



NON-PROFIT
ORGANIZATION



CLOUD
DEPLOYMENT &
MANAGED
SERVICES



HELPED **nasscom** BUILD A RELIABLE AND SECURE INFRASTRUCTURE
WITH CLOUD DEPLOYMENT & MANAGED SERVICES.



CLIENT OVERVIEW

Nasscom, a not-for-profit industry association, is the apex body for the \$245 billion technology industry in India. This industry has made a phenomenal contribution to India's GDP, exports, infrastructure, and global visibility. Moreover, this industry provides the highest employment in the private sector.

Established in 1988 and ever since, nasscom's relentless pursuit has been to constantly support the technology industry. In their continued journey towards seeking trust and respect from varied stakeholders, they reorient themselves time and again to remain innovative, without ever losing their humane and friendly touch.



CONTEXT

Nasscom is focused on building architecture integral to the development of the technology sector through policy advocacy and help in setting up the strategic direction for the sector to unleash its potential and dominate newer frontiers.

Over 3000+ members constituting 90% of the industry's revenue have come together to establish nasscom to enable the association to spearhead initiatives at local, national, and global levels. In turn, the technology industry has gained recognition as a global powerhouse.



KEY BUSINESS CHALLENGES

- Managing a highly scalable infrastructure.
- Managing a dynamic cloud infrastructure.
- Managing the security of Cloud Infrastructure.
- Managing the end-to-end reliability of the cloud.
- Managing secured connections over the cloud.
- Managing Container services on the cloud.



SOLUTION

Centilytics' Certified AWS Solution Architects conducted a comprehensive analysis to study the existing architecture and specific requirements. AWS was the customer's preferred provider as it offered high security and scalable infrastructure.

After examining the existing architecture, a team of dedicated engineers at Centilytics redesigned the infrastructure and provided the following Solutions:

- Assessment of the existing architecture, network, and security configurations.
- Deployment of the Web Application according to the best practice in private networks.
- CI/CD Setup in cloud for container-based application deployment.
- API Gateway Setup to connect with third-party vendor.
- Securing the infrastructure by enabling WAF and logging.

TECH STACK

- AWS Mumbai region was chosen for hosting the servers.
- Different regions were chosen for storing the cloud backups.
- WAF protection was enabled.
- Application Load Balancing (ALB) was deployed in the infrastructure.
- MongoDB was deployed in EC2 instances.
- Amazon Transfer Family, WAF, CloudWatch, AWS CloudTrail, and AWS Config were used to monitor, govern, and evaluate the AWS infrastructure.



SOLUTION ARCHITECTURE

SOLUTION APPROACH

Assessment & Solution

- Assessment of the existing architecture, network, and security configuration.
- Cost optimization of AWS infrastructure after migration of the production environment.
- Application Load Balancing (ELB) was deployed for path-based routing.
- Amazon Guard Duty, Amazon CloudWatch, AWS CloudTrail, and AWS Config were used to monitor, govern, and evaluate the AWS infrastructure.
- Kubernetes were deployed in the infrastructure with the help of the CloudFormation template.

DEPLOYMENT

- The deployment planner had all the milestones and timelines mentioned which ensured that the project was completed on time.

VALIDATE

- Post successful deployment of resources on the cloud, the infrastructure was validated on all the pointers (security, accessibility, etc.) before handing it over to the customer.
- After the application was tested by the customer on all the parameters, a cut-over date was agreed for Go-Live.
- Post-Go-Live, a validation tracker was sent to the customer, which ensured all the agreed activities had been done.

TRANSITION

- Smooth transitioning and handover to support were ensured by having proper KT sessions with the team and introducing them to the customer.
- Inventory, Credentials, Security Status, Server Hardening & Patching, and best practices operational checklist were handed over.

TOOLS AND SERVICES USED

- Native AWS monitoring services (CloudWatch, CloudTrail, Config) for auditing and monitoring. Also, Site 24*7, one of the third-party monitoring tools was configured to monitor the infrastructure.
- Integration of both Native and other monitoring tools with the Zoho Desk made a good experience for real-time incident management. Even change and CI items were managed properly.
- Centilytics is used as the cloud management platform for providing better visibility and managing spending on the cloud. Also, reporting and governance were made easy through this tool.

OS PLATFORMS | WINDOWS & LINUX



DESIGN CONSIDERATIONS

- Security by design solution architecture.
- Segregation of the network based on the workloads.
- Segregation of accounts based on the Application architecture.
- Autoscaling Features provided for the scalable Infrastructure.
- Load Balancing between the multiple servers.



OPERATIONAL BEST PRACTICES

BACKUP & DR

For Backup of EC2 instances, a native image-based incremental backup will be triggered, and which will further be integrated with our in-house auto-backup tool for automatic scheduling & alerting for every successful & unsuccessful backup.

TAGGING RECOMMENDATIONS

AWS resources were tagged as per the agreed naming convention and AWS best practices.



SERVICES USED

EC2, VPN Gateway, API Gateway, Kubernetes, AWS code commit, Security groups, S3, AWS Marketplace, Amazon Transfer Family, WAF, CloudWatch, AWS CloudTrail, AWS Config, GUARD DUTY, and KMS.



OUTCOMES

AWS was the cloud of choice which ensured that the customer could move faster, operate more securely, and save substantial costs, all while benefiting from the scale and performance of the cloud.

The customer had opted for 24x7 managed service support where Centilytics offered proactive monitoring, support, advisory, and management of the infrastructure. As part of the managed service deliverables, Centilytics is committed to providing a better customer experience through Alert Management, Security Controls, Infrastructure & Cost Optimization. A Scheduler has been enabled for the required business hours.