

Application Portfolio Rationalization Paves Way for Transforming **Auctions Platform for an Infrastructure Leader**



CASE STUDY



About Client

Indian state-owned
infrastructure development agency



Industry

Government



Service

Cloud

Business **Need**

The client wanted to **implement an online auction platform** for optimizing its procurement, bidding, and tendering processes. The vision was to facilitate more transparent, efficient, and competitive project allocation with a platform that can not only drive greater value and progress for the state's infrastructure and industrial

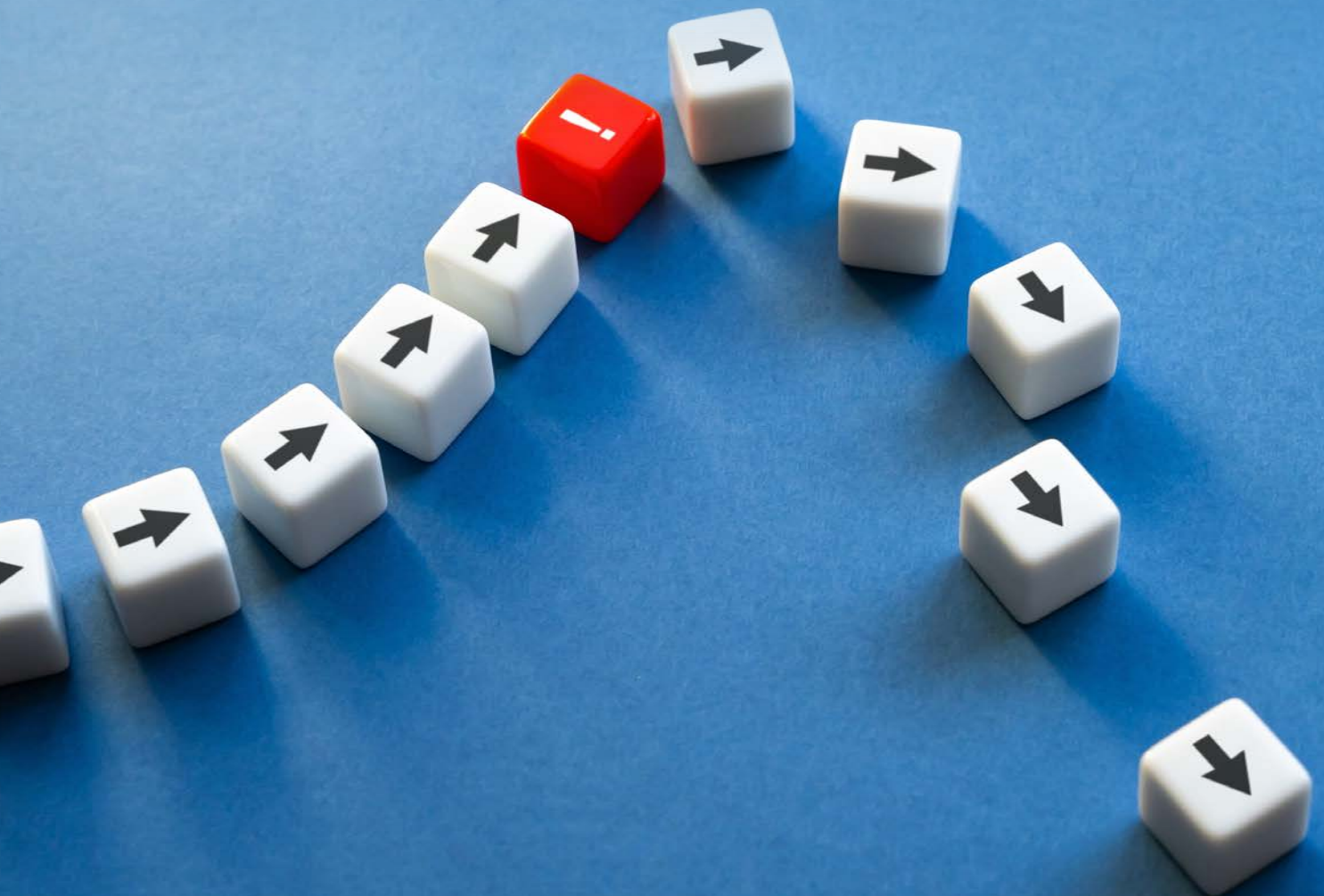
sectors but also deliver a seamless user experience. Considering the online bidding requirement, the platform had to be available and accessible by large number of participants, across multiple locations in real-time, it had to be scalable with **99.99% uptime.**



Business Challenge

The client was hosting its servers at a co-location facility. Their existing infrastructure setup failed to provide the necessary 99.99% uptime, leading to **persistent high latency issues**. As a result, online auctions suffered from **frequent**

cancellations, causing significant **revenue losses**. The client needed a solution to improve platform performance, scalability, and availability, reduce losses, and regain the trust of bidders and stakeholders in the auction process.

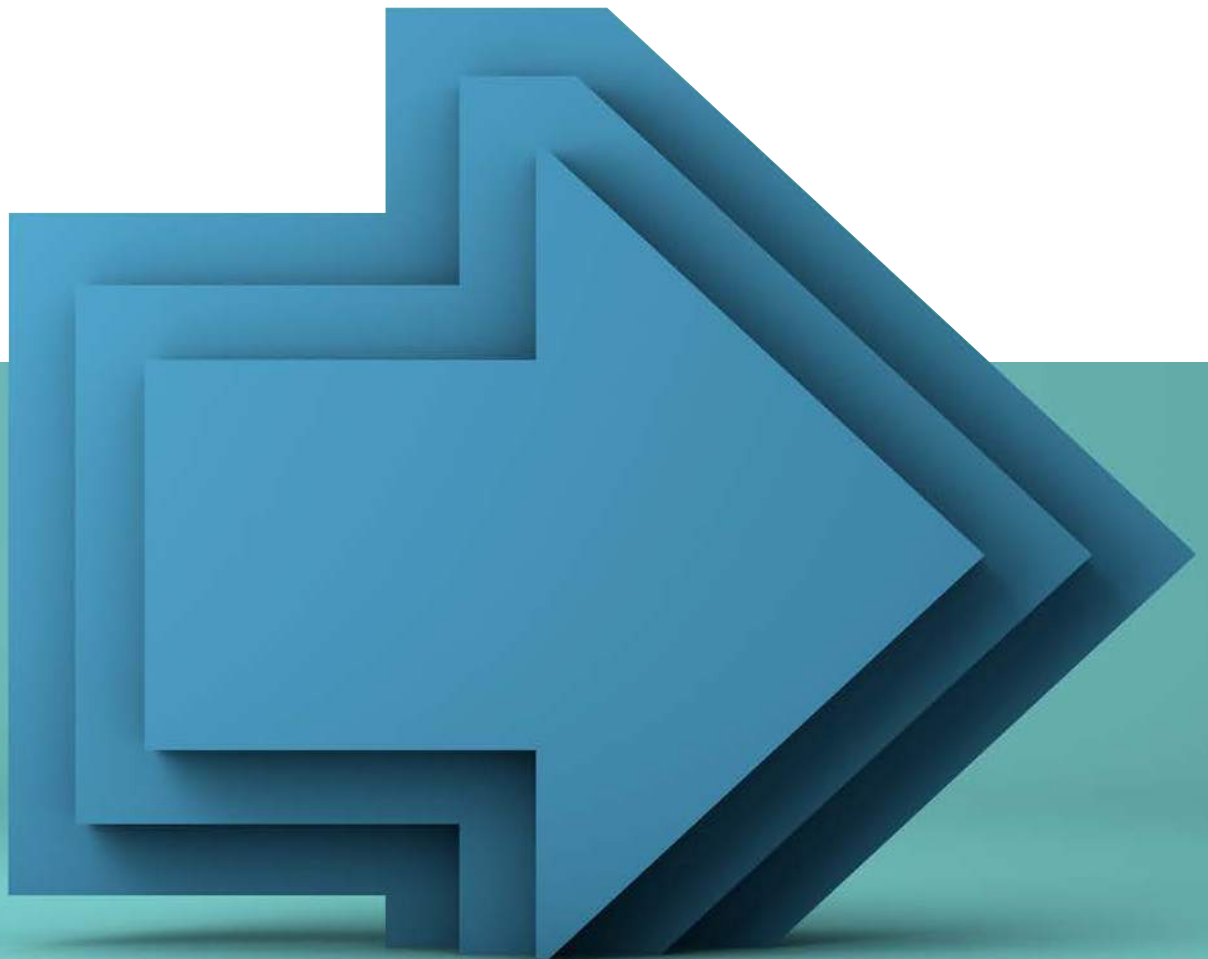


Business **Solution**

To enhance the auction platform's performance and reliability, NSEIT assessed its functionality, business value, technical debt, maintenance costs, usage patterns, and future compatibility using application portfolio rationalization services. Based on the reports of this analysis, we planned and executed the platform's migration to Amazon Web Services (AWS) and implemented various cloud- native solutions based on the assessment recommendations. This involved:

Scalability improvements by:

- ▼ Enabling auto scalability and horizontal scaling to:
 - ▼ Handle changing user demands in the AWS environment
 - ▼ Dynamically adjust resources for optimal performance during peak auction periods
- ▼ Deploying Amazon EC2 Instances in a reliable and scalable computing environment for the auction platform.
- ▼ Implementing an Application Load Balancer within Amazon EC2 instances for efficient load balancing and improved user experiences.
- ▼ Employing Amazon S3 standard storage for secure and efficient object storage of auction-related data.



Security improvements by:

- ▶ Configuring a robust disaster recovery plan for high availability and failover to safeguard against disruptions and minimize downtime.
- ▶ Utilizing Network Address Translation (NAT) for secure internet access to private subnet resources, enhancing overall security.
- ▶ Implementing AWS Tier-4 security architecture using a well architected framework to address data security concerns.
- ▶ Implementing OpenVPN for secure access to EC2 instances and private subnet resources via a Bastion Host.
- ▶ Setting up site-to-site VPN for secure network connectivity between the client's office and AWS environment.
- ▶ Provisioning CloudWatch for comprehensive monitoring of instances and network activities, enabling proactive issue detection and resolution.
- ▶ Deploying AWS Web Application Firewall (WAF) to filter web requests based on specific conditions, ensuring security, and monitoring the Auction Platform login page against unauthorized access using compromised credentials.
- ▶ Utilizing Amazon GuardDuty as a continuous threat detection service for
 - ▶ Monitoring the client's AWS account and workloads
 - ▶ Providing detailed security findings
 - ▶ Facilitating effective remediation actions to bolster peripheral security



Tech Stack



Amazon
EC2



Application
Load Balancer



AWS WAF

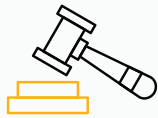


- Network Address Translation
- Bastion Host
- Site to Site VPN for CloudWatch

Business **Impact**

NSEIT made the client's auction platform more scalable, secure, and resilient. The migration empowered them to:

Handle higher traffic
(~20 auctions/day
without any
downtime)



**Increased daily
revenue by
conducting more
auctions**

**Offer a seamless
experience to
auction participants**



**Proactively mitigate
and address
security threats**

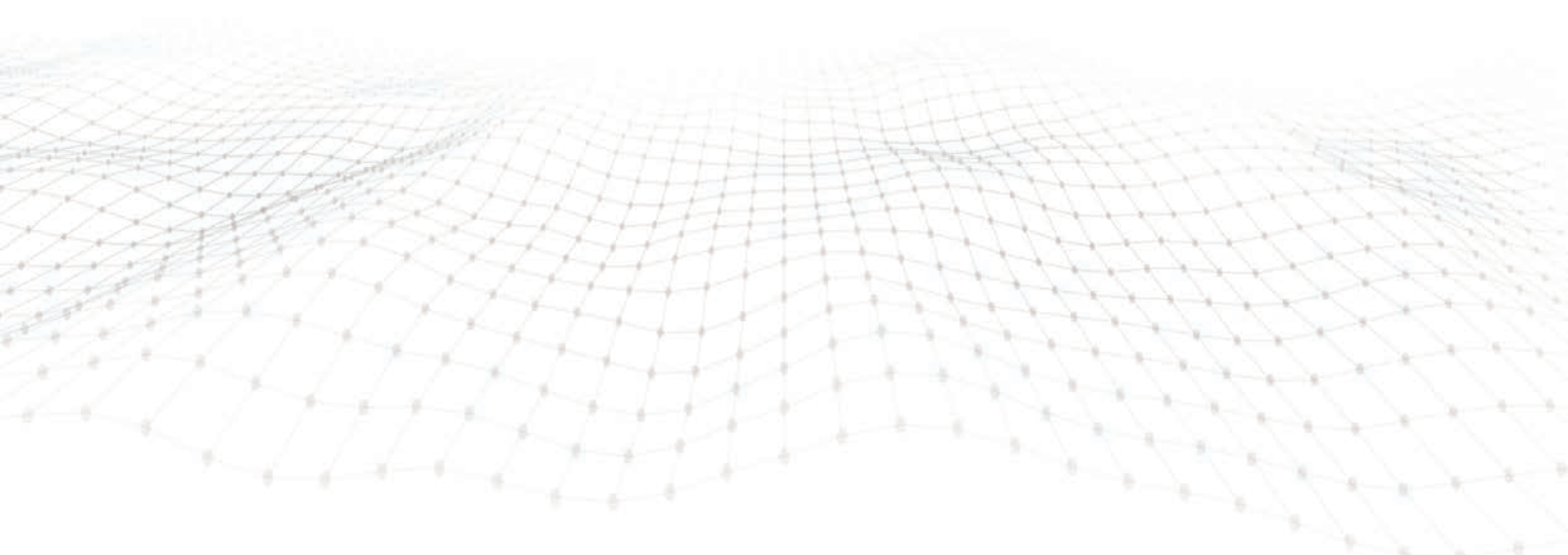
**Save costs on
maintenance of
servers and their
upkeeping**



About **NSEIT**

NSEIT Limited is a digital native technology company that engineers world-class solutions to help our global customers accelerate their digital transformation journeys. Our key service pillars are Application Modernization, Business Transformation, Data Analytics,

Infrastructure & Cloud Services, and Cybersecurity, through which we create intuitive digital experiences and tangible business impact. For over two decades, our innate drive for excellence has made us the partner of choice for global organizations. At NSEIT, we fuel digital progress.



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