



COMPLIANCE

**Summary and Lessons Learned from Chapter 23 Case Studies in The
DevOps Handbook, Second Edition**

Abstract

The first case study, "Providing Compliance in Regulated Environments," demonstrates how integrating compliance requirements into automated delivery pipelines enables organizations to meet strict regulatory standards while maintaining speed and efficiency. The second case study, "Relying on Production Telemetry for ATM Systems," highlights how real-time monitoring and telemetry empower organizations to proactively detect and resolve issues, ensuring reliability and security for critical financial services. Together, these case studies showcase the importance of automation, cross-team collaboration, and data-driven decision-making in achieving both compliance and operational excellence in technology organizations.

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As organizations strive to achieve world-class agility, reliability, and security, they increasingly turn to DevOps practices to overcome the challenges inherent in complex technology environments. Chapter 23: “Protecting the deployment pipeline” of *The DevOps Handbook*, Second Edition, presents two compelling case studies that illustrate how DevOps principles can be effectively applied in highly regulated and mission-critical settings. The first case study, “Providing Compliance in Regulated Environments,” examines the integration of compliance requirements into automated delivery pipelines, showing that regulatory obligations can be effectively addressed without hindering innovation or speed. The second case study, “Relying on Production Telemetry for ATM Systems,” highlights the transformative impact of real-time monitoring and telemetry on operational excellence and system reliability. Together, these case studies provide valuable insights and lessons for organizations seeking to strike a balance between rapid delivery and the demands of compliance and stability. This paper summarizes the main points and key takeaways from both case studies.

Case Study 1: Providing Compliance in Regulated Environments

Main Points:

- The case study discusses how organizations operating in highly regulated industries (such as finance, healthcare, or government) can successfully adopt DevOps practices while still meeting strict compliance requirements.
- The authors describe the traditional challenges, including manual audit processes, siloed compliance teams, and change management bottlenecks, which slow down delivery and increase the risk of non-compliance.
- By integrating compliance controls directly into the software delivery pipeline, organizations can automate evidence collection, access controls, and change approvals.
- The case study illustrates how tools such as automated testing, infrastructure as code, and version control enable the creation of auditable, repeatable processes that meet both engineering and compliance requirements.

Lessons Learned:

- Compliance does not have to be a barrier to DevOps adoption; in fact, DevOps can make compliance easier and more reliable.
- Automation and transparency are key: by embedding compliance into daily workflows, organizations reduce the risk of human error and make audits less stressful and time-consuming.
- Collaboration between compliance, security, and engineering teams is crucial for designing controls that are both effective and minimally disruptive (Kim, Debois, Humble, Willis, & Forsgren, 2021).

Case Study 2: Relying on Production Telemetry for ATM Systems

Main Points:

- This case study examines an organization responsible for ATM systems and its utilization of production telemetry to ensure reliability and security.
- Traditionally, production problems were often detected late, frequently after customers were affected, resulting in costly incidents and a loss of trust.
- By implementing comprehensive monitoring and telemetry, the organization gains real-time insights into system health, performance, and security.
- Production telemetry enables proactive detection of issues, rapid troubleshooting, and continuous improvement of system reliability.

Lessons Learned:

- Real-time visibility in production environments is crucial for maintaining high reliability, particularly for mission-critical systems such as ATMs.
- Telemetry data supports not just operations, but also development and compliance by providing evidence of system behavior and policy adherence.
- Making telemetry widely available to both technical and business teams fosters a culture of shared responsibility and continuous learning (Kim, Debois, Humble, Willis, & Forsgren, 2021).

Conclusion

Both case studies demonstrate that DevOps principles, automation, collaboration, and transparency support not only agility and speed but also enhance compliance and reliability in highly regulated or mission-critical environments. Integrating compliance into pipelines and leveraging telemetry data are effective strategies for building trustworthy and resilient systems.

References

Kim, G., Debois, P., Humble, J., Willis, J., & Forsgren, N. (2021, 7). *The DEVOPS Handbook: How to Create World-Class Agility, Reliability, & Security in Technology Organizations* (second ed.). It Revolution Press.

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