# Driving data from the cloud: RAM tracking







# (?) The challenge

As a growing business, RAM was faced with a number of challenges in its pursuit of growth and portfolio diversification.

From multiple mergers and acquisitions to a desire to grow the business in both the UK and North America and bring new products to market, RAM needed to move beyond an existing server-based setup.

"I joined in November 2020", says Richard Blown, Group CTO. "The objective was to take RAM from being a predominantly hardware-based tracking company to become more of a forward-thinking technology company."

"There are lots of tracking providers", says Richard, "But what makes your product stand out? The hardware is often a commodity; it can be bought off the shelf. It's really the software and customer experience that differentiates you from your competitors."

One of the biggest challenges (and opportunities) faced by RAM was growth. To meet their demanding growth expectations, scalability would be all important. Not only in

terms of growth in the number of connected vehicles but also in dealing with the spikes in demand that this would create.

"If there's a network outage, and vehicles are sending you messages every 60 seconds", says Richard, "all those messages will be queued up then fired at you all at once."

The ability to bring new products to market more quickly and easily would also be a key part of the project.



### (?) The solution

#### Turning to existing supplier Zen, RAM chose to implement an AWS cloud-based solution.

The business would transition from a hosted data centre to a fully cloud-based infrastructure, managed and supported by Zen. With locations from Leeds to Ipswich to the Czech Republic, and many employees working from home, a cloud-based setup would also enable better communication and collaboration regardless of geographical location.

Through an ongoing process of mergers and acquisitions, new networks and locations had been (and continued to be) added to the RAM setup – a process that would be difficult to sustain in the old environment.

The ability to add those new networks and locations would be greatly enhanced through the new Zen-designed solution.

"It's a massive data exercise", says Richard. "You've bought a company that has 20,000 black boxes in vehicles talking to their servers, and they need to suddenly talk to our servers. Plus you need to copy all of the historical data. Working with Zen

to design, build and test that migration process was vital. The support offered was invaluable.

"When you need to do a migration like that, the fact that it's in the cloud allows you to quickly spin up the environment and copy vast amounts of data. But when you're done you also need to be able to spin those environments down because they're expensive. That's the on-demand nature of working in AWS. Before the cloud we would have had to buy all that infrastructure and size it for the entire project, whereas what we've been able to do is do that as we've gone along, just in time, according to demand."

Continuing on the benefit of choosing an AWS cloud-based solution, Richard adds: "If I'd had to spin up an environment able to cope with the whole migration and run it for the whole length of migration, it would have been five times more expensive. Cloud offers better cost, speed and flexibility."

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#### (?) The benefits

"Having a cloud-based infrastructure, managed by Zen, helps me sleep at night", says Richard.

"You've got that 24/7 support and that all important cloud burstability – all in AWS, which I would choose every time. If anything does happen, if our growth reaches a certain tipping point, the cloud infrastructure takes care of it."

The benefits of the new AWS solution from Zen include the scalability and support RAM craved, along with the ability to quickly spin up new products and services.

"A good example is connected cameras", adds Richard.

"We wanted to bring to market a connected camera with a 4G SIM card in it. When somebody is involved in a crash or an accident and you need to get that footage, you can get it immediately over the air.

"By working with Zen, not only were we able to spin those new environments up really quickly, but we could also leverage their architects and cloud subject matter experts to benefit from their thought leadership and best practice."

And that partnership with Zen is something that RAM Tracking truly values.

"I definitely see Zen as a partner as opposed to a supplier", says Richard. "We're not just going to them and asking them to do or build something for us, we're also benefiting from their input and best practice. It's a very collaborative way of architecting new solutions.

"What we're building is very bespoke. We've benefited greatly from Zen's support and the AWS Well Architected Framework. We know that anything we build will be to best practice, but we're also able to leverage Zen in terms of things we've already built. Their Well-Architected Review provides

feedback on performance, security and resilience of our existing solutions."

#### Looking to the future?

"A big area of our partnership with Zen in the future will be in terms of data. There's data we currently provide to our customers, like reporting.

"But there's also the big data to consider – that we're now able to analyse using AI and machine learning. With a hundred thousand vehicles talking to us every 60 seconds, there's a huge amount of potential there, from spotting trends to improving our marketing to enhancing and tailoring the information and support we're able to provide to our customers."

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