

A person wearing a dark green quilted jacket, olive green pants, a dark beanie, and black gloves is walking through a snowy forest. They are holding a camera with a black handle. The background shows bare trees and a light sky with falling snow. A white box in the top left corner contains the EPI·USE logo.

EPI·USE®

Spartan Camera – more secure,
efficient, and scalable environment for
AWS-hosted trail camera application



About Spartan Camera

Spartan Camera is an industry-leading provider of trail cameras that are ideal for monitoring wildlife and their behavioral patterns. They have also excelled in developing trail cameras, which deliver photos and videos in near real-time directly to your smartphone or web portal. The camera application used by Spartan is hosted on AWS

Our journey with Spartan Camera began in 2017 when our team assisted in migrating their application to the AWS Cloud. Following the migration, we focused on modernizing their application hand-in-hand with evaluating their infrastructure – based on the AWS Well-Architected Framework – to build a more secure, efficient, and scalable environment. Our recommendations helped them improve their performance efficiency, while also reducing their AWS costs.



The Solution

Security

- A careful evaluation of Spartan's infrastructure revealed areas for improvement in security. While enhancing server security, we replaced overly permissive security rules with more restrictive ones.
- Our audits indicated several IAM users whose access keys were older than 90 days. As part of standard IAM security best practices, we recommended rotating the IAM user access keys which were older than 90 days. This measure was crucial in reducing the chances of any outside intrusions into the AWS console.

Performance efficiency

- The network connections to RDS were initially established over the public internet, which imposed several challenges to the database security and its network performance. Managing the database security groups was cumbersome, as it was hard to track the public IPs that changed. Moreover, it contributed to increased data transfer costs and latency issues.
- We established VPC peering, which offered significant improvements in network performance, security, and cost. With VPC peering, network communications were established via private IPs, resulting in improved database security and speed, along with significant cost savings.

Reliability

- The architectural review of Spartan's AWS environment showed several unevenly distributed EC2 instances across different Availability Zones (AZs).
- Our team worked on expanding the instances evenly among different AZs, thereby offering inexpensive, low-latency network connectivity between AZs in the same region. This greatly improved the application's resilience and protected it from a single point of failure.





Enhanced scalability

- Spartan initially had their application hosted on cPanel. However, cPanel is not designed to scale horizontally with AWS, which could cause application availability issues. We helped them modernize their existing architecture by implementing AWS Elastic Beanstalk, along with autoscaling and load balancing. These improvements ensured high application availability and better price performance. The introduction of autoscaling facilitated better cost management while meeting their traffic demands.

Managed Services

- As a managed service provider, we have always been proactively involved in performing AWS Well-Architected reviews to build a highly efficient and fault-tolerant infrastructure for Spartan. We also perform monthly account audits to assess Spartan's AWS environment and ensure that it is compliant with best practices. Our support team is available 24/7 for any technical assistance.

“We did a Well-Architected Review with EPI-USE Services for AWS and found it to be beneficial. The review guided us to look at different aspects of our IT infrastructure, identify areas that we need to improve, and learn about tools and good practices.”

Tom Nguyen, Spartan Camera Project Manager



About EPI-USE Services and AWS

EPI-USE Services for AWS offers robust and scalable hosting solutions, based on AWS. As a Next-Gen Managed Services Provider (MSP) we provide managed services and consulting services for AWS, including assessment, development, migration, management, and optimization, allowing our clients to focus on their core business. By providing a flexible cloud migration methodology, we tailor our migrations to each client's unique requirements. This allows any business to move from traditional server environments to AWS quickly and efficiently, with little to no impact on existing environments.

To learn more about how we can help your business, contact info-aws@epiuse.com or visit epiuse.com/aws-services.



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