# Trend Micro uses Amazon Aurora to deliver security solutions at the pace and scale elastic cloud customers demand

**Case Study**

## Executive Summary

As businesses have adapted to take advantage of the cloud's elasticity, their appetite for spinning up and destroying workloads has accelerated, causing data storage to be much more dynamic and demanding. Trend Micro had to find new ways to boost service performance. By migrating its Deep Security products from Oracle and 3rd party SQL databases to Amazon Aurora, Trend Micro can better support the speed and performance demanded by the most elastic environments. Trend Micro's Deep Security wraps security services around customer workloads and containers in the cloud. Each of these services captures, stores, and analyzes the most relevant security data for each function in near real time.

## The Challenge

Thanks to the new levels of elasticity enabled by the cloud and the adoption of DevOps for application development, businesses today will often spin up and destroy between 20-100% of their workloads in under 24 hours. This tremendous acceleration of a workload's lifecycle challenges service providers like Trend Micro to deliver and decommission their solutions just as quickly.

Deep Security customers running 3rd party SQL databases will often demonstrate a decrease in performance as they increase their elasticity because they can't keep up with registering workloads, collecting data, deleting data, and flushing it all out. When this happens, it can slow down the customer's entire business.

## The Solution

Trend Micro rearchitected its Deep Security solutions to run on Amazon Aurora for greater performance capabilities. AWS solution architects helped optimize query performance and enable seamless scaling of Trend Micro's solution, resulting in performance speeds 3-5 times faster than Oracle and other databases. Customers who migrated reduced and often eliminated latency concerns, which meant Trend Micro went from being a bottleneck in the customer lifecycle to being invisible.

## About Trend Micro

Trend Micro Incorporated, a recognized, global leader in cybersecurity solutions, is dedicated to helping make the world safe for exchanging digital information. The company offers layered security solutions for data centers, cloud environments, networks, and endpoints. Products from Trend Micro work together to seamlessly share threat intelligence and provide better, faster protection for customers through a central point of control.

Trend Micro supports companies of all sizes, from cloud-native startups to enterprise-size global leaders, with solutions tailored to meet their unique security needs and delivered at the scale and speed of their business.

> "We went from being a bottleneck in our customer's lifecycle to being invisible and even an enhancement in their process due to Aurora."
>
> — Steve Quane
> Executive Vice President,
> Network Defense and Hybrid
> Cloud Security, Trend Micro

> "Trend Micro comes from a long history of continually providing security tools and services to support modern security challenges. Partnerships with AWS and Trend Micro allow us to constantly challenge the status-quo or conventional thinking so we can execute new strategies that serve our customers securely."
>
> — Jason Cradit
> Sr. Director of Technology, Pivvot

## Results and Benefits

Running its Deep Security solution on Amazon Aurora allows Trend Micro to better differentiate their services and improve their value to customers.

### Removed performance bottlenecks for customers

Amazon Aurora enables 3-5 times faster performance of Deep Security solutions compared to Oracle or 3rd party SQL databases. "We have customers achieving massive scale of infrastructure who end up logging millions of security and telemetry events every day," Steve Quane, Executive Vice President, Network Defense and Hybrid Cloud Security at Trend Micro explained. "Amazon Aurora is so important to our service because it helps us capture that tremendous amount of information quickly."

### Reduced demands on customers with managed services

Managed services are a huge benefit to customers. According to Steve, "Our customers hate buying more servers and storage and having to hire extra people to set up networks, add functionality, and manage infrastructure—especially as they add big data." By providing Deep Security on Amazon Aurora, Trend Micro hopes to entice even more customers to migrate to a managed service model. "There is zero doubt in my mind, that fully managed database services like Aurora are driving customers to the cloud."

### Enhanced cloud posturing capabilities with AWS APIs

Trend Micro tracks over 50 services to help customers better understand their cloud posture and configuration via Trend Micro's Cloud Conformity services. Using APIs provided by AWS for Amazon Aurora, Trend Micro gets faster and broader exposure to the metrics which they pass along to customers to show them how individual deployments meet security and policy-based requirements.

### Improved customer satisfaction and experience

Part of Trend Micro's push to move customers to the SaaS offering is the dramatic increase they've seen in customer satisfaction, "Our customer satisfaction scores for SaaS or IaaS offerings are significantly higher than our customer satisfaction score for on-premises deployment. I can think of ten reasons why this is; the top two being we can get them features faster, and they have fewer problems regarding staff skill set deficiencies because AWS handles the load balancing and performance metrics," said Steve.

Deep Security as a service will become a part of Trend Micro Cloud One™, a security services platform for cloud builders, in 2020.

## Learn more

Amazon Aurora is a MySQL and PostgreSQL-compatible relational database built for the cloud, that combines the performance and availability of traditional enterprise databases with the simplicity and cost-effectiveness of open source databases. Amazon Aurora is up to five times faster than standard MySQL databases and three times faster than standard PostgreSQL databases. It provides the security, availability, and reliability of commercial databases at 1/10th the cost.