

Case Study - Application Replacement and Migration to EC2



Our client was a full-service national lender offering mortgage solutions to clients of diverse income brackets and credit classes. They were founded on the idea that people are more than numbers; education and customer service make the distinction. Some of our client services to their customers include issuing variety of loan types for both purchase and refinance and providing programs necessary to help them take command of their finances.

CHALLENGE:

Our client concluded that they required a smart application that would facilitate loan estimations and processing to flow securely between loan applicants (clients), brokers, and lenders. The capability to quickly share data throughout the organization would significantly decrease the amount of time required for loan processing. Furthermore, the system would need to be built within a year, implemented in a secure public cloud, and satisfy the requirements of a \$25,000 per month operating budget.

Key application requirements included:

- ▶ Leadership sponsored project to bring the application to the web with a modern responsive design
- ▶ An originator portal that would support both loan originators and loan administrators
- ▶ Generation of full loan estimate documents that would be sharable with loan applicants
- ▶ Secure procedures to move the loan application to an enterprise servicing system
- ▶ Decreasing each loan officers' manual workload, while increasing the number of processed loans each day
- ▶ Significantly reducing the extra labor hours required to process loans.

Technical challenges included:

- ▶ Integrating with existing enterprise systems for loan and content management
- ▶ Maximizing overall system performance, while minimizing network latency issues
- ▶ Meeting relevant security and FFIEC compliance requirements
- ▶ Automatically transferring the completed loan estimation to the loan servicing system
- ▶ Securely migrating legacy data to the new cloud-based application
- ▶ Defining high-level architecture best practices that are secure, scalable, resilient, and performant

SOLUTION:

Idexcel team worked along with our client to review the current existing systems and integration points to identify several vital systems: Encompass, Compliance360 and Allstate Digital Integration Platform (ADIP). To ensure performance, security, compliance, and resilience, Idexcel developed the application on Windows platform using .Net technology and deployed the application to the Amazon Web Services (AWS) public cloud.

The architecture was distributed utilizing an SOA pattern to eliminate a single point of failure and to improve performance and scalability. The overall solution was implemented using a combination of Microsoft Products, AWS Services, and other 3rd Party Tools.

The primary workloads were hosted on load balanced EC2 instances with Windows Server 2012/2016 as operating systems. Some of the Docker-based Services were hosted on application load balanced EC2 instances with the Windows 2016 server. The EC2 & AWS best practices are followed for Security, Operational Excellence, Reliability, Performance, and Cost.

The combination of tools and services were aligned with AWS's Well Architected Framework. The solution included:

- ▶ Microsoft Products integrated with the application
- ▶ 3rd party tools: FltConnect, Encompass, DocuSign, MongoDB, Jenkins, Chef, 3rd Party Penetration Testing, Palo Alto Firewall
- ▶ AWS EC2 instances running the Windows Operating System
- ▶ AWS Services for automation, monitoring & compliance

By teaming with Idexcel, our client was able to deploy a massive AWS infrastructure, while implementing a DevOps Pipeline utilizing Chef, Jenkins, and AWS CodeDeploy. These practices allow for constant integration, transparency, accountability, and speed across teams.

BENEFITS:

The Idexcel team was able to complete and deploy the aforementioned application in nine months with an operating cost of \$20,000 per month. Information now flows seamlessly between loan applicants, brokers, loan originators, and lenders. The overall process cycle time – from application submission to approval, was reduced by a factor of 50%. Successful migration of the older legacy data reduced the company's storage cost by 85%; this solution was achieved by replacing expensive SAN-based storage with AWS S3. The new portal and its integration decreased manual processes by 25%.

OUR AWS COMPETENCIES



- Public Sector
- Solution Provider
- DevOps Services Competency

- Financial Services Competency
- Migration Services Competency

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Find out how Idexcel solutions can help your business. Contact us today!

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