



# Using the AWS Cloud for Collaborative Client Support



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## Client Information

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The client is a Fortune 100 American holding company, in the automotive sector providing mass customization of trucks and buses. The company's subsidiaries and affiliates produce international brand commercial and military trucks, proprietary diesel engines, school and commercial buses. With other 16,000 employees the client's products, parts, and services are sold through a network of nearly 1,000 dealer in 90 countries throughout the world.

## Background

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- Trigent has shared a 16+ year relationship and continues to support the client's requirements with a dedicated team and over that time has developed a deep knowledge of the client's systems, capabilities, operations and supply chain.
- Trigent helps the client with product planning and change management and also provides, TriCon, a mission-critical enterprise software that generates vehicle-specific Bill of Materials (BOMs) from customer orders generated by dealers. This software is deployed at data centers located and maintained by the client and feeds their ERP system which in turn, orders, schedules and manages fulfillment.
- In addition to the enterprise software, Trigent provides a 24x7x365 Level 2 Help Desk as a first line of contact in the event that something goes wrong.
- Trigent also provides an on-call Level 3 support team for rapid issue analysis and remediation.

## Current Business Challenge

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To meet competitive market demands, the client is constantly improving product designs, engineering processes, and production efficiency. As a result, the configuration system (TriCon) must be modified to reliably handle a wide variety of new product designs and provide services to a variety of new enterprise applications. It must also clearly identify the business impact of any of these changes.

# Solution

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## Embracing a High Rate of Change in a Complex World

To flexibly maintain end-to-end test configurations, Trigent has deployed a mirror configuration test system (TriCon) in an AWS virtual private cloud (VPC). This VPC is available to both Trigent and the client's Subject Matter Experts (SMEs) for rapid issue analysis and to try out “what if scenarios” using multiple different run-time configurations without impacting the client's official deployment and production systems.

Trigent uses an Enterprise Agile Delivery Methodology adapted to accelerate delivery while meeting the client's requirement for predictable transparent deliveries. This involves incremental Sprint-based deliveries deployed and demonstrated in the AWS cloud. The client's SMEs and other stakeholders directly provide feedback leading to improvements reflected in the next Sprint. All discussions and changes are recorded and available in an online Project Notebook.

## Exploiting a “Quality Bonus”

Trigent maintains a team of dedicated engineers with deep knowledge of the client's business environment and operations. This team is available to address any issue that affects order processing.

Fortunately, through rigorous processes and dedicated engineers, the system bug rate is low. When the dedicated team is not addressing client-driven system enhancements, they work on Trigent-driven initiatives that anticipate the client's critical unaddressed needs. Often, this proof-of-concept leads to an “advanced development” project, identification of other critical needs, or new/changed system requirements.

Due to the high complexity and dynamic nature of vehicle configuration, the focus of many of the Trigent-driven initiatives is on improved analytics. Some of these initiatives use NoSQL (AWS: DynamoDB) and Hadoop (AWS: Elastic Map Reduce), as well as highly scalable rules-based systems.

## A Word about Security

Due to the sensitive nature of the client's data, all data must be as secure in the cloud as it is in their data center. To this end, all client data is encrypted both in motion and at rest. To limit cyberattacks, a very small network “attack surface” is exposed and constantly monitored and alarmed. System access/authentication is carefully restricted, monitored and logged. Client application availability times are set by the client and managed by Trigent.

## Benefits

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Maintaining test and R&D environments in an AWS Virtual Private Cloud has allowed Trigent to provide this long standing client with:

- Exceptional service through quick problem resolution and collaborative development,
- Improved business metrics by quickly delivering solutions to address identified critical needs, and
- Cheaper operations by flexibly using cloud resources without impact to onsite development and production systems