SEI Bulletin

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Silent Sentinel Tool Automates Software Risk Analysis

February 19, 2025—Before installing software, system owners should assess its risks and impacts on their computing environment. Manual testing of the software's execution can yield results of varying accuracy and consistency, depending on the tester's skill. The SEI recently released Silent Sentinel, an open source tool that streamlines and automates software deployment risk analysis. The tool provides a repeatable, consistent process for software teams doing development, quality assurance, infrastructure maintenance, and cybersecurity.

Silent Sentinel uses a Linux-based, containerized sandbox environment to run a series of tests on presumed trustworthy applications written in any language. Users configure the tests for deployment conditions such as system calls, memory usage, and network configurations. The tool's reports can provide a realistic assessment of how the application will affect a computing environment. By automating risk analysis, Silent Sentinel creates a unified set of baseline data that teams can repeatedly reference, update, and use for evaluating proposed changes.

Read more »

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SEI News

SEI Support for President's Cup Leaves Lasting Legacy
As CISA's sixth annual cybersecurity competition begins with a new supporting vendor, the SEI looks back at five years of success.

2024 SEI Research Review Materials Now Available
The event's videos, presentation slides, and posters showcase SEI methods, prototypes, and tools that address the nation's software challenges.

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Latest Blogs

Introducing MLTE: A Systems Approach to Machine Learning Test and Evaluation
Machine learning systems are notoriously difficult to test. Machine Learning Test and Evaluation (MLTE) is a new process and tool developed by the SEI and the Army AI Integration Center (AI2C) to help teams more effectively negotiate requirements, document, and evaluate ML systems.

Cyber-Informed Machine Learning
Jeffrey Mellon and Clarence Worrell propose cyber-informed machine learning as a conceptual framework for emphasizing three types of explainability when ML is used for cybersecurity.

See more blogs »

Latest Podcasts

Securing Docker Containers: Techniques, Challenges, and Tools
Sasank Venkata Vishnubhatla and Maxwell Trdina sit down with Tim Chick to explore issues surrounding containerization, including recent vulnerabilities.

An Introduction to Software Cost Estimation
Software cost estimation is an important first step when beginning a project. Anandi Hira discusses various metrics, best practices, and common challenges.

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Latest Videos

Operational Resilience Fundamentals: Building Blocks of a Survivable Enterprise
Greg Crabbe and Matt Butkovic share their experiences in establishing and maintaining operational resilience programs.

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Latest Publications

Using LLMs to Adjudicate Static-Analysis Alerts
Will Klieber and Lori Flynn discuss techniques for using large language models to handle static analysis output.

Addressing Today's Software Risks Requires an Assurance-Educated Workforce
Carol Woody summarizes gaps in workforce knowledge, skills, and support resources based on recent publications and panel discussions held by the Software Assurance Supply Chain forum.

See more publications »

Upcoming Events

Elements of Effective Communications for Cybersecurity Teams, February 28
In this free webcast, cybersecurity operations researcher Sharon Mudd discusses the standard incident management lifecycle.

See more events »

Upcoming Appearances

Women in Cybersecurity (WiCyS) 2025, April 2-5
Visit the SEI's booth on the career fair floor.

RSA Conference 2025, April 28-May 1
Meet with SEI CERT Division staff at booth 1649.

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Upcoming Training

Insider Threat Program Manager: Implementation and Operation
March 4-6 (SEI Arlington, Va.)

Creating a Computer Security Incident Response Team
March 25 (SEI Live Online)

Managing Computer Security Incident Response Teams
March 26-28 (SEI Live Online)

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Employment Opportunities

Associate Penetration Tester

Embedded Software Engineer

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All current opportunities »

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