AWS Cloud Migration Increases Availability and Agility for ISU

As Illinois' first public university, Illinois State University (ISU) has a storied history of excellence, beginning with its founding as a training school for teachers in 1857. In the 150+ years since then, the University has evolved into a nationally recognized public university enrolling over 20,000 students in a wide range of programs at the bachelor, master, and doctoral levels.

ISU was experiencing performance issues during peak times, service outages, operational issues, and long support times with its Managed Services provider for their PeopleSoft Campus Solutions and HCM applications. After two years of continuous challenges, and impacts on the student user community, ISU issued an RFP for a new PeopleSoft Managed Services provider that could also migrate the PeopleSoft stack to the cloud and manage the infrastructure. ERPA was awarded the contract after a thorough evaluation process.

Leveraging the Power of AWS Cloud

ERPA designed the proposed solution based on ISU's rigorous requirements, which included robust capacity for up to 100,000 hourly Integration Broker and synchronous messages, the ability to accommodate more than 7,500 concurrent users during peak usage periods, data warehousing needs and a disaster recovery solution to meet stringent RTO and RPO requirements given ISU's physical location in a tornado-prone region of the United States.

ERPA determined Amazon Web Services (AWS) was the ideal fit for ISU's infrastructure. ISU benefited from the robust AWS network backbone, along with regional facility diversification through scalable infrastructure with the capability to meet high-demand Oracle workloads as well as assurance that critical data was protected in the event of a natural disaster via active-active environments in two disparate AWS availability zones. Our solution included:

- AWS EC2 instances configured for scalability, optimal availability and reliability leveraging AWS Well Architected best practices
- Cross-region disaster recovery solution to meet RTO and RPO requirements
- Extensive use of AWS native services such as CloudTrail, CloudWatch, GuardDuty, and AWS Web Application Firewall (WAF) for monitoring and security
- Appropriately provisioned resources including S3, EBS and EFS for storage
- Streamlined application and infrastructure patching and maintenance with always up-to-date hardware
- Enhanced security and compliance posture to exceed internal, regulatory, and statutory requirements

THE CHALLENGE

Frequent service outages, performance issues, lack of disaster recovery, and ineffective application management.

THE SOLUTION

A Well Architected high-availability, fully redundant AWS solution tailored to stabilize and meet PeopleSoft application workloads. Extensive use of AWS cloud native features and functionality, continually updated compute resources, and scalability.

THE OUTCOME

A successful *lift & shift* migration to the cloud for optimized performance, increased scalability, reliability, redundancy, and security, resulting in operational efficiency and enhanced end user experience.

> *We transitioned our new production environments over a weekend without a hitch.*

Todd Smoak
Executive Director of Technology Solutions

Cloud Migration and Managed Services for Operational Efficiency

Starting with implementation, the process couldn't have been smoother, according to ISU's Executive Director of Technology Solutions, Todd Smoak. The ERPA team successfully performed a lift-and-shift migration of the two PeopleSoft applications to the AWS cloud within the agreed upon timeline which stabilized the PeopleSoft applications.

> *"We transitioned our new production environments over a weekend without a hitch. It probably took longer to migrate the DNS entries nationwide than it did for our admins to actually log in to the new migrated environments. Then we just spent the rest of the weekend testing, confirming, making sure everything was right."*

ISU experienced immediate improvements in performance and application reliability. In the first test of the ERPA-designed AWS cloud solution – 3,000+ concurrent users registering for spring semester – Smoak was relieved there were no crashes and no interruption of service.

> *"It's a big weight off our shoulders,"* he said.

And while cost-savings wasn't necessarily a goal of the project, Smoak has seen a nearly 30% reduction in TCO since moving to AWS with ERPA.

As part of the proposed solution, ERPA offered Peoplesoft Managed Services on top of Managed Hosting with increased efficiency using ERPA's proprietary cloud orchestration tool, ActiveGenie™. Ultimately, ERPA serves as a one-stop shop for ISU, delivering everything from incident management to PeopleSoft administration and management including PeopleTools upgrades and PUM updates to database administration and management.

The overall result for ISU? *"A brighter future"*, says Smoak.

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> *We've got [ERPA] who we consider a true partner with us. We've been able to meet the demands of our users, keep our environments patched and current. You can see we're at the latest PUM of everything, and we're constantly deploying those. And because of that, and it's been so smooth, it's allowed our internal PeopleSoft team to focus on helping our customers get the best use out of the PeopleSoft products we own,"*
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> **Todd Smoak**
> **Executive Director of Technology Solutions**