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NIOMETRICS PRESENTS RESEARCH PAPER ON MACHINE LEARNING FOR TRAFFIC ANALYSIS AT RAID 2018

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SINGAPORE, 09 OCTOBER 2018 — A team from Niometrics presented the paper "OTTer: A Scalable High-Resolution Encrypted Traffic Identification Engine" in the 21st International Symposium on Research in Attacks, Intrusions, and Defenses (RAID 2018) that took place from 10-12 September in Heraklion, Crete.

Security applications rely on monitoring high-volume network traffic in real-time. The research conducted by Niometrics enables the identification of specific markers within encrypted data traffic using machine learning techniques, providing a fundamental capability to detect malicious applications that would otherwise go completely unnoticed while spreading across digital networks.

The work in OTTer describes a pattern language that can be used to identify fine-grained application-level events in encrypted network traffic and demonstrates its expressiveness with case studies for distinguishing Messaging, Voice, and Video events within popular apps.

The team achieved an efficient implementation of this language, confirming it can be deployed in heavy-traffic environments when it was integrated into Niometrics proprietary DPI (deep-packet inspection) system. The proposed pattern language can be mined from traffic samples automatically, minimising the otherwise high ruleset maintenance burden.

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Dr. Periklis Akritidis, Niometrics' CTO and one of the research authors, noted that:

"One way that the private sector could identify and access crucial research is to stay plugged in with the academic world. Monitoring research journals, involving internal R&D teams with research conferences, identifying scientific breakthroughs, and accessing cutting-edge exploratory research, are necessary for the industry to push the field forward."

"The key is not to be just a spectator in research, but to be an active participant. Being immersed in exploratory research and the academia is incredibly critical for technology companies like Niometrics to continue building industry-leading software systems. We see the collaboration between Niometrics and academic conferences like RAID as a competitive advantage for both sides."

Dr. Sotiris Ioannidis, Research Director at the Institute of Computer Science, FORTH, and General Chair of RAID 2018, commented:

"Interactions between industry and academia prompt greater efficiencies in translating and commercialising of academic research. This increased commercialisation activity from academics could serve as an economic and societal boost, as the economy could be bolstered by new products and technologies reaching the market. RAID is appreciative of Niometrics' support and believe that this form of collaboration will enable us to jointly push the boundaries of innovation in the field of computer and information security."

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ABOUT RAID
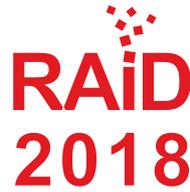
The 21st International Symposium on Research in Attacks, Intrusions, and Defenses (RAID 2018), brings together leading researchers and practitioners from prestigious universities, government, and high technology companies all over the world to discuss novel research contributions related to computer and information security. Since its inception in 1997, the RAID conference is known for the quality and thoroughness of the reviews of the papers submitted, the desire to build a bridge between research carried out in different communities, and the emphasis given on the need for sound experimental methods and measurement to improve the state of the art in cybersecurity.

ABOUT NIOMETRICS

Niometrics is a network analytics company that provides solutions for Communications Service Providers (CSPs) to develop strategies and decisions for new digital businesses, customer experience management, and network planning and optimisation.

Analysing a combined base of over 500 million subscribers who consume and exchange over 60 PB of data daily, Niometrics' proprietary, full-stack Deep Network Analytics (DNA) technology extracts, processes, and transforms in real time complex network data into insights, enabling CSPs to take better and more timely actions to drive higher business ROIs.

Niometrics partners with some of the largest telecommunications providers in the world. Based in Singapore, the company has operations and R&D hubs across Asia-Pacific, Europe and the Middle East.

Visit niometrics.com to learn more.

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