Candice Garcia

Module 12.2

The first case study focuses on managing compliance in modern DevOps environments. Traditional compliance methods, like manual reviews and static logs, don't work as well anymore because DevOps systems are more fast-moving, automated, and constantly changing. This creates a "gap" between what auditors need to see and how systems operate. This case study talks about how automated tools can help solve the problem of compliance in fast-moving systems like DevOps. These tools help track changes in real time and provide clear documentation to show how they comply with compliance standards. Instead of relying on older, slower methods, these tools make it easier to keep up with fast updates while meeting compliance requirements.

Collaboration between DevOps teams and meeting the compliance laws is critical because both groups bring different strengths. Compliance officers know the regulations, while developers understand the technical side. Working together helps solidify that compliance is built into the system from the start instead of trying to fix issues too late. The main takeaway is that companies in industries with even more strict regulations, like healthcare or finance, must keep their compliance processes current. And again, since DevOps moves much faster than older ways of processing, it's even more crucial to have the tools that help meet the required standards without slowing processes down. This allows businesses to stay efficient while still following the rules.

The second case study focuses on how telemetry helped detect and stop fraud in an ATM system. The problem happened when a developer created a backdoor in the code that let someone put ATMs into maintenance mode to access money without needing any user name or affiliation. If it were not for telemetry, more traditional methods, like reviewing the code manually, would have caught this too late because this was a much more new and isolated situation. The fraud could have gone on for a long time without being noticed. Telemetry played a key role in this situation because it monitored the ATM's actions in real-time. The tool noticed that the ATMs were going into maintenance mode at unusual times that didn't match their standard patterns. This flagged the activity as suspicious, which let the team investigate and find the backdoor before the fraud escalated.

Without telemetry, the team might not have seen the problem until much later, such as a manual audit, at a much later time. A key takeaway from this case study is the clarity telemetry can bring in modern development, especially within higher-risk areas like banking, when dealing with finances and users' personal information. Telemetry allows for real-time feedback and ongoing monitoring. This makes it much easier to detect and address unusual behavior automatically. Unlike older methods, which can be slower or miss subtle issues, telemetry catches problems faster and adds more efficiency than manually reviewing large amounts of information. This tool is highly recommended for companies handling personal data or financial systems because it saves time and helps prevent significant problems.

Best DevOps Tools in 2023. (n.d.). Staragile.com. https://staragile.com/blog/telemetry-and-monitoring-in-devops

Kim, G., Humble, J., Debois, P., Willis, J., & Forsgren, N. (2021). *The DevOps Handbook, Second Edition*. IT Revolution.