✂️ Cut My AWS

CASE STUDY

GOVERNMENT HEALTHCARE · ACA EXCHANGES · 6 AWS ACCOUNTS

EC2 → Microservices: 30% Cloud Savings Across 3 State Exchanges

How a 10-year DevOps engagement transformed government healthcare marketplaces — including DC Health Link and the Massachusetts Health Connector — from monolithic EC2 to microservices on Lambda, ECS, and EKS. Three exchanges, six AWS accounts, 30% cost reduction, zero downtime.

30%	10 yrs	6
Cloud cost reduction	Engagement duration	AWS accounts optimized

DC Health Link, MA Health Connector & 1 more — via IdeaCrew

3 State Health Benefit Exchanges · 6 AWS Accounts

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🏥 The Client

IdeaCrew was a government consulting firm that built and operated Affordable Care Act health insurance exchanges for multiple states — including **DC Health Link** (District of Columbia) and the **Massachusetts Health Connector**. Across 6 AWS accounts, these platforms serve hundreds of thousands of residents who depend on them to compare, enroll in, and manage health insurance.

David Plappert served as **DevOps Team Lead** for the full 10-year engagement — responsible for cloud infrastructure, security posture, and cost optimization across all 6 accounts.

⚡ The Challenge

Healthcare exchanges run on a different set of rules than typical SaaS. Failure isn't a bad quarter — it's people losing access to healthcare.

📈 **Open enrollment traffic spikes of 10-50x** — Every year, a 6-week window drives massive surges. The original monolithic EC2 architecture required over-provisioning year-round to survive these peaks.

🔒 **HIPAA compliance — no exceptions** — Protected health information (PHI) across every layer. Encryption at rest and in transit, access controls, audit logging, vulnerability scanning, and annual security assessments.

⏰ **24/7/365 uptime mandate** — DC residents depend on this system for healthcare access. Downtime isn't a business inconvenience — it's a public service failure that makes the news.

💰 **Taxpayer-funded infrastructure** — Every dollar of cloud spend is public money. Waste isn't just a budget problem — it's an accountability problem.

🏗️ **Legacy monolithic architecture** — The original platform was built on standard EC2 instances — monolithic, always-on, and expensive to scale. As traffic grew, so did the bill.

👨‍💻 David's Role

As DevOps Team Lead for the full engagement, David owned:

- **Full AWS & Azure infrastructure management** — the go-to expert for all cloud architecture decisions across both platforms
- **Cloud cost optimization** — continuous cost reduction while scaling to meet growing demand and seasonal surges
- **Security & compliance** — HIPAA-compliant infrastructure, IAM policies, encryption, audit logging, and vulnerability management
- **Architecture modernization** — led the migration from monolithic EC2 to microservices on Lambda, ECS, and EKS
- **Data warehouse & BI** — MongoDB BI Connector + Tableau dashboards for leadership and client reporting
- **Automation** — Ruby, Bash, and Node.js tooling that eliminated manual processes across the team

AWS Lambda · ECS · EKS · EC2 · S3 · RDS · Azure · MongoDB · Tableau · Ruby · Node.js · CloudFormation

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🔧 The Migration: EC2 → Microservices

The original DC Health Link infrastructure was built on standard EC2 instances — a monolithic architecture that worked at launch but became increasingly expensive and inflexible as the platform grew.

Monolithic EC2		Lambda + ECS + EKS
Always-on, over-provisioned, scaling by adding bigger boxes	→	Event-driven, right-sized, scaling to zero when idle

What changed

⚡ **Event-driven workloads → Lambda** — Background processing, data pipelines, and API endpoints that didn't need to run 24/7 were migrated to serverless. Pay per invocation, not per hour.

📦 **Application services → ECS & EKS** — Core application components were containerized and deployed on managed container services — right-sized, auto-scaling, and efficient.

📉 **Eliminated always-on waste** — Monolithic EC2 instances ran 24/7 whether traffic was flowing or not. Microservices scale to demand — including scaling to zero during off-hours.

🎯 **Open enrollment handled elastically** — Instead of over-provisioning all year for a 6-week surge, the microservices architecture auto-scaled during enrollment and contracted after — no manual intervention.

30%	3	0
Cloud cost reduction	Compute platforms (Lambda, ECS, EKS)	Always-on idle instances

🛡️ Security & Compliance

A healthcare exchange handling PHI for 100K+ residents requires security that goes far beyond "enable encryption." David managed the full security posture across both cloud platforms:

🔐 **HIPAA-compliant architecture** — Encryption at rest (AES-256) and in transit (TLS 1.2+) across every service. No exceptions, no shortcuts.

👤 **Least-privilege IAM** — Fine-grained access controls ensuring every service, developer, and automation had exactly the permissions needed — and nothing more.

📋 **Audit logging & monitoring** — CloudTrail, CloudWatch, and centralized logging for compliance audits, incident response, and real-time alerting.

🔍 **Vulnerability management** — Regular security assessments, patching cadence, and proactive remediation of misconfigurations before they became incidents.

📊 Results

30%	10 yrs	100K+
Cloud cost reduction	Continuous optimization	Residents served

24/7	HIPAA	2 clouds
Uptime maintained	Full compliance	AWS + Azure managed

💬 What Leadership Said

> *"David helped manage our entire AWS & Azure infrastructure with remarkable skill. He optimized our cloud costs, designed scalable architectures that supported our growing clients' needs. His deep knowledge of AWS services made him our go-to expert for all cloud-related initiatives."*
>
> — VP of DevOps & Cloud, IdeaCrew

> *"David was instrumental in developing and maintaining our data warehouse solutions. He helped create sophisticated data pipelines and visualization dashboards that provided critical business insights to our leadership team. His work directly contributed to data-driven decision making across the organization."*
>
> — VP of DevOps & Cloud, IdeaCrew

> *"David is a natural problem-solver who approaches challenges with creativity and persistence. He communicates technical concepts clearly to non-technical stakeholders and consistently meets project deadlines. David would be an excellent addition to any technical team."*
>
> — VP of DevOps & Cloud, IdeaCrew

🎯 The Takeaway

David spent 10 years doing for DC Health Link what most organizations need done once: finding the mismatch between their cloud infrastructure and their actual business needs — and fixing it.

The same expertise is now available to your organization. One audit. One report. Permanent savings. No 10-year commitment required.

✂️ Cut My AWS

Your AWS bill isn't going to cut itself.

The same person who cut 30% from a government healthcare exchange's cloud spend can audit your AWS account in 5-10 business days.

No savings? No fee. You literally cannot lose.

🗓️ Book Your Free Intro Call

cutmyaws.com/book · 15 min · free · no pitch deck

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