

Artifact Abstract for: PowerHook: Enabling Software-Based Power Side Channels Against AMD SEV Technologies via Transient-Execution Replay

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Badge Requested: Artifact Available

Artifact URL/DOI: <https://zenodo.org/records/20080425>
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the accompanying documentation.

Abstract

This artifact accompanies the WOOT '26 paper “PowerHook: Enabling Software-Based Power Side Channels Against AMD SEV Technologies via Transient-Execution Replay.” The artifact consists of a scoped set of PowerHook evaluation materials that will be made publicly available as part of this submission. Specifically, it includes KVM patches required to run PowerHook’s transient-replay mechanism, proof-of-concept components for systematic evaluation, synthetic attack case studies, latency-analysis materials across different AMD SEV technology levels, and a Python framework for evaluating traces. The accompanying README provides further information on the individual artifact components and basic instructions for using them.

The focus of this artifact submission is public availability. We request only the Artifact Available badge and do not request functional evaluation or reproduction of experimental results. Accordingly, the artifact is intended to make the research materials available for inspection and future research, rather than to provide a complete end-to-end reproduction package.

For safety and responsible-disclosure reasons, the artifact does not include the final real-world attack targeting OpenSSL code. Instead, the released package focuses on proof-of-concept components, synthetic case studies, and analysis infrastructure, without distributing code that directly targets real-world software or can be easily weaponized. Any relevant safety, ethical, or usage restrictions are described in the accompanying README.

The evaluation should check that the artifact is publicly accessible through the provided stable URL/DOI and that the archive contains the materials described in this abstract and