LOG4SHELL EXPLOIT

REMOTE CODE EXECUTION
CVE-2021-44228

Nicholas Jacob

University of Advancing Technology

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WHAT IS LOG4J

- Open-source software by Apache Software Foundation
- Records Events
  - Errors
  - Routine System Operations
- Communicates diagnostic messages to Admins and Users
- Examples: 404 Error, Minecraft servers log memory used and console commands entered

HOW LOG4SHELL EXPLOIT WORKS

- Log4j feature allows log messages to be specially formatted by users
- Messages can be formatted to contain variables
  - Variables can be requested from separate servers
- Variables are translated before being logged
- Requested variable can be in the form of code

WHY ITS SO BAD- CVSS SCORE: 10.0 CRITICAL

- Log4j's widespread use
- Low complexity
- No privileges required
- No user interaction required
- New vulnerabilities followed as a result

RELATED VULNERABILITIES

- CVE-2021-45105
- CVE-2021-45046
- CVE-2021-44832
- CVE-2021-4104
- CVE-2022-23302
- CVE-2022-23305
- CVE-2022-23307

Log4j vulnerabilities dated before Log4Shell

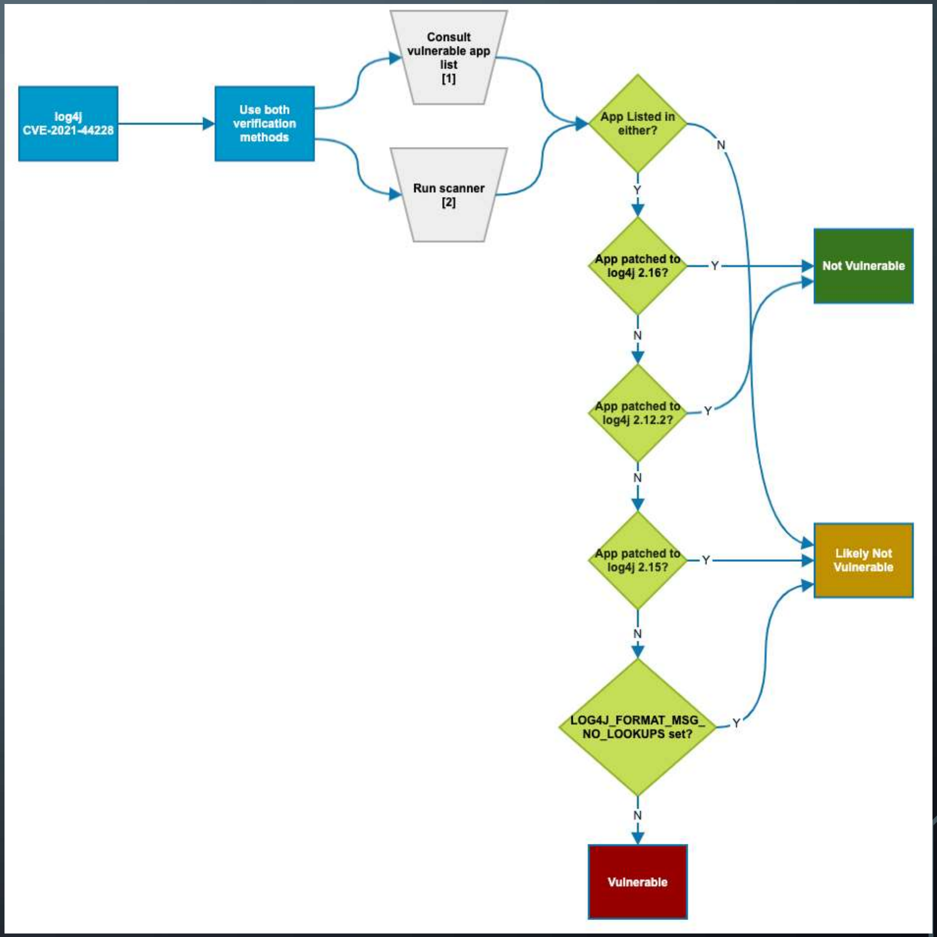
- CVE-2020-9493
- CVE-2020-9488
- CVE-2019-17571
- CVE-2017-5645

TECH USING LOG4J

- Minecraft
- VMWare: Various Products
- Apple iCloud
- AWS
- Adobe ColdFusion
- Cisco: Various Products
- Apache: Various Products
- F-Secure: Various Products
- Broadcom: Various Products
- Fortinet
- FortiGuard
- IBM
- Okta

ACTIONS

- Follow CISA flow chart to determine vulnerability
- Update all vulnerable apps
- Continue to watch for future app updates
- Stay informed on new exploits



log4j CVE-2021-44228

Use both verification methods

Consult vulnerable app list [1]

Run scanner [2]

App Listed in either?

App patched to log4j 2.16?

App patched to log4j 2.12.2?

App patched to log4j 2.15?

LOG4J_FORMAT_MSG_NO_LOOKUPS set?

Not Vulnerable

Likely Not Vulnerable

Vulnerable

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