-and-vertical-platform modernization. Engagements typically run from three-month transformations to multi-year advisory relationships, spanning startups through Fortune 100 enterprises.

EMPLOYMENT HISTORY

Principal Architect — ChenMed LLC — Dec 2020 – Present
Enterprise Architect — MariaDB Corporation — Dec 2018 – Jul 2020
Senior Principal Consultant — Oracle Corporation — Dec 2015 – Oct 2018
Senior Database Architect — Everyone Counts — Jan 2014 – Dec 2015
Senior Database Engineer — HP Cloud Services — Oct 2012 – Jan 2014
Senior Support Engineer — Amazon.com — Jan 2011 – Sep 2011
Senior MySQL Architect — OptionMonster Holdings — Apr 2007 – Dec 2010
Lead Developer (Founding Team) — Netmark Systems — Sep 2000 – Feb 2007

MariaDB Corporation: primary technical advisor for Fortune 100 and government accounts, 65TB+ deployments at 100,000+ TPS, drove $13M lifetime ARR, MariaDB 10.3 Certified DBA. HP Cloud Services: built the MySQL automation framework that became the foundation of HP's Database-as-a-Service Public Cloud offering. OptionMonster Holdings: 15 globally distributed MySQL clusters supporting financial trading at 7,000+ QPS across a multi-master sharded topology.

TECHNICAL FOCUS

Production AI — Agentic dialog systems, vector embeddings for document intelligence, real-time conversational scoring, LLM integration in regulated environments, Snowflake Cortex

Data Platforms — Snowflake (multi-account governance, 1PB+ scale, Cortex AI), MySQL / MariaDB / Percona (Galera, ColumnStore, multi-master), Oracle, PostgreSQL

Ingestion & CDC — Near-real-time change data capture, HL7, FHIR, EDI, Kafka, XML, JSON, API-based ingestion at petabyte scale

Cloud & Infrastructure — AWS, GCP, Azure, FedRAMP, high-availability architecture, disaster recovery, SOC and HIPAA compliance

Automation & CI/CD — Jenkins, Liquibase, Hudson, Git, Ansible, Chef, SaltStack, Python, Perl, Bash

Domain Expertise — Value-based healthcare, financial trading systems, government and election infrastructure, direct-sales and vertical SaaS platforms

RECOGNITION & CERTIFICATIONS

U.S. Patent #15/681,084 — Electronic Voting Security (Oracle-owned, co-inventor)

Oracle Fusion Ops Engineering Excellence Award — 2015, 2016, 2017

MariaDB 10.3 Certified DBA — 2019