RIPTIDE

Riptide & Mule ESB Stack the Deck for Online Business

Deepstacks University delivers on-demand, video-based training, 24/7 through a virtual poker training platform developed by Riptide. Using cloud computing technologies integrated with the Mule ESB for rapid deployment, Deepstacks reduced costs by having no in house development team, no datacenter, and only the use of cloud services, making their online business cash flow positive in less than 6 months.

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> **Zenon Rawley**
> Director of Software Development
> Riptide Software

The Challenge: Building an Online Business from the Ground Up

Deepstacks University was born at the World Poker Tour at the Mirage in Las Vegas. During breaks, its founders often discussed the lack of quality poker education. They quickly realized there was a market for poker training very similar to other online training and online video-based instruction programs. Mere lectures did a poor job of preparing people to handle real world situations. Based on their experience, the founders believed situational training would be a more effective approach. In situational training people are put in a series of situations, forced to react, and then critiqued on their responses. Based upon this insight, Deepstacks Poker Training began holding live events in multiple cities, eventually recruiting famous poker player Mike “The Mouth” Matusow as their lead trainer.

In 2009, Deepstacks was ready to address a broader audience, by moving its poker training online. While traditional online poker training consisted of watching online videos, lecture-style, Deepstacks wanted to transform the industry by delivering their new way of learning poker online. This training program was called Deepstacks University. There was only one problem: while Deepstacks had built strong competencies around poker instruction and contracted with many of the top names in the world of poker, they lacked any sort of IT or software engineering support infrastructure.

In March 2009, Deepstacks approached Riptide, a leading provider of cloud computing and on-demand technology, consulting, professional services, and development, and proposed this revolutionary online poker training system.

They wanted to take the industry by storm with a robust Learning Management System (LMS) that provided an interactive experience to their users. Because Deepstacks University really shows what Mule integrated with cloud services can do. In the past, a new business would be years in the making. Now, with a few poker experts, a series of cloud services, rapid application development technologies, and Mule for the integration, you can have a self-sustaining business in months, not years.

Riptide had previously built a similar system for the US Army, it was an ideal candidate to build Deepstacks University.

To achieve the vision for Deepstacks University, a whole new business would have to be built. Deepstacks did not want to be in the business of installing and maintaining server or software infrastructure. Therefore, Riptide advised the company to leverage a fully cloud-based architecture so that Deepstacks could focus on what they knew best—poker. With the cloud, an entire Internet business could be built without a single technical person on staff.

The Solution: Cloud Services Integrated with Mule ESB

A specific cloud architecture and deployment model was chosen as the best choice for the needs of Deepstacks University. There would be four elements to the solution. The first would be the underlying infrastructure upon which the application would be built. This would be provided by Amazon Web Services (AWS), an infrastructure as a service provider. The second would be the state-of-the-art interactive multimedia instruction (IMI) learning management system (LMS) custom developed by Riptide.

Third, Salesforce would be used as the back-office system containing all customer information. Finally, integration was needed between the components. For their integration platform, Riptide chose Mule, the world's #1 open source ESB.

"We work almost exclusively in the cloud and we use Mule ESB in nearly all of our projects. If you are going to do cloud integration, there is no better choice than Mule. It really is built for the cloud," said Zenon Rawley, Director of Software Development for Riptide.

The first step in building Deepstacks University was enhancing the Riptide LMS system for the Deepstacks University specific business requirements. Riptide chose to leverage the latest in rapid application development (RAD) technologies and selected the Groovy & Grails technology stack. The technology decision was based off of Riptide's deep internal knowledge of the Java platform, which could maximize the potential for code reuse. Riptide built the interactive user interface for delivering the training content using Flash technology. Development of the core functionality of the web application was completed over the first 3 months of the project.

The core application was designed from the start to be deployed on Amazon Web Services (AWS).This would allow global scalability and service delivery to customers worldwide. Therefore, the next step was to focus on the Amazon cloud infrastructure and integrations for handling the distribution of rich multimedia content. The LMS system needed to have strong content delivery capabilities, therefore Amazon S3 provided a storage repository for the Amazon Cloudfront content delivery network (CDN), which was used to ensure fast multimedia delivery across the globe.

To support management of all customers, subscriptions, scoring, ratings, comments, referrals, affiliates, and customer support, Riptide implemented Salesforce for Deepstacks. They then integrated the Deepstacks backend with Salesforce using Mule ESB. “We needed a very scalable integration solution with good support for cloud technologies. We were exposing RESTful web services from the Deepstacks application and needed to integrate to Salesforce. Mule let us quickly develop an integration that met our scalability needs,” said Rawley.

Mule ESB monitors the Deepstacks system for new records and data changes. When records are found messages are constructed and put into queue to be processed. A custom service component receives these messages and sends the data within batch operations over the Salesforce API. Additional services are used to poll Salesforce for various data changes, which need to sync into the local system.

Mule also pushes customer, financial, campaign, and scoring data into the Salesforce platform. Unlike the online services and transaction operations, this operation did not have to be done in real time. Therefore the Mule Quartz connector was used to trigger an event at off-peak hours that read all data elements from the underlying system database. These data elements were transformed into Salesforce objects and ultimately routed to another endpoint for export.

“Riptide's creativity and experience were essential to bring the vision of Deepstacks University to life. Riptide's deep expertise in cloud computing technologies using Salesforce and Mule Enterprise Service Bus (ESB) technologies were invaluable in scaling our online business and helping us grow,” said Ron Leventhal, founder of Deepstacks University.

In October 2009, **DeepstacksU.com** went live, and saw an explosive uptake in users.

“Deepstacks University is a study in the power of cloud integration. In the past, a brand new business would be years in the making. Now, with a few poker experts, a series of cloud services, and Mule as the integration backbone, you can have a self-sustaining business in just a few months,” said Rawley.

About Riptide

Riptide is a leading provider of cloud computing and on-demand technology consulting, development, and professional services. Their team of expert consultants and developers leverages the power of the Web by utilizing the latest in cloud computing and on-demand technologies. With a firm focus on technology innovation and best practices, Riptide consistently delivers high-quality products and services that can be trusted at an affordable price. Riptide is located in Orlando, Florida. To learn more about Riptide and its service offerings visit **RiptideCloud.com** or call **1-800-RIPTIDE**.