

REAN Customer Success Story I4C Innovations

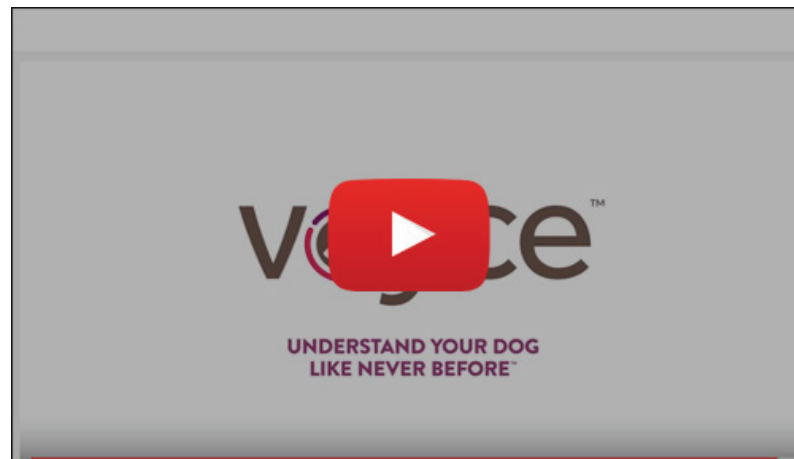


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Ben Maphis
Director of Program &
Vendor Management

About I4C

voyceI4C Innovations (I4C) is committed to building a suite of unique products and services for the companion animal market. I4C's Wellness Monitors and online Wellness Management Services provide actionable health information and educational tools to a passionate market of pet owners and veterinarians. Their Voyce product offerings makes it easy to share pets' progress, milestones, and health information with friends, family, trainers, and veterinarians



Challenge of Scale

Voyce products require scale and resiliency across application, services, integration, and data infrastructure. Voyce must ensure that applications are architected to scale quickly to meet surges in demand. I4C and REAN Cloud have developed a sophisticated backend big data platform for Voyce that provides data processing, storage, and analytics workflow services. With support from the REAN Cloud Technical Implementation Services team, I4C leverages highly elastic and scalable infrastructure from Amazon Web Services (AWS) to meet their growing needs in the most cost efficient and secure manner. Furthermore, Voyce desires a strategic partner to help manage and maintain their platform and applications on an on-going basis through managed services to maintain this efficiency and security..

Why I4C Selected REAN Cloud

I4C selected REAN Cloud as their cloud consulting partner to guide them through implementing best practices and to ensure the optimal use of AWS resources in delivering highly available and reliable application and data services. Requirements include deployment across multiple Availability Zones using AWS Elastic Load Balancing as well as building in capabilities for fault tolerance, redundancy, and stateless session handling. REAN Cloud provided I4C with a one-stop shop of cloud consulting technical implementation expertise combined with on-going operations and management of their cloud platform. REAN Cloud provides customized operations support through its Managed Services (MGS) offering, which provides I4C with 24x7x365 enterprise technical support.

Architecture Assessment, DevOps Pipeline, and MGS

REAN's Business Services team completed a comprehensive assessment of I4C's existing architecture and recommended specific and actionable changes to improve performance and security. The team also identified the components within the architecture which could take full advantage of AWS such as AutoScaling to automate the size of their server fleet and Amazon Elastic Load Balancing to distribute the traffic evenly amongst their servers.

Using the automation tools such as the AWS APIs and CloudFormation templates, REAN also created parallel environments to support development, testing, integration, and production workloads. Furthermore, REAN automated the deployment of a load testing environments and saved costs by terminating the environment when testing was completed. REAN also helped improve I4C's continuous integration, continuous delivery pipeline by installing and configuring Jenkins on Amazon EC2. A DevOps pipeline was built to improve I4C's test and development lifecycle process by reducing the time from code to deployment by running automated build and testing scripts. For on-going support, REAN MGS includes monitoring, alerting, and automated trouble ticketing solutions to ensure timely reporting and response to fixing unhealthy infrastructure and application errors. REAN Cloud configured all applicable resources to ship logs, including Amazon CloudWatch metrics, to the central logging system backed by Splunk Enterprise. REAN Cloud MGS also provides proactive monthly reports to I4C to check for cost optimizations, security improvement recommendations, and any remediation recommendations.

REAN's Secure, Compliant Cloud Infrastructure Setup

In addition to optimizing application, data, and services infrastructure, REAN Cloud Consulting Technical Implementation Services team enhanced the security posture of I4C's infrastructure to ensure confidentiality, integrity, and availability of all data collected and processed. Using REAN and AWS's security best practices, REAN implemented and configured Multi-Factor Authentication (MFA) to all the IAM users accessing the AWS console, while also providing secure remote access with SSL VPNs for developers and other team members to access Amazon Virtual Private Cloud other cloud resources from I4C offices. Using a defense-in-depth strategy, REAN implemented protections at every layer from the network layer with a unified threat manager to provide deep packet inspection and firewall controls, the server layer with host-based intrusion detection and prevention services installed on Amazon EC2 instances with anti-malware, monitoring and logging agents to check for security threats and anomalies, and finally the AWS account layer with securing Amazon VPC network access control lists and EC2 security groups to protect traffic at the subnet and instance layers.

Big Data and Internet of Things at I4C

REAN Cloud and I4C have created a big data platform to collect and process streaming data from Voyce sensors. This big data platform provides insights into key wellness indicators which assist in early illness detection and provides cost savings through preventative care. The platform consumes and uses Mulesoft on Amazon EC2 instances as its enterprise service bus to help orchestrate the various services which provide order management, device connectivity, data ingestion, and messaging services to provide data to the pet owner Wellness portal. The physical bands, i.e. the Internet of Things (IoT) devices, provide information from thousands of pets over HTTP and includes billions of data points which are then processed and stored through multiple layers including Amazon SQS and S3.

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About REAN Cloud

REAN Cloud, an AWS Advanced Consulting Partner, is a one stop shop for managed solutions in the Amazon Web Services Cloud to help organizations become agile and productive. Their turnkey solutions empower innovation and reduce time to market at a low cost in a monthly subscription model. The team's extensive AWS expertise empowers their customers to quickly, securely and reliably launch their solution with confidence with no investments needed to procure hardware/software or services. REAN Cloud has worked with global organizations including Radian, Ditech Mortgage, Trend Micro, Riverbed, Ozy Media and Sentient Energy. Their solutions are bundled with advanced security features to help address clients' compliance needs.