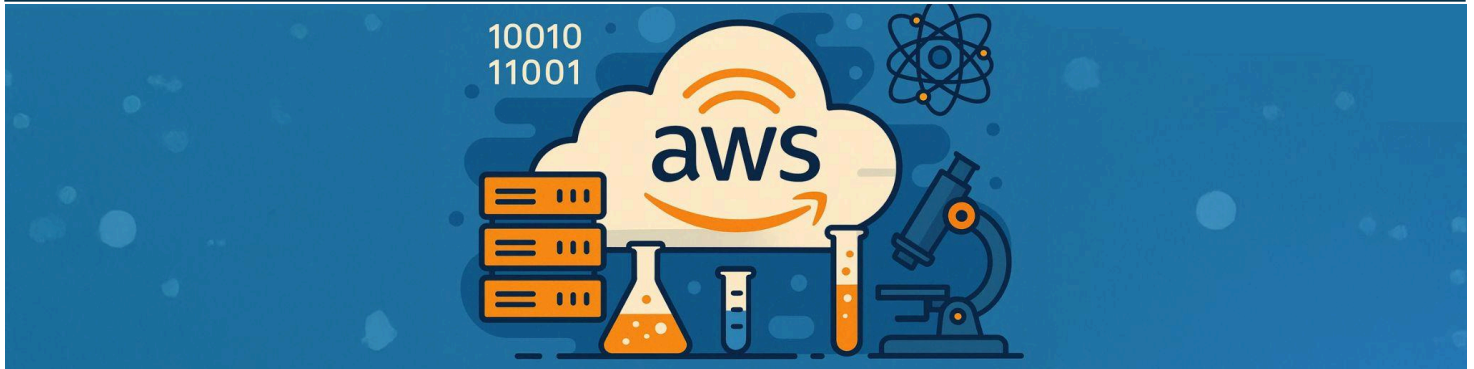**BaseBuild**
Coders, On Demand

Scalable AWS Infrastructure & Support for BD FlowJo

Created by David McKillen, Basebuild, Inc.

Client Overview

FlowJo is a leader in flow cytometry analysis software, supporting researchers and institutions globally. Their platform and website require continuous uptime, fast content delivery, and the flexibility to evolve with user demand.

The Challenge

FlowJo's digital presence required:

- High availability for global users across various time zones
- Efficient handling of media files and documentation
- Scalable infrastructure to support platform growth and new product launches
- Ongoing backend support without burdening internal development teams

Robust AWS Infrastructure with CMS Flexibility

We engineered a reliable server environment hosted on AWS and powered by a CMS that balances performance, speed, and customization.

AWS Server and Laravel Stack

- Amazon EC2 (Elastic Compute Cloud): Hosts the October CMS environment with scalable instances to manage site traffic and updates seamlessly.
- Amazon RDS (Relational Database Service): Manages structured content data with fast, secure, and scalable access for dynamic site content.
- Amazon EFS (Elastic File System): Externalized file storage allows for consistent file access across multiple EC2 instances, supporting load balancing and redundancy.
- October CMS: A Laravel-based content management system known for performance and flexibility.
- Laravel Framework: Forms the foundation for clean, secure, and scalable backend logic.

Support Services

- Continuous AWS monitoring, updates, and tuning
- Security patching and infrastructure hardening
- Backup scheduling and disaster recovery setup
- Deployment management and CI/CD pipeline assistance
- Performance optimization and cost review

Results

- Reliable global performance with near-zero downtime
- Efficient content management for internal teams using October CMS
- Future-ready architecture capable of supporting new product rollouts
- Reduced internal maintenance with Basebuild as ongoing infrastructure partner

Conclusion

FlowJo's trust in Basebuild to manage and evolve their AWS infrastructure has resulted in a faster, safer, and more scalable web presence. With a solid technical foundation in place, their team can stay focused on innovation in the life sciences space.

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