

Network Security January 2023 B

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Collaborative Discussion 2: The Pros and cons of logging – The impact of log4j

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by [Michael Botha](#) - Wednesday, 15 February 2023, 10:19 AM

Logging system information is pertinent to proactive live system analysis, as well as reactive auditing (OWASP, N.D.). Additionally, non-repudiation has become part of the pillars of Information Security (IS) and requires that interactions be persisted (OWASP, N.D.). Therefore, it is necessary to maintain records in the form of logs. However, offering such as a service from a host operating system or an application would obviously expand the attack surface of the relevant environment (Berger, 2021). Moreover, making the most of disparate logs has not been a commonly established technique (Ekelhart, 2018).

Considering the aforementioned below presents a few solutions:

- Only send logs via secure protocols (OWASP, N.D.).
- Encrypt stored logs.



- Perform a vulnerability assessment on logging systems, and ensure command injection is not possible (Berger, 2021).
- Store logs in a standard format (OWASP, N.D.).
- Use semantic techniques for analysing aggregated logs (Ekelhart, 2018).

References:

Berger, A. (2021) What is Log4shell? The Log4j vulnerability explained (and what to do about it). Available from: https://www.dynatrace.com/news/blog/what-is-log4shell/?utm_source=google&utm_medium=cpc&utm_term=log4j%20vulnerability%20application-security&utm_content=none&gclid=CjwKCAjwiuuRBhBvEiwAFXKaNJd3hLzY [Accessed 14 February 2023].

Ekelhart, A. et al (2018) Taming the logs - Vocabularies for semantic security analysis. *Procedia Computer Science* (137)

OWASP. (N.D.) Logging Cheat Sheet. Available from: https://cheatsheetseries.owasp.org/cheatsheets/Logging_Cheat_Sheet.html [Accessed 15 February 2023].

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