CASE STUDY

TECH mahindra

Transforming Customer Experience and Driving Operational Efficiency for a US-based Fortune 500 Enterprise by Leveraging the SRE Framework

Overview

With widespread digital adoption, enterprises are under constant pressure to provide the best omnichannel and personalized experience across digital and retail channels. Additionally, since most enterprises have grown both organically and inorganically over the last many years, their infrastructure and environments are also extensively diverse when it comes to technology debt and stack. A critical element of delivering an unparalleled customer experience is shorter product launch cycles. Hybrid IT stacks pose a challenge to this goal by making it difficult to manage, predict, and resolve issues due to their inherent complexities.

Grappling a similar situation, a US-based Fortune 500 enterprise collaborated with Tech Mahindra to accelerate time-to-market, transform customer interactions, and elevate operational efficiency. As a remedy, Tech Mahindra implemented a site reliability engineering (SRE) framework since the SRE approach is drastically changing how IT operations function, including the way products are built, developed, released, and managed. It also provides the best omnichannel and personalized experience across various channels, including digital, retail, indirect, and assisted customer care.

Client Background and Challenges

The client is a US-based Fortune 500 enterprise that provides wireless and wireline services and products such as corporate networking solutions, data center and cloud services, security and managed network services, and local and long-distance voice services. The client also offers network access to deliver internet of things (IoT) services and products and serves small and medium businesses, global enterprises, public sector entities, and wholesale customers. It is operational in the Americas, Middle East, Asia-Pacific, as well as Europe and Africa.

- In the demanding North American market, the client hosts a plethora of applications, services, and infrastructure as part of its IT landscape. These assets were acquired and developed organically over decades.
- Such complex environments resulted in the client struggling to get a holistic view of the system's health, which impacted the timely detection of the root cause of issues. Moreover, new cloud-native and microservices-based architectures made managing the situation more complicated.
- Besides operations, time-to-market became a pressing concern too. In order to provide the best omnichannel and personalized experience to the customers, enterprises need to cut down product launch cycles to cater to competition and seasonality. However, the launch of new services was getting severely impacted owing to various system dependencies and manual tasks.
- To resolve this problem, the client's IT teams were required to collaborate with software developers, system operators, and other IT teams to manage code delivery and releases efficiently. It became a must for engineers to merge the barriers that existed between software development, testing, and operations teams across the boundaries of clouds and on-premise data centers.

Our Approach and Solution

As a way forward against the above challenges, most large enterprises have been adopting hybrid-multi-cloud environments to meet business demands and achieve the right balance of cost, performance, and reliability. In this regard, the site reliability engineering (SRE) principles are being increasingly embraced to bring in cost savings, ease of use, and higher value for the teams involved. SRE revolutionizes the functionality of IT operations, and the way products are built, developed, released, and managed.

It leverages the best practices such as service level objectives (SLO) and error budgets to balance the fast delivery of new features and software reliability. SRE also enables the best omnichannel and personalized experience across different channels while boosting the overall experience for employees and partners/vendors during every stage of interaction. From an implementation perspective, observability and automation are at the heart of SRE to deliver seamless experience and efficiency.

Resultantly, Tech Mahindra devised an operational transformation program for the US-based Fortune 500 enterprise that utilized Tech Mahindra's SRE framework and radically enhanced the client's time-to-market as well as customer experience. Tech Mahindra's SRE framework, which is based on industry best practices, effectively manages business complexities and customer experience expectations. It comprehensively spans multiple channels, technologies, hybrid infrastructure, and an array of SLOs and service level indicators (SLI) definitions. The framework can be lifted and shifted for implementation across verticals for enhanced operational efficiency. It stays modular, scalable, and Infra-APM agnostic.

Tech Mahindra has developed and adopted an end-to-end (E2E) framework that touches all aspects of the SRE transformation without compromising strategic objectives. The implemented framework comprises:

Modern architecture - standard tech stack, cloud-native, API-first approach

Product-oriented agile - product-based agile teams, business-value-based prioritization, and product development

Reliability and performance - adoption of SRE practices, standard measurements, error budgets

Validation and governance - include architecture assessment, automated governance, and validation

Engineering and security practice - implementation of shift-left engineering practices, security-as-code, infrastructure automation

End-to-end (E2E) automated life cycle of software delivery - frequent high-quality product release, E2E devSecOps automation

Business and Community Impact

Tech Mahindra's holistic SRE framework brings people (culture), processes, and technology solutions together to meet a customer's strategic objectives. With our SRE-based operational transformation program for a US-based Fortune 500 enterprise, we could provide multiple benefits like –

- Accelerating the digital channel reliability SLO improvement by 20%
- Enhancing the reliability score of multiple interaction channels and flows to more than 90%
- Improving the mean time to repair (MTTR) for critical apps by 25%
- Reducing the number of outages for critical apps by 25%
- Cutting down development to production rollout cycle by 40%
- Reducing toil across processes by more than 40%
- Boosting production environment availability to 99.9%
- Providing P3 tickets reduction by 25%
- Furthermore, our framework delivers one of the largest SRE implementations, encompassing 1000+ interaction flows, 40+ applications, and 1700+ services across hybrid environments and a complex mix of applications
- The framework also helped enable system, security, and IT governance compliance

To know more, reach us at **Kumar_Amit@TechMahindra.com**

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