

Pharmaceutical Company Migrates Legacy ERP Reporting to AWS Cloud Data Platform

A national leader in pharmaceutical solutions providing point-of-care dispensing, pharmacy management, wholesale, and distribution services to the healthcare sector, this company serves employers, health providers, and onsite clinics, specializing in reducing medication costs while improving patient adherence and health outcomes.

The organization processes sensitive HIPAA-regulated data (PII/PHI) across multiple business lines, serving markets including Employer Health, Direct Primary Care, Orthopedics, and Pharmacy Management.

BUSINESS CHALLENGES

- ▶ **Legacy Technology:** The company relied on a 1980s era homegrown ERP system with reporting logic written in C code, producing flat reporting files that were manually processed and difficult to maintain.
- ▶ **Manual Processes:** Data and analytics workflows were largely manual, creating bottlenecks, inconsistencies, and limited scalability as the business grew.
- ▶ **Multiple Data Sources:** External data feeds from pharmacies and third-party partners needed to be consolidated alongside internal ERP data but lacked a unified platform.
- ▶ **Compliance Requirements:** All data contained HIPAA-regulated PII and PHI, requiring strict security controls, encryption, and auditability throughout any modernization effort.
- ▶ **No Internal Modern Business Intelligence (BI) Capability:** Leadership lacked self-service dashboards or analytics to drive operational decisions across pharmacy management, distribution, and employer health lines.

IRONSIDE'S SOLUTION

Ironside designed and implemented a cloud-native data and analytics platform on AWS, modernizing the entire data lifecycle from ingestion through visualization: The engagement demonstrated delivery agility to meet evolving requirements and expanding requirements through a series of projects, reflecting high trust and realized business value.

- ▶ **Legacy Code Interpretation & Migration:** Refactored the C-based reporting code used to generate legacy ERP reporting files and re-implemented the logic as modern, maintainable cloud-based ETL pipelines.
- ▶ **Automated Data Pipelines:** Replaced manual data processes with automated ingestion, transformation, and loading workflows capable of handling internal and external data sources at scale.
- ▶ **Centralized Data Warehouse:** Consolidated disparate data sources into a single, governed AWS cloud data warehouse purpose-built for analytics.
- ▶ **Self-Service BI & Dashboards:** Deployed interactive dashboards and reporting for pharmacy analytics, operational metrics, and business KPIs, enabling users to explore data independently.
- ▶ **HIPAA-Compliant Architecture:** Implemented encryption at rest and in transit, role-based access controls, comprehensive audit logging, and monitoring to meet healthcare compliance requirements end-to-end.

AWS SERVICES DEPLOYED

- ▶ **AWS Glue:** ETL pipeline orchestration and data transformation
- ▶ **AWS Lambda:** File transfer and validation
- ▶ **Amazon RedShift:** Cloud data warehouse for centralized analytics
- ▶ **AWS Step Functions:** Orchestration and coordination of data pipeline tasks
- ▶ **Amazon Quick:** Self-service BI dashboard and paginated reports with Amazon Quick Sight
- ▶ **AWS CloudTrail:** Audit logging for compliance and security
- ▶ **Amazon CloudWatch:** Infrastructure monitoring and alerting
- ▶ **AWS IAM Identity Center:** Fine-grained access control and HIPAA policy enforcement

Note: AWS Well-Architected Design Excellence validated through AWS architectural review.

BUSINESS OUTCOMES

Eliminated Legacy Dependency

Retired 40+ year-old ERP reporting logic, removing critical technical debt and single-point-of-failure risks.

Operational Efficiency

Automated formerly manual data workflows, reducing processing time and human error while improving data freshness for decision-making. The platform is designed to support operational growth.

Self-Service Analytics

Business users gained on-demand access to dashboards covering pharmacy performance, distribution metrics, and operational KPIs without IT dependency.

HIPAA Compliance Achieved

Full compliance with healthcare data regulations including BAA execution, encryption at rest and in transit, and comprehensive audit trails.



- AI Services Competency
- Data Services Competency

Let's talk about your data and the insights you want.
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