SecurityRisk ADVISORS

Threat Bulletin

Spring4Shell

Summary

Update - Thursday, March 31*:* VMware has posted some CVE information, CVE-2022-22965: Spring Framework RCE via Data Binding on JDK 9+.

Spring4Shell was disclosed on Tuesday, March 29th. This vulnerability should not be confused with CVE-2022-22963 or CVE-2022-27772, two other Spring framework vulnerabilities. Spring4Shell is caused by unsafe deserialization of passed arguments.

Spring.io posted an announcement on their blog, Spring Framework RCE, Early Announcement.

Are you impacted? These are the prerequisites for the exploit:

- JDK 9 or higher
- Apache Tomcat as the Servlet container
- Packaged as WAR
- spring-webmvc or spring-webflux dependency

A remediation workaround has been posted by SpringCloud.io.

At 3:33am EDT, LunaSec updated their blog post with a writeup covering exploitation details.

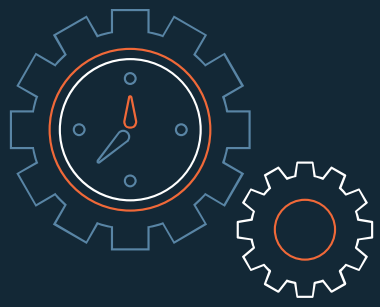
At 6:38pm EDT, LunaSec posted on Twitter that they updated their blog post with more details about Spring4Shell.

We don't have information on how widespread or exploitable this vulnerability is but *Praetorian has confirmed that it is exploitable*.

Official notice from the Spring project will likely be posted on the VMware Tanzu security advisories webpage.

Wednesday, March 30*:* An **unconfirmed** zero-day vulnerability referred to as Spring4Shell was posted on multiple websites and has been getting a lot of attention. CVE details are not currently available. We expect more details to be made available over the next 10-24 hours.

The vulnerability exists in the Spring framework with JDK version greater or equal to 9.0. Multiple proof-of-concepts have been posted online but remain unconfirmed.



Vendor: Java Spring Framework

CVE-ID: CVE-2022-22965

Published: 03/30/2022

CVSS V3 Overall score: TBD

Criticality: High

Patch Availability: No

Vulnerability Type: Remote Code Execution

Exploitability Metrics

Attack Vector: TBD

Attack Complexity: TBD

Privileges Required: TBD

User Interaction: TBD

Impact Metrics

Scope: TBD

Confidentiality: TBD

Integrity: TBD

Availability: TBD

Confidence Metrics

Exploitability: TBD

Remediation Level: TBD

Report Confidence: TBD

Affected Products

Spring Framework

- 5.3.0 to 5.3.17
- 5.2.0 to 5.2.19

Safeguards/Recommendations

Update – Thursday, March 31:

A remediation workaround has been posted by SpringCloud.io.

Developers should know how to prevent deserialization attacks.

Wednesday 29: We recommend organizations implement the following YARA rules. We will continue to disclose information as it becomes available.

References

- https://spring.io/blog/2022/03/31/spring-framework-rce-early-announcement
- https://tanzu.vmware.com/security/cve-2022-22965
- https://www.lunasec.io/docs/blog/spring-rce-vulnerabilities/
- https://www.springcloud.io/post/2022-03/spring-0day-vulnerability/
- https://www.praetorian.com/blog/spring-core-jdk9-rce/
- https://bugalert.org/content/notices/2022-03-30-spring.html
- https://github.com/Neo23x0/signature-base/blob/master/yara/expl_spring4shell.yar
- https://cheatsheetseries.owasp.org/cheatsheets/Deserialization_Cheat_Sheet.html

Version History

Version 2.

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