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S E R V I C E S

50x Growth, 85% Less Downtime: EdTech Leader Boddle Scales Smart with base2Services

> " base2Services have been such a critical partner in helping us to ensure that we had the right AWS Cloud infrastructure in place to scale and grow. They were there 24/7 when we had any issues or needed advice, and helped us improve and evolve our scaling in a cost-efficient way. We really could not have done it without their help.

Edna Martinson - Co-Founder of Boddle Learning

boddle

See the impressive results

❱ Enabled exponential user growth by supporting a 50x increase in total registered users (up to 5 million), while stabilizing capacity to successfully handle a 12x increase in Monthly Active Users (up to 2 million/month)

❱ Time to implement new features was reduced from months down to days, with deployment frequency increasing from quarterly releases to fully automated, on-demand deployments

❱ Achieved dynamic scaling to support over 80,000 simultaneous players, an 8x increase, while eliminating previous performance issues under load

❱ Reduced unplanned platform outages by over 85%, ensuring smoother access during critical peak morning login times

❱ Reduced the AWS cost per Monthly Active User (MAU) by 82% while supporting 12x the user base

❱ Mobile game build and distribution time to app stores was reduced by 90% from 4 hours down to ~15 minutes

50x
Registered User Growth

85%
Reduction in unplanned outages

82%
AWS Cost Reduction per user

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A bit about Boddle

Boddle Learning is a dynamic, US-based EdTech innovator transforming math and literacy education for children. They create a high-quality, engaging, interactive learning app that replaces traditional drills with colorful, game-based adventures, converting screen time into productive discovery. Boddle's Learning Management System (LMS) empowers teachers and parents to create custom assignments and monitor real-time progress, ensuring effective, individualized education. Built with a vision for global scale and accessibility, Boddle is committed to helping kids grow their love for learning.

What Boddle needed

Boddle's rapid success and adoption quickly exposed critical limits in stability and scale, especially during peak school morning logins when thousands of students signed in at once. These sharp demand spikes led to slow performance and occasional outages, directly impacting classrooms when the platform was needed most. Internally, Boddle also faced significant operational friction. Manual steps, inconsistent deployment environments, and limited visibility into performance issues made software releases slow, risky, and time-consuming.

To keep pace with their growth, and to prepare for future expansion and new subject coverage, Boddle urgently needed to modernize its infrastructure and delivery practices. Their platform had to be resilient, observable, and secure, capable of scaling seamlessly while accelerating delivery. Key Priorities included achieving high availability and elasticity to absorb demand surges; enabling faster, safer releases via containerization and CI/CD; establishing clear observability for rapid issue diagnosis and right-sizing decisions, and implementing robust security and cost control measures.

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What base2Services delivered

To address Boddle's critical scaling limitations, stability issues, and operational friction, we executed a comprehensive, AWS-centric modernization strategy. Our focus was establishing a resilient, elastic, and financially intelligent infrastructure capable of handling explosive growth and accelerating product delivery.

Stabilizing Scale and Performance

The immediate priority was eliminating disruptive performance dips during peak school logins. We modernized the architecture using containerization and serverless principles:

- **Elasticity with Amazon ECS Fargate**
  We migrated Boddle's rigid EC2 Learning Management System (LMS) workloads to Docker containers running on Amazon ECS Fargate. This provided rapid horizontal scaling, allowing the platform to automatically absorb massive demand surges without performance degradation.

- **Database Optimization**
  To eliminate bottlenecks, we implemented a serverless Amazon Aurora reader-replica. This offloaded heavy read queries, significantly boosting database performance and application responsiveness.

- **Proactive Scaling**
  We analyzed daily usage patterns and implemented scheduled Amazon ECS task scaling and Amazon Aurora capacity adjustments to "pre-warm" clusters ahead of known morning peaks. This crucial step proactively eliminated predictable time-of-day outages.

Accelerating Delivery and Governance

The second pillar focused on transforming slow, risky releases into an automated, efficient process:

- **Infrastructure as Code (IaC) & CI/CD**
  We defined all AWS resources using AWS CloudFormation (IaC) to create repeatable, safe environments. We then built end-to-end, GitOps-based CI/CD pipelines that fully automated deployment, including deploying static assets via Amazon CloudFront for accelerated delivery. We also automated the mobile game build and distribution to app stores, cutting the release cadence from several hours to under 15 minutes enabling Boddle to test app builds more frequently.

- **Observability and Control**
  Centralized Amazon CloudWatch and APM gave Boddle clear, real-time metrics on performance and container health. We also established a multi-account structure and proper account management using AWS Organizations to apply scalable security and compliance guardrails.

Cost Optimization & Rightsizing

Finally, we ensured financial sustainability. Through comprehensive rightsizing (shifting idle/oversized resources) and securing reserved-instance commitments, we optimized Boddle's monthly cloud spend and significantly reduced their AWS cost per Monthly Active User (MAU) despite their massive user growth. This enabled Boddle to reinvest savings directly into product expansion and future subject coverage.

We delivered this strategic overhaul as the foundation of our ongoing partnership, while empowering the Boddle team to effectively manage the new automated processes. As their trusted DevOps as a Service partner, we provide continuous infrastructure management, optimization, iteration, and expertise. An approach that ensures the resilience, speed, and cost efficiency Boddle needs to meet current US demand and further refines a secure, scalable foundation for their ambitious global future.

About base2Services

base2Services is a globally recognized leader in Cloud Delivery, Operations and Management, specializing in DevOps, Amazon Web Services (AWS) and cloud-native computing. Since 2005, base2Services has delivered successful cloud deployments to countless customers across a wide variety of industries. Our expertise in cloud technology and implementation allow us to provide our clients' businesses with premium services at the highest standards.

As an AWS Advanced Consulting Partner with certified DevOps and SaaS competency, our team members are skilled in the implementation, management, operations, maintenance and support of leading cloud systems with a focus on providing our clients with security, automation, scalability and recovery features. Our extensive knowledge and experience with cloud applications and their development make deployments an easy and affordable process for our clients. Our methodology, demonstrated results and commitment to data security have made us a trusted partner for our numerous international customers.

base2Services is ISO/IEC 27001:2013 certified for its information security management system (ISMS) for cloud development and operations, and is CPS 234 compliant.

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