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Assignment 12.2

Compliance

(Kim et al.) shares with us two case studies in Chapter 23 of the textbook. They are "Providing Compliance in Regulated Environments" and "Relying on Production Telemetry for ATM Systems," both of which focus on the challenges of implementing compliance and telemetry solutions in highly regulated environments.

In "Providing Compliance in Regulated Environments," the author discusses the importance of compliance in regulated industries such as pharmaceuticals, financial services, and healthcare. The author points out that compliance is critical to ensure companies adhere to industry standards and regulations, which can help mitigate risks and avoid costly penalties. However, it may be worth noting that (Kim et al.) share that meeting compliance could take much time and resources. The author suggests that companies invest in compliance management software to automate compliance tasks and stay updated with changing regulations.

(Fenton) shares with us why we need a regulated environment in the first place. The article shares that regulatory frameworks are essential models policymakers use to propose, enact effectively, and reform regulations. These frameworks protect consumers and ensure businesses operate correctly, although keeping up with every regulatory change can be challenging.

The first reason is The General Data Protection Regulation (GDPR), which was Enacted in the European Union in May 2018. GDPR is a privacy law that sets standards for storing user details online, impacting all companies doing business in Europe. It is continually updated, and non-compliance can result in steep fines. We also have The California Consumer Privacy Act or the CCPA, which became effective in January; it applies to companies processing data of over 50,000 California residents annually, generating gross revenue of over $25 million or earning more than half their revenue from selling California residents' data. Updates to CCPA regulations can significantly impact companies' data handling practices. We also have payment card industry data security standards (PCI DSS), HIPAA, and the Sarbanes-Oxley Act.

The case study also highlights the importance of collaboration between IT and business teams to ensure successful compliance initiatives. IT teams must work closely with business teams to identify compliance requirements and design solutions that meet them. In addition, IT teams must ensure compliance solutions by integrating them with our ecosystems/enterprises and processes to minimize disruption to business operations.

In "Relying on Production Telemetry for ATM Systems," the author discusses the importance of Telemetry in ensuring the reliability and availability of critical systems such as ATM networks. The author points out that telemetry data can provide valuable insights into these systems, allowing IT and compliance managers to identify issues before they become a serious problem both for the company and its consumers.

First, let us quickly revisit what Telemetry is. (Wickramasinghe) shares that Telemetry involves the automated collection and transmission of data from remote or inaccessible points to a receiving system for monitoring and analysis. It is crucial in IT and software development to ensure system health, diagnose issues, and improve performance. Key uses include monitoring application performance, tracking user behavior, and supporting security by detecting anomalies.

The case study highlights the challenges of implementing telemetry solutions in complex environments such as ATM networks. IT teams need to ensure that telemetry data is analyzed and acted upon promptly to avoid system downtime or other issues.

So, here is how it works. In "Providing Compliance in Regulated Environments," Shinn tells us how someone used to audit our systems and enterprises, and it use to be done the old-fashioned way. The old-fashioned way was that one person who is auditing the system/enterprise would ask for screenshots at every point where there could potentially be a violation of regulation, which meant that, that one person was receiving hundreds, if not, thousands, maybe even millions of screenshots every single hour, day, or minute. Which could make it nearly impossible to, quote-unquote, audit the system/enterprise in the first place. Luckily for us, we can use code, and write code that looks at our code and displays specific information about our system/enterprise. And we know that the information provided is true and accurate and not misleading because code cannot act malicious on its own.

So, the idea here is that that code can generate specific data needed for that person to audit our system/enterprise effectively. Because that person can audit effectively and quickly, we can see that in "Relying on Production Telemetry for ATM Systems," Smith was able to find a malicious actor within their own company because this new effective way of auditing their system allowed them to see discrepancies that they might not have noticed for quite a long time had they had to go through screenshot by screenshot of changes made to every single ATM across multiple locations.

Lessons learned from both case studies include the importance of collaboration between IT and business teams, the need for scalable and reliable solutions, and why it is essential to promptly stay current with industry regulations and standards. Companies operating in highly regulated environments must invest in compliance management software and ensure compliance initiatives are integrated with existing systems and processes. They also need to implement telemetry solutions because we can reliably stay on top of critical systems and proactively identify and address issues quickly.

Works Cited

Fenton, Emily. "Regulatory Compliance Examples: 5 Illustrative Case Studies." Visualping, 26 Feb. 2023, visualping.io/blog/regulatory-compliance-examples-and-case-studies. Accessed 28 July 2024.

Kim, Gene, et al. The DevOps Handbook, Second Edition. IT Revolution, 30 Nov. 2021.

Wickramasinghe, Shanika. "Telemetry 101: An Introduction to Telemetry." Splunk-Blogs, 5 Sept. 2023, www.splunk.com/en\_us/blog/learn/what-is-telemetry.html.