CERTAINTY

WE ESTABLISH AND ADVANCE SOFTWARE AS A STRATEGIC ADVANTAGE. We lead and direct research and transition of software engineering, cybersecurity, and related disciplines as the intersection of academia, industry, and government.

Founded on our experiential understanding of organizations, network operations, and constantly changing technology, the CERT Division applies the best science to impact operational missions, increase the trustworthiness of technology, and develop cyber talent. We strengthen the resilience of critical national infrastructures, increase the cybersecurity of systems, and develop cyber capacity.

OUR PEOPLE

• Researchers—Maturing the disciplines of engineering and secure software systems

• Innovators—Creating and prototyping technologies that enable the cyber mission

• Collaborators—Applying our expertise with academia, government, and private industry

• Transitioners—Partnering with Carnegie Mellon University to disseminate our solutions

OUR WORK

CERT focuses on the entire software and cyber lifecycle from early technology prototyping to sustainment. As the technology landscapes in our focus areas continue to evolve, the SEI adjusts how it applies our expertise to add CERTainty to your strategic advantage through software. We routinely produce research findings, software methods, books, training, datasets, academic publications, models, and other high-impact deliverables.

OUR KNOWLEDGE AND EXPERIENCE

We deploy our researchers, software engineers, security analysts, and other cybersecurity experts and their theoretical and empirical knowledge to understand and solve and security problems. We collect real-world data to gain insight into today's pressing problems. We conduct research and development for our sponsor, the Department of Defense; the Department of Homeland Security; federal, state, and local governments; multiple levels of law enforcement; the intelligence community; operators of critical infrastructures; and many industry organizations.

Stay Connected

We invite you to subscribe to the SEI Bulletin. The SEI Bulletin is a biweekly newsletter designed to keep you up to date on SEI news, events, research, and other matters of interest to the SEI community. Each issue also provides the latest information on SEI professional development and employment opportunities.

If you have any questions or would like to schedule a call with an expert to discuss your challenges, please visit our website at **sei.cmu.edu** or email us **info@sei.cmu.edu**.

OUR FOCUS AREAS

- Engineering for cybersecurity—Security and resiliency engineering, software security assurance, prototype tools for emerging challenges

- Improving enterprise cyber resilience—Risk management, assessment, security operations, insider threat, network situational awareness

- Understanding and countering threat—Malware analysis, vulnerability analysis, platform evaluation

- Developing the cyber workforce—Rapid cyber skills acquisition, modeling and simulation

- Strengthening the foundations of cybersecurity—Data analytics, AI, formal methods

HOW THE SEI WORKS WITH YOU

The SEI takes innovation from concept through research and development and into application. Although we are an R&D center, our contribution doesn't end there; we also make things that software and cybersecurity professionals can use—prototypes, tools, methods, curricula, and more. We research, develop, and apply our work with organizations in

- The private sector—Commercial organizations achieve strategic advantage by rapidly applying improved software engineering technology. We combine our expertise with yours to mature new technology. While all of industry benefits, our commercial R&D sponsors enjoy early access to results they can use to improve development, streamline operations, and gain an edge.

- Government—As a federally funded research and development center (FFRDC), we fulfill core DoD software engineering needs that are unmet by in-house and private-sector R&D centers.

- Academia—As part of the Carnegie Mellon University community, the SEI contributes to the intellectual capital of the university through research, collaboration, and teaching. Our technical staff maintain close relationships with top researchers and faculty in cybersecurity and software engineering at CMU, and we frequently collaborate with other universities as well. SEI staff publish dozens of papers in academic journals and frequently speak at top conferences in the field.

EDUCATION AND OUTREACH

Through training and other community outreach the SEI connects with the broader community to inform, invite discussion, and raise the state of the practice. You can enroll in courses from the SEI or our licensed partners, join online and onsite seminars, attend conferences on the latest software engineering and cyber research and techniques, and access thousands of free publications such as technical papers, proceedings and presentations, and curricula. You can also access SEI-developed software and tools to put the latest research and techniques into practice at your organization. SEI training and outreach includes

- Courses to develop your knowledge and skills

- Credentials to earn SEI certificates by completing a series of courses in a particular technical discipline, or to become SEI-Authorized to deliver an SEI-licensed service

- Workforce Development to help you fill gaps in essential competencies for your organization's employees

- Computer Security Incident Response Teams, which the SEI helps develop at the organizational and national level (NatCSIRTs) to improve incident management capabilities worldwide

- Curricula to help institutions of higher learning educate the workforce of the future

- Events such as conferences, workshops, and seminars where you can strengthen your connections with thought leaders, stay current on technical developments, and learn about recent advances

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About the CERT Division

The CERT® Division of Carnegie Mellon University's Software Engineering Institute studies and solves problems with widespread cybersecurity implications, researches security vulnerabilities in software products, contributes to long-term changes in networked systems, and develops cutting-edge information and training to help improve cybersecurity.

Contact Us

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