Madisyn Kovacic

CSD 380

This story looks at how Amazon changed the way they built their software between 2001 and 2005. At first, Amazon used a single big system called Obidos that handled everything in one place. But as Amazon grew, this system became really complicated and hard to manage. To fix this, they switched to a new way of building their software, called a service-oriented architecture (SOA), where different parts of the software could work independently.

This change taught Amazon some important lessons. First, by making sure each part of the software was a separate service, they gained better control and ownership over each piece. Second, they stopped clients from accessing the database directly, which helped them expand and improve reliability without causing problems for users. Lastly, organizing teams to focus on each service made development easier and encouraged them to be more innovative and customer-focused.

The results of this change were impressive. By 2011, Amazon was making 15,000 updates to its software every day, and by 2015, that number jumped to 136,000 daily updates. This story shows how changing from a big, all-in-one system to smaller, independent services can make software development faster, more flexible, and more innovative.6,000 deployments per day. This case study demonstrates how shifting from a monolithic architecture to microservices can dramatically improve agility, scalability, and continuous innovation in software development.

Sources

Denuwan Himanga Hettiarachchi. “End of Microservices Era? — Amazon Prime Case Study.” *Medium*, 9 May 2023, denuwanhimangahettiarachchi.medium.com/end-of-microservices-era-amazon-prime-case-study-9da7a5fdb0c2 Accessed 10 Feb. 2025.

H, Jeremy. “4 Examples of Microservices in Action | DreamFactory Blog.” *DreamFactory Software- Blog*, 20 Oct. 2022, blog.dreamfactory.com/microservices-examples

“Let’s Architect! Designing Microservices Architectures | Amazon Web Services.” *Amazon Web Services*, 24 May 2023, aws.amazon.com/blogs/architecture/lets-architect-designing-microservices-architectures/