Workhorse fine-tune their infrastructure for peak performance, thanks to Bytes AWS

Company profile

Industry: Technology   HQ: Redhill, Surrey

WORKHORSE

Overview

Workhorse create order and inventory management software, enabling businesses to streamline their processes and centralise order workflows in one place. Their cutting-edge solutions save valuable time with automated workflows and better visibility over customers, orders, invoices and inventory.

Challenge

Workhorse wanted to review their existing AWS cloud infrastructure to see if it could benefit from new or improved AWS services. They had a specific desire to improve resilience, security and cost optimisation. To perform this detailed review of their cloud infrastructure, Workhorse chose Bytes AWS.

Solution

Bytes AWS performed their review using AWS Well-Architected best practices, before producing a report focusing on key areas and prioritised based upon the seriousness of the findings.

Bytes AWS discovered that several improvements could be made to increase the security of resources. They also found that adopting more cloud-native features would improve the scalability and responsiveness of the architecture.

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> The Bytes AWS team have been very helpful in capturing our business requirements and effectively implementing changes, ensuring our workloads are ready to scale with our growing client base. We continue to make use of their excellent advice and assistance through their support services and are particularly keen to make use of Bytes as a partner through the Well-Architected Review program, ensuring all our workloads continue to meet AWS Best Practice.
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> **Alastair Badman | Director | Workhorse**

They recommended:

- Tightening up EC2 Security Groups to lower the attack surface of public facing resources.
- Introducing new AWS products and features to help in logging, monitoring and alerting.
- Using auto-scaling technologies to allow systems to increase or decrease available resources based upon demand.

To improve security and resilience, Bytes AWS suggested adopting EC2 Security Groups, Instance Profiles and SSM Agents. They also prescribed additional services such as GuardDuty, AWS Backup, AWS Config, Security Hub and Amazon Inspector as an extra layer of protection.

Bytes AWS also recommended introducing scaling and auto-scaling groups to avoid reliance on single server instances. Regarding data, they suggested moving persistent data onto shared storage solutions such as EFS and reviewing introduction of encryption for data at rest or in transit. They also recommended versioning S3 files.

For ongoing support, Bytes AWS provide Workhorse with ticket support. They can raise incidents and request tickets relating to their infrastructure, which will be routed to the correct team for action. Bytes' engineers can use this to provide status updates and request further details. One example where this helped was with the RDS Database, which was sometimes slow. Bytes identified the issue as stemming from the instance type being used, but increasing the size was not viable due to cost. Bytes resolved the problem by changing the generation of the instance type. The features of the newer generation stopped the problem occurring, but also kept the costs the same.

Benefits

Workhorse gained improved resiliency and security, which vastly reduces the opportunities for someone to adversely impact the company's main assets, either deliberately or by accident. The company also benefit from improved monitoring, logging and alerting, meaning they have much improved visibility of the health of their environment and can deal with faults or issues faster.

Workhorse's systems have benefitted from increased scalability and resilience, where increased customer demand no longer risks introducing latency. And additional monitoring has enabled them to pre-empt issues, before they arise.