Independent Verification & Validation (IV&V)

of Formally Verified Systems

Taking Advantage of Formal Verification

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IV&V of Formally Verified Systems

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OVERVIEW

Formal verification, such as that provided in seL4, is being used to harden military systems. Formal verification provides proofs of application correctness, for robust, secure applications. However, formal verification is not proof against all vulnerabilities. AIS's proven expertise in IV&V of formally verified systems provides system developers and stakeholders confidence that they are taking advantage of the benefits formal verification provides.

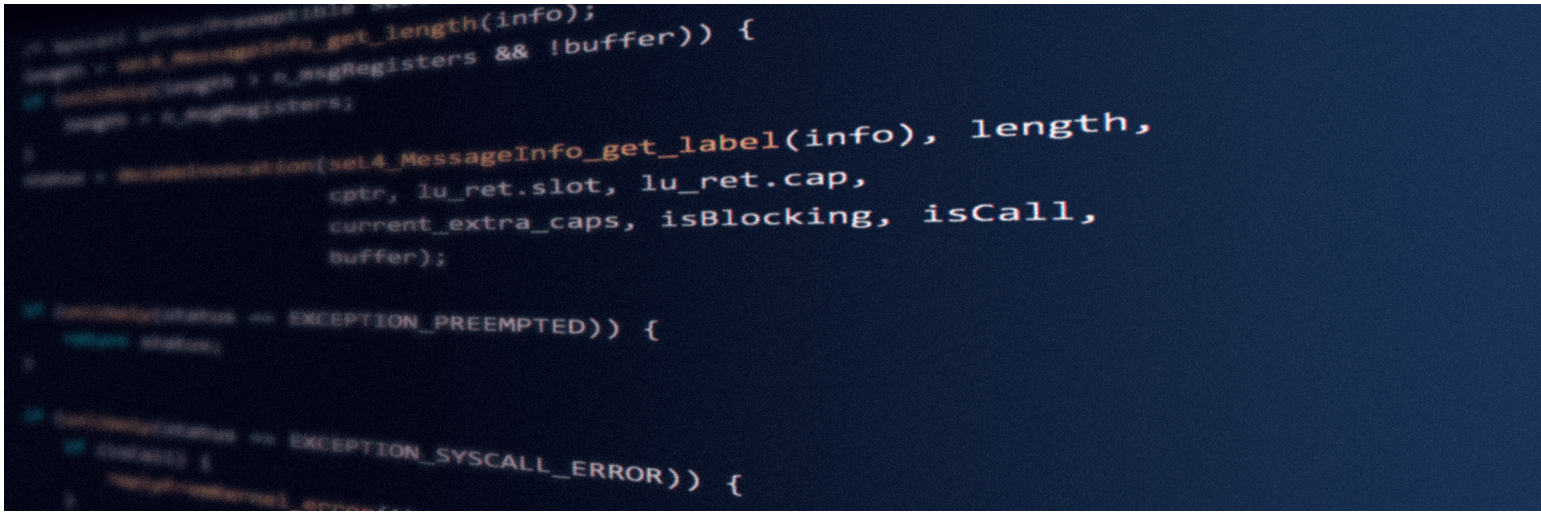
Confidence

AIS has been providing IV&V of seL4 based formally verified systems since 2014. Our team has extensive experience with systems assessment in the form of IV&V, secure design consultation, red teaming, penetration testing and functional validation.

RISKS

Proofs only cover specific attributes of verified applications. Vulnerabilities can derive from many other sources, to include:

- Program logic bugs
- Vulnerabilities in underlying hardware
- Errors in application build processes
- Insecure design (insufficient authentication, isolation)



ABOUT AIS

AIS is a cyber and information technology company that plays a leading role in supporting critical cyber operations for the United States Department of Defense and Intelligence Community. AIS employs cyber engineers and scientists throughout the United States.

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FOR MORE INFORMATION

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