

Emagine International Case Study

“Whether a client has 2 million customers or 22 million, we can scale RED.cloud on AWS to deliver messages and interactions to those customers in under 250 milliseconds.”

- David Peters, Chief Executive Officer, Emagine International

“The cost of using the AWS Cloud varies in line with usage and demand. This gives us the flexibility to scale and enables us to optimize the cost of our RED.cloud solution.”

- David Peters, Chief Executive Officer, Emagine International



Emagine International’s RED.cloud can deliver messages to millions of telecommunications customers in less than 250 milliseconds in response to events through the scalability of the AWS Cloud. Emagine International builds software solutions for telecommunications businesses to raise customer revenues and loyalty. RED.cloud uses Amazon VPC to meet stringent customer security requirements, and Amazon EC2 to run analytics databases.

About Emagine

Founded in 1998, [Emagine International](#) provides software and services that help telecommunications companies (telecoms) increase customer revenue and loyalty. The business is headquartered in Sydney, Australia, with clients across Asia, Middle East and Africa. Emagine’s services include its RED (Real-time Event Decisioning).cloud—a platform that enables telecoms and other service providers to respond when customers experience events such as reaching limits on monthly mobile data allocations. RED.cloud would deliver real-time streaming analytics and business rules to enable telecoms to execute these messages and interactions—such as inviting customers to purchase more data when they are reaching their data limits. Telecoms could use the platform to gain greater value from their assets; increase their ability to continuously analyze customer behavior; and continuously adjust interactions with those customers in response to lessons learned from previous interactions.

The Challenge

Emagine had traditionally deployed its software within telecoms' on-premises environments. "Our key reason for taking this initial approach was that the cloud space was virtually nonexistent 15 years ago. Now, there have been various iterations of cloud-based infrastructure services," says David Peters, chief executive officer at Emagine. With many telecoms planning to move their infrastructure to the cloud over the next five years, Emagine realized it needed to deploy the RED platform in the cloud to remain relevant to customers and prospects.

As well as enabling rapid decision-making and responses, the platform's supporting infrastructure had to scale seamlessly and cost effectively to support large but rapidly-changing data volumes, while maintaining high availability.

Why Amazon Web Services

Emagine International's top priority was to select a cloud-services provider that its customers would have confidence in. One of the company's preliminary deployments of RED.cloud was for a telecom that had previously used Amazon Web Services (AWS) for another application. "AWS had the infrastructure and security that were acceptable to that provider, and it could scale up or down when necessary," says Peters.

Emagine's RED.cloud has to make two decisions in under 250 milliseconds once it receives data from telecoms. The first decision is whether the event justifies interacting with the customer and the second is what offer it should make to the customer. Peters says, "For example, when a customer is about to run out of data under his or her service plan, we can text them to ask if they would like to purchase another 200 MB of data for \$2. If they agree, we provision the additional data in real-time."

When conducting its evaluation of cloud services, Emagine realized it needed expert assistance to build and deploy its platform on AWS. The business engaged AWS Technology Partner [Blue Crystal Solutions](#) to undertake the project. "AWS recommended us to Emagine because of our robust track record in architecture, performance management, data security, implementations, licensing and managed services across the cloud and, in particular, the Oracle technologies that underpinned the Emagine platform," says James Banister, associate marketing and business development manager at Blue Crystal Solutions.

Blue Crystal Solutions provided expert consultancy and support to Emagine, including cost optimization, licensing compliance, use of fit-for-purpose technologies, future-proofing, and design of the AWS infrastructure to meet stringent performance targets, and information security requirements. "Emagine's requirements evolved during the project and we responded quickly to support them," says Banister. The Blue Crystal Solutions-designed architecture maximized the use of AWS Availability Zones to meet the customer's availability requirements, and stored more than 11 TB of data within the first three months alone. "Our AWS implementation passed an independent telecoms security audit with flying colors," Banister adds.

Emagine is running a version of its platform in an [Amazon Virtual Private Cloud](#) (Amazon VPC) to isolate sensitive internal resources from external access while supporting public-facing systems. [Amazon Elastic Compute Cloud](#) (Amazon EC2) with [Amazon Elastic Block Store](#) (Amazon EBS) storage volumes are running the servers supporting an Oracle database used for analytics and a VoltDB database used to support real-

time decision making. [Amazon Simple Storage Service](#) (Amazon S3) provides backups and archiving of Oracle data. Blue Crystal Solutions' proprietary monitoring tool—BlueDiamond—integrates with [Amazon CloudWatch](#) to provide round-the-clock alert management.

The Benefits

Emagine is now running a version of its RED.cloud platform on AWS. The platform is capable of ingesting several TBs of real-time data from telecoms, and supporting considerable changes in the amount of data ingested over the course of a single day. “The scalable and flexible architecture of AWS enables us to cope with those changes and volumes, and still provide the standard of service that our customers expect,” says Peters

At present, development and testing of the platform are undertaken in house, but Emagine is about to move these processes to AWS. “We expect to conduct improved testing for performance and volume,” Peters says. “Whether a client has two million customers or 22 million, we can scale RED.cloud on AWS to deliver messages and interactions to those customers in under 250 milliseconds. With the AWS Cloud, we can dial up what we need to test and deliver, and dial back down as required.”

Emagine is also able to manage its costs proactively using AWS. “The cost of using the AWS Cloud varies in line with usage and demand. This gives us the flexibility to scale and enables us to optimize the cost of our RED.cloud solution,” said Peters. “In addition, by paying only for the AWS services we consume, we avoid large, upfront expenditure in infrastructure. Furthermore, our partnership with Blue Crystal Solutions enabled us to reduce the costs of implementation, transformation, and ongoing operations.”

About the Partner

Blue Crystal Solutions

- A Standard Partner of the AWS Partner Network (APN). Blue Crystal Solutions is a specialized supplier of Cloud, Application, and Database Management services, providing high quality solutions to meet its clients' business objectives.
- For more information about how Blue Crystal Solutions can help your company build and manage your AWS environment, see [Blue Crystal Solutions' listing](#) in the [AWS Partner Directory](#).

Learn More

To learn more about how AWS can help your Big Data needs, visit our Big Data on AWS details page: <https://aws.amazon.com/big-data>.