P-A-S-S™ Consulting – Cloud-based payment gateway facing multiple outages and unable to handle the volume of 300,000

Challenge : Cloud-based payment gateway facing multiple outages and unable to handle the volume of 300,000

System unable to process 300,000 transactions
Outages and multiple restarts affecting productivity

Results:

FIRST PHASE

System stabilized to handle 60,000 transactions

Database Utilization doubled without hardware upgrade

Memory utilization reduced from 70% to 10%

Results:

SECOND PHASE

10X IMPROVEMENT in 8 WEEKS without any hardware upgrade

300,000 transactions/day without any disruptions

MULTIPLE restarts eliminated

A large payment solutions company offered financial services via a cloud-based payment gateway. A rural banking service used by one of its key clients was experiencing severe performance related disruptions. The client's business activity demanded that 300,000 transactions/day be supported. However, the gateway was choking when the transaction volume exceeded 29,000 transactions/day, requiring multiple daily restarts of the application.

Avekshaa's Solution :

As a first step, the Avekshaa Performance Analysis & Audit methodology™ was applied to diagnose performance issues across the entire technology stack, from the hardware up to the application level. Then Avekshaa's P-A-S-STM Platform was used to identify critical bottlenecks, which were analysed and fixed by Avekshaa architects. Java code, queries and configuration were optimized for maximum performance. The database also underwent a similar analysis and optimization. The web and application servers were examined and an optimal configuration was recommended based on the performance metrics.

The next phase of work focussed on scaling up the gateway 10x to handle up to 300,000 transactions/day. The Avekshaa team of architects proposed a new highly scalable architecture along with the necessary design and code changes in a manner that ensured component reuse and minimal disruption to existing components and interfaces. Performance benchmarking was performed at the end of the development phase to ensure that the system handled the requirements.

Results :

As a result of Avekshaa's first phase of work, the gateway was stabilized to handle 60,000 transactions/day without disruptions. The database utilization was almost doubled without any additions to the hardware, allowing headroom to effectively handle twice the number of transactions. Memory utilization was also drastically reduced from 70% to 10%.

The second phase focussed on a 10x scale-up. A poorly performing system that capped out at 29,000 transactions/day while requiring multiple restarts, now handled 300,000 transactions/day smoothly and without disruptions. Avekshaa delivered a 10x improvement without additional hardware or upgrades, all in an impressively short time of 8 weeks.