

Distributed Anomaly Detection in Internet of Everything*

Subtitle[†]

Anonymous Author(s)

Abstract

Our world has become so connected that the Internet of Things (IoT) has now become a subset of the Internet of Everything (IoE). While this increased connectivity has opened up a vista of opportunities for solutions to myriads of challenges plaguing our world, the increased connectivity has also increased our vulnerability to security breaches. Moreover, with the coming of 5G comes the dawn of connectivity explosion. Because security is not the primary function of most of these devices, they dedicate only spare system resources for monitoring and diagnosis.

However, with the increased connectivity to each other and the cloud, a middleware can leverage a hybrid pool of resources to build a robust anomaly detection framework that can help connected powerful and less powerful devices to remain secure while performing their primary function. By using the kernel events generated from each process in each node, we provide a reverse-engineering monitoring process that also provides uniqueness in the distributed platform. A simulation environment with the middleware shows effective latency management for both time-constrained and non-time constrained flows without depleting the primary function of the devices.

Keywords keyword1, keyword2, keyword3

1 Introduction

Text of paper ...

A Appendix

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