

Forte Data Solutions Relies on NETSCOUT to Assure Migration of Services From On-Prem to AWS Cloud

Virtual nGeniusONE and vSTREAM Appliances Provide Visibility Required to Ensure Performance of Applications and Databases in Hybrid On-Prem and AWS Cloud Environments

HIGHLIGHTS

The Challenge

- Forte encountered service performance issues after they started migrating services to AWS
- End-users were experiencing slowdowns, instability and intermittent freezes within critical application migrated to AWS, as well as timeouts while creating reports
- Overall user experience greatly diminished, creating frustration for end-users

The Solution

- Forte used the NETSCOUT® to monitor their on-prem services before AWS migration
- vSTREAM™ appliances were deployed as targets for VPC Traffic Mirroring along with virtual nGeniusONE® in the AWS infrastructure to monitor services during and after AWS migration
- This facilitated monitoring of services in the hybrid cloud end-to-end and, including networks on Apache, Oracle, and Java application ports

The Results

- Accelerated migration of application and database workloads from on-prem to AWS
- Eliminated slowdowns, instability and intermittent freezes in the application, thus ending delays in generating and sending out statistical reports to key stakeholders
- Curtailed revenue losses associated with late reports and lost productivity
- IT gained ability to uncover web, database, and application errors quickly and easily
- Ensured highest quality end-users work experience when using critical application



Customer Profile

Forte Data Solutions delivers professional services, managed services and integrated technology offerings that address customers' most complex data challenges. They have successfully built and delivered integrated technology solutions for organizations of all sizes throughout the world.

The Challenge

As experts in migrating database, application, and storage infrastructures to virtual cloud environments, Forte Data Solutions' reputation depends on the seamless and reliable performance of its solutions. Originally Forte's web-based statistical application was deployed in their on-prem datacenter and monitored by NETSCOUT visibility fabric. Due to a growing and ad-hoc nature of the demand for Forte services by customers, forte decided to migrate many of their application workloads to AWS. This allowed them to benefit from the inherent elasticity of the AWS cloud while paying only for the compute, network and storage resources required at any time to meet the customer demand. After migrating application workloads to AWS, the end-users of the company's web-based statistical application, which is used for generating stat reports, started to experience slowdowns when running queries, instability and intermittent freezes within the application, and timeouts while creating reports. Users reported that saving work was taking longer than usual, thus causing reports to be delayed, which directly impacted other key stakeholders. These issues made the overall user experience far more difficult, ultimately frustrating end-users and costing the company lost revenue.

As the overall load of the application was continuously growing, the data stored in an Oracle database and running on multi-node Real Application Cluster (RAC), was placed in a Scaling Group so activity peaks could be easily satisfied by automatically scaling out new RAC nodes once CPU and RAM usage thresholds were exceeded. However, Forte cloud administrators noticed that the Scaling Group was regularly scaling in and out the number of active RAC nodes beyond the established limit. This was having a huge impact on the overall behavior of the database, causing frequent CloudWatch alarms to be raised, and making monitoring essentially unusable. In addition, database backups were delayed, while some were outright failing.

All of these ongoing and unresolved issues led to an increased overall stress for the IT team, who were responsible for ensuring the performance of the cloud environment and the applications running within it.

Solution in Action

Forte Data's IT team turned to NETSCOUT to address its AWS monitoring challenges. NETSCOUT vSTREAM appliances were deployed along with virtual nGeniusONE in the corresponding AWS infrastructure. Monitoring was configured to analyze networks end-to-end across on-premises datacenter application workloads and AWS Cloud workloads, including Apache, Oracle, and Java application ports. The nGeniusONE dashboard workflows provided immediate insights into database, web and application details and their dependencies. Database monitoring revealed evidence of persistent scaling in and out, while web monitoring uncovered persistent latencies on both web servers, eliminating the RAC cluster as the root cause. Application session analysis showed multiple Java and embedded SQL related errors pointing to version-related issues after Java upgrades. Armed with these invaluable insights, the IT team was able to revert to a previous Java version. Once this fix was applied, errors disappeared and the RAC Scaling Group returned to normal threshold usage.

The Results

The NETSCOUT end-to-end monitoring solution for the hybrid cloud has been a true success story for Forte Data Solutions. As a result, IT is now enabled to proactively monitor and troubleshoot application performance in the AWS environment. The nGeniusONE dashboard workflows allowed IT to immediately identify the root cause of issues both on-prem and in AWS cloud, leading to rapid resolution, thus dramatically reducing the Mean-Time-To-Knowledge (MTTK).

By resolving issues quickly and relying on NETSCOUT's end-to-end visibility, Forte's IT team was able to achieve critical benefits, including:

- Migrating applications to AWS cloud with confidence as dictated by business needs
- Eliminating slowdowns, instability and intermittent freezes in the application, thus ending delays in generating and sending out statistical reports to key stakeholders
- Curtailing revenue losses associated with late reports and lost productivity
- Gaining the ability to uncover web, database, and application errors quickly and easily
- Ensuring the highest quality end-users work experience when using the application

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For more information about NETSCOUT solutions visit:

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