

Planetary-digital engineering: The impact of cloud-based side-channel attacks on planetary-wide ecosystems

Gwern Acck
University of Åbinta
gwern.acck@abinta.edu

Abstract

In recent years, the world has seen a large increase of cloud-based side-channel attacks targeting critical infrastructure of the planet. Researchers found a large share of these to originate from—as of yet—unknown species of life. Most forms of attack are exceptionally novel, but prior work has already proposed several effective mitigation techniques for attacks targeting global information networks, multimedia feeds, and industrial supply chains. Highlighting a forgotten but potentially catastrophic area, this paper quantifies the impact of these attacks on planetary-wide ecosystems—including oceanic life, volcanic microbial singularity, equatorial rainforests, and aerial-synthetic lifeforms. The findings suggest that cloud-based side-channel attacks affect these systems in unprecedented ways, disturbing planetary balance and catalyzing natural disasters that have the potential of wiping out humanity. This paper proposes a partial solution that mitigates the effectiveness of some side-channels attacks. However, further work is desperately needed.

Keywords: planet, cloud, side-channel, attack, planetary-digital security, ecosystems, disaster

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).