DataDrill

DevOps & Scalable Cloud Infrastructure

Service Overview

Description

Our DevOps and Infrastructure Modernization service helps life sciences teams replace outdated, fragmented environments with secure, scalable, and automated systems. We support everything from cloud migration and backend refactoring to CI/CD automation and platform integration. Whether you are consolidating platforms or modernizing legacy architecture, we deliver stable, production-ready infrastructure that evolves with your business.

Business Challenge

Life sciences organizations often operate across complex, disconnected systems with manual infrastructure management, limited automation, and growing compliance pressure. These setups create bottlenecks during releases, increase downtime risk, and reduce visibility into operations. We address this by building unified, code-driven environments that are automated, reliable, and audit ready.

Value Proposition

- Everything-as-Code approach ensuring consistency, repeatability, and version control
- End-to-end automation with CI/CD pipelines tailored to your stack
- Robust monitoring and alerting for proactive issue detection
- Proven experience in cloud infrastructure for regulated industries

Benefits

- Seamless migration of large-scale systems with no service disruption
- Improved performance under high load, supporting hundreds of concurrent services
- Real-time monitoring and logging across backend, data, and infrastructure layers
- Infrastructure built to meet audit, compliance, and recovery requirements from day one

Methodology & Delivery Approach

We follow a structured, agile approach focused on speed, transparency, and technical excellence—designed to deliver robust infrastructure and scalable analytics systems for regulated healthcare environments.

Delivery Phases

- **Discovery & Assessment** – We align with client teams to assess current architecture, pain points, and requirements.
- **Planning & Design** – Define infrastructure architecture, automation scope, CI/CD setup, and compliance needs.
- **Implementation** – Build infrastructure as code, ETL pipelines, and system components across frontend, backend, and data layers.
- **Validation & Testing** – Conduct stability, performance, and rollback checks across environments.
- **Deployment & Monitoring** – Launch in controlled phases with documentation, observability, and post-launch support.
- **Support & Optimization** – Continuous improvement based on real usage data, user feedback, and system telemetry.

Communication & Collaboration

- **Kickoff & Onboarding** – Initial alignment on scope, technical goals, and timeline. Shared workspace setup for documents and collaboration.
- **Weekly Progress Loops** – Regular updates via Slack, Teams, or preferred channels. Dedicated technical lead for coordination and delivery consistency.
- **Documentation & Dashboards** – All architecture, monitoring tools, and deployment plans are shared centrally and accessible to client teams.

Project Execution

- **Parallel Workstreams** – Backend, data engineering, and frontend work in sync to accelerate delivery.
- **Real-Time Observability** – Dashboards and logs active from day one to ensure transparency and issue detection.
- **SLAs & Governance** – Clear delivery checkpoints, status summaries, and continuous delivery support.

Team Competences & Qualifications

Expertise:
Our team consists of experienced Cloud and DevOps engineers, particularly adept in highly-regulated sectors like healthcare and biotechnology.

Experience Highlights:
- Setting up and migrating production environments in healthcare and biotech
- Cloud migration and backend refactoring of over 100 services
- CI/CD automation across backend, frontend, and infrastructure pipelines
- Database migration of 2.5TB with zero-downtime execution
- Integrated monitoring systems supporting global, high-volume platforms

Technology Stack & Tools

CI/CD Tools:
GitLab CI/CD

Infrastructure as Code:
Terraform

Monitoring Solutions:
Integrated observability using Azure-native monitoring tools

Cloud Platforms:
AWS and Azure, including services for compute, storage, containerization, and access control

Additional Capabilities

- Containerization using Docker
- Kubernetes-based orchestration and deployment
- Secure PostgreSQL data migration at scale
- Multi-region deployment with failover and disaster recovery
- Infrastructure designed with role-based access, audit logging, and encryption
- Support for GDPR, HIPAA, and compliance through data pseudonymization and policy enforcement

ROI

Modernizing cloud infrastructure and introducing automation delivers tangible returns within the first 12 months. In recent large-scale platform consolidations, replacing manual deployments with CI/CD pipelines, introducing container orchestration, and aligning systems with strict compliance standards eliminated over 100 hours of manual work per month, reduced downtime risk, and accelerated time-to-market for new features.

These changes lowered operational costs while creating competitive advantages by enabling faster adaptation to market needs. With our €30–60 per hour rates and domain expertise, organizations can achieve similar results faster and at lower total cost compared to generalist vendors.

Case Study Highlight

Client: Healthcare/Biotechnology Company

Challenge:

The company needed to migrate all backend services, data, and infrastructure from AWS to Azure after acquisition. Their existing platform included over 100 AWS Lambda functions, 7 large PostgreSQL databases holding 2.5TB of business-critical data, and 3 static frontend applications—all of which had to be migrated and modernized without service disruption while meeting strict GDPR and HIPAA compliance requirements.

Solution Delivered:

We refactored over 100 serverless functions into containerized services and deployed them on Azure Kubernetes Service. We migrated seven PostgreSQL databases using PEERDB with minimal downtime and ensured full data consistency. CI/CD pipelines were built for backend, frontend, and infrastructure using GitLab. Static applications were deployed using Azure Storage and CDN. Infrastructure was defined and deployed using Terraform, with integrated logging and security controls through Azure Monitor and Application Gateway with WAF.

Business Impact:

2.5TB of data migrated with near-zero downtime

More than **100** services successfully containerized and deployed

Improved system performance, observability, and scalability

3 static frontend applications successfully modernized and globally distributed via Azure CDN

Infrastructure fully aligned with compliance and security requirements from day one