Clearscale

Empowering a Global Fitness Platform To Reduce Costs by Half With AWS

How Clearscale migrated a complex, mission-critical production application to a custom-architected AWS infrastructure with near-zero downtime for global users

btwb

Client Profile

Industry — Health & Fitness / SaaS

Size — Mid-sized company with a global user base

Technology — Migration and Modernization

Overview

A global fitness platform was facing rising costs and scalability limitations with its existing hosting environment, Platform-as-a-Service (PaaS). Clearscale migrated the entire platform to AWS with near-zero downtime, building a secure, compliant Landing Zone and modern networking foundation. The result: 50% cost savings, 99.99% availability, and the agility to scale for growth.

Meet Our Hero: Beyond The Whiteboard (BTWB)

btwb is one of the world's premier performance and progress tracking platforms for hundreds of thousands of CrossFit and functional fitness athletes across the globe.

As the platform's popularity grew, its PaaS environment turned from an enabler into a constraint. Performance dipped during peak app use hours, infrastructure costs climbed rapidly, and innovation was stifled as the PaaS struggled to support new features that would benefit users. Most critically, btwb lacked fundamental infrastructure control. The PaaS restricted permissions so the team couldn't perform essential tasks, such as database backups or restores, leaving them constantly dependent on the PaaS support team. To remain a leader in the market and meet rising customer expectations, btwb needed to retire its PaaS and migrate to a modern AWS foundation.

The Goal

- Successfully migrate all data and users from the PaaS environment
- Build a secure AWS Landing Zone with enterprise-grade governance
- Ensure global availability and reliability
- Reduce costs while creating room for growth
- Empower btwb's team with full control over operations

The Problem

Problem 01

Poor performance during peak usage due to scaling limitations

Problem 02

Escalating costs tied to restrictive PaaS pricing

Problem 03
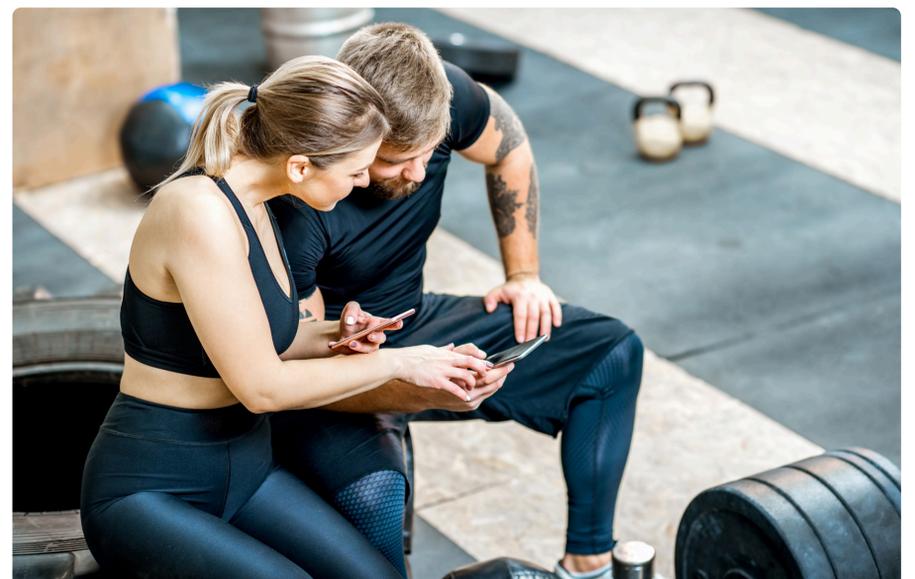
Innovation blocked by technical and cost barriers

Problem 04

Lack of control over infrastructure and databases

Problem 05

Dependency on PaaS support for basic operations

The Solution

Clearscale partnered with btwb to engineer and execute a seamless migration that minimized disruption and established a state-of-the-art AWS foundation tailored to their specific needs. The solution was methodically designed around three pillars: security, scalability, and operational excellence.

Step 01: AWS Landing Zone and Governance

- Created a well-architected, multi-account environment using AWS Control Tower, providing centralized governance and establishing separate accounts for departments
- Enforced guardrails via five carefully crafted Service Control Policies (SCPs) to restrict root access, require MFA, and maintain encryption standards

Step 02: High-Availability Network Architecture

- Built a resilient network using an Amazon VPC that spanned three Availability Zones (AZ) and segmented public and private subnets
- Added NAT Gateways and VPC Endpoints for secure connectivity

Step 03: Application and Database Modernization

- Migrated application to Amazon EC2 with Auto Scaling groups to adjust during peak app use
- Transferred a 1.5 TB database and workloads to Amazon RDS using custom replication strategies.
- Implemented AWS RDS Proxy for optimized database connectivity, pooling, and failover.
- Deployed Amazon ElastiCache for Valkey to speed performance

Step 04: Comprehensive Security Implementation

- Encrypted all data with AWS KMS and TLS 1.2+
- Managed and rotated database credentials and API keys with AWS Secrets Manager
- Enabled intelligent threat detection and auditing with AWS GuardDuty, CloudTrail, and Config

Step 05: Operational Excellence and Knowledge Transfer

- Introduced Infrastructure as Code to accelerate development cycles
- Implemented AWS Budgets to establish cost controls
- Delivered detailed documentation, runbooks, and training to support btwb staff self-sufficiency

[Image placeholder: Modernized architecture diagram, page 4 of PDF]

The Impact

50%
Reduction in infrastructure costs

99.99%
Availability with multi-AZ architecture

3x
Faster database query performance using RDS optimization and ElastiCare

Seamless handling of traffic spikes through Auto Scaling

Stronger compliance with enterprise-grade security guardrails

Direct operational control, accelerating development cycles

"Clearscale delivered exactly what we needed: a secure, scalable AWS environment that gives us the control and flexibility we were missing. Their team's expertise in architecting our multi-AZ infrastructure and implementing enterprise-grade security has been invaluable. We're now able to focus on building features for our athletes instead of fighting platform constraints, while also reducing our infrastructure costs."

— Beyond the Whiteboard

Turn Cloud Chaos Into Clear Results On AWS

Clearscale helps SaaS companies break free from cloud chaos and experience clear results on AWS. If your current environment is holding you back and you're ready to experience better growth, scalability, and security, let's talk.

Talk to an Engineer

aws
PARTNER
Premier Tier
Services