Vulnerabilities in WebAssembly: A Survey

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Figure 1: Seattle Mariners at Spring Training, 2010.

ABSTRACT

A clear and well-documented LaTeX document is presented as an article formatted for publication by ACM in a conference proceedings or journal publication. Based on the “acmart” document class, this article presents and explains many of the common variations, as well as many of the formatting elements an author may use in the preparation of the documentation of their work.

KEYWORDS

binary exploits, Webassembly, IT Security

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1 INTRODUCTION

Introduce the papers structure: State of the art What is wasm relevant features for vulnerabilities What are binary exploitation techniques usually used

Which can and cannot be used in wasm (picture/table?) Talk about wasabi Talk about own experiments?

[1]

2 WEBASSEMBLY

The following will give an Introduction to and and overview of Webassembly, paying special attention to the parts relevant to a discussion of binary vulnerabilities. For more information, see the official specification at [2].

2.0.1 High Level Overview. The name Webassembly is a slight misnomer, since it a different form and function than typical assembly languages. It is a binary byte code format which is interpreted by a virtual machine, most often a browser. It is supposed to run at near-native speeds. There exists a human-readable form of WebAssembly binaries called ’wat’.

REFERENCES

[1] Daniel Lehmann, Johannes Kinder, and Michael Pradel. 2020. Everything Old is New Again: Binary Security of WebAssembly. *Proceedings of the 29th USENIX Security Symposium* (Aug. 2020), 217–234.

[2] Andreas Rossberg. 2021. *WebAssembly Specification.* https://webassembly.github.io/spec/core/

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