



## CASE STUDY

# Schwing Stetter India eliminates Single Point of Failure with AWS

### Executive Summary

The Client is the 100% subsidiary of the Global leaders in the field of Concrete Construction equipment manufacturing. The client’s Indian subsidiary caters to the Global customers with its world class concreting equipment. They are the Number 1 player when it comes to producing Premium concrete pumps in the world as on 2017. They serve 10000+ Customers over 30+ Countries with US Dollars 1.30 Billion annual turnover and a 4000+ skilled work force. To better serve internal and external clients, the client has established a sophisticated IT infrastructure as they operate truly around the clock.

### The Challenges

The Customer anticipated multi-fold business growth over the next few years and hence needed to establish a scalable environment to manage explosion of data and meet data spikes.

To conduct their international operations across multiple time-zones, SCHWING Stetter India has deployed so many mission-critical applications. Over time, the diversity of applications has grown so huge and also on-prem and Cloud IT infrastructure had not been upgraded to balance it out. Hence the Customer started witnessing Data Center Outages which caused frequent and unplanned downtime that started affecting their business continuity.

Their network threat protection tools like load balancers, Intrusion Prevention Systems, web application firewalls, are vulnerable during power failures leaving the ecosystem exposed.

The client understood that what’s ahead of them is a comprehensive upgrade of their AWS Cloud Infrastructure and was concerned about high capital expenditures the project may demand.

#### Industry

Discrete Manufacturing

#### Challenge

Deploy resources to manage architecture, eliminate single point of failure & implement highly available SQL database mirroring

#### Services & Tech

Amazon EC2, Amazon S3, Multi-AZ MySQL DB, WAF, Guard Duty, Trend Micro Cloud One™



“Uniware Systems expertise in terms of needs analysis, planning, building consensus surrounding solutions, in line with our futuristic IT Roadmap was very helpful in the project.”

**IT Project Manager**  
*Schwing Stetter India*

## Specific Outcomes that were set out for measuring Project Success

- Eliminate Single Point of Failure (SPOF)
- Enable their global IT footprint with high availability
- Achieve Scalability without CAPEX
- Delivery seamless user experience through high performance
- Consolidate workload and optimize cost of running the infrastructure



“With AWS Solutions, Uniware Systems helped us eliminate SPOF by completing a technology refresh with an awesome pay-per-use model, without having to incur significant Capex and Opex.”

GM-IT  
*Schwing Stetter India*

## The Solution

To mitigate the risk of single-point-failure, the customer reached out to Uniware System – an AWS Advanced Consulting Partner in Chennai to help them with high-availability, scalability, fault-tolerant ecosystem with security and ensuring their Disaster Recovery strategy with industry-standard benchmarks with Recovery Time Objective (RTO) / Recovery Point Objective (RPO).

## Multi-AZ Deployment for high Availability

Taking into account of the scalability of databases and storage units, a Multi-AZ MySQL Deployment was done. This ensured the MySQL DB continue to replicate between two Availability Zones. The ECS deployed with EC2 replicated instances placed in two different availability zones. In an event of one availability zone goes down, entire application workloads will be distributed to another instance via load balancer. Auto Scaling automated the scaling of resources across the Amazon EC2 instances.

With AWS EC2, AWS ALB and Amazon Route 53 the client achieved a highly available and secure application tier by implementing cross zone traffic load balancing. A highly available Amazon Aurora MySQL Database was carefully deployed with AWS pre-engineered mechanism for load balancing, to distribute client requests between cluster nodes. Distributed highly available clusters across geographical locations. This ensured the clients services and applications are resilient to any potential disasters by automatically failing over to a node in another physical location.

## Scalability on a Global Level

Now that a high available system has been discussed, the question of scalability of Databases was addressed. Uniware Systems implemented Amazon Elastic Compute Cloud (Amazon EC2), Elastic Load Balancing and Auto Scaling to form scalable clusters of servers. Auto Scaling groups made it easier to deploy new code on a daily basis.

For ensuring Scalability to the level that client desired, Amazon Elastic Container Service (Amazon ECS) was deployed with AWS EC2 Clusters. Whenever the system experienced peak workloads, EC2 Instances were spinned-up for sharing the workload and during non-peak hours, Instances were spinned-down based on the work load.

## Security

To protect a high-available and scalable infrastructure, Uniware Systems implemented a robust security solution framework using AWS Web Application Firewall (WAF) ensure security based on AWS WAF Rules.

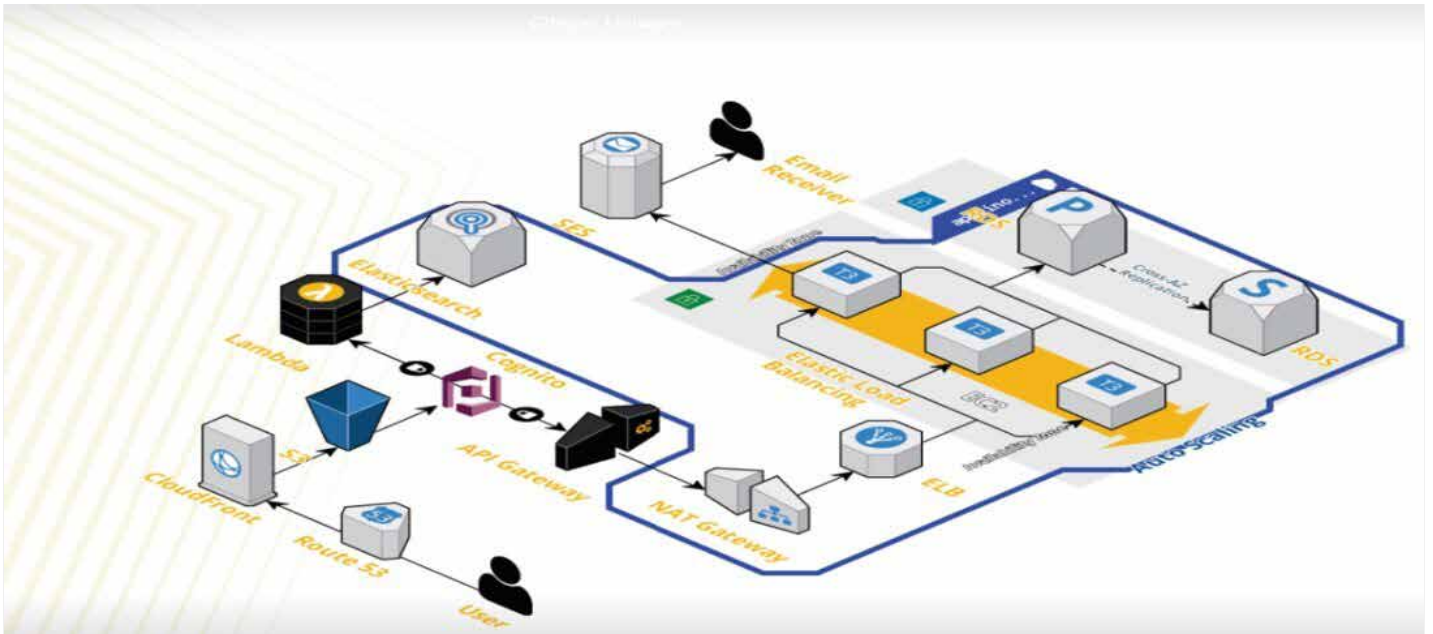
Uniware Systems also implemented Amazon GuardDuty, the threat-detection service that continuously monitored for malicious activity or unauthorized behavior and protected their AWS accounts, workloads, and data. This enabled a smooth project implementation with an automatic response to threats with detailed security findings for visibility and remediation.

With Trend Micro Cloud One the workloads were protected against vulnerabilities like malware or unauthorized changes protecting new and existing workloads.

## Project Outcomes

With the understanding of client's availability, scalability and security needs, Uniware Systems was implemented a right mix of AWS Solutions and helped the client achieve set out goals for the project.

- With Aurora MySQL RDS Multi-AZs deployment high availability was achieved
- Able to scale meeting the unexpected business demand with auto-scaling.
- The cost of running Cloud Infrastructure had come down
- Users experience was enhanced with low latency with a global reach through Cloud front.
- Security was ensured throughout the project implementation without disruptions



## Conclusion

Uniware Systems approached this AWS Cloud Infrastructure refresh to improve High Availability, Scalability and Security in a systematic manner recommending futuristic and yet cost-effective AWS solutions.



### About Uniware Systems

Uniware Systems promotes the world's leading IT Infrastructure, Networking and Cloud Computing products. Uniware Systems maximizes benefits of unified infrastructure by extending multiple functionality of leading OEMs so that customers can upgrade their IT Infrastructure and future-proof them to easily manage workloads of any size. Uniware Systems provides turnkey solutions for businesses to start and scale. With a team of certified solution specialists, Uniware Systems help client extract maximum ROI from their IT investments.

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