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The case studies in the book prove great examples of how logging and controls can be a great benefit for applications. They allow for insights into how an application complies with regulations such as SOX or HIPPA. It can also improve security and the ability to detect fraud. Telemetry overall provides transparency into the actions in an application.

The first case study addresses how to prove compliance controls in modern systems. In older systems, auditors would ask for things such as a sample of all servers. In today’s systems, especially with services like AWS, virtual servers are created and destroyed on the fly. This causes the need to look at compliance differently. At Amazon, they worked with auditors one control at a time to provide audit logs that auditors could review themselves. It also goes on to recommend building controls into development pipelines as well. This also helps to ensure controls are met to stay in compliance with any regulations. Having built in controls and logging is a great way to create transparency and trust in an application. This provides a great level of visibility and gives auditors everything they need to see that controls are being met.

The second case study discusses the importance of production telemetry when it comes to detecting fraud. It mentions how auditors often rely on code reviews to detect fraudulent activity. Code reviews however can easily overlook complex “backdoor” code. This type of code can also be impossible to detect, making it unreliable. Having transparent production telemetry, however, can detect anomalies that could potentially be fraud. In their case, telemetry showed ATMs were put into maintenance mode at unscheduled times, leading to the fraudulent activity being caught very quickly. They were able to catch the activity even before money was counted to check for inconsistencies. This goes to show how important proper logging can be.

Both case studies highlight the importance of logging and telemetry. Having clear transparency in a system has many benefits. These case studies focused on the benefits of auditing and fraud detection. Telemetry is also great for monitoring security. Logging gives insights into production activities which can help identify security weaknesses. It also gives insights into errors or inefficiencies which can then be addressed by a development team. This leads to having a more stable and efficient application. Having proper insights into applications allows the system to be better understood for many uses.

References

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