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ASIACONNECT
DISTRIBUTED AND CLOUD-BASED
NETWORK DEFENSE SYSTEM
FOR NRENs



Co-funded by
Asi@Connect Project under
the TEIN* Cooperation Center and
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Who Are We?

The Distributed and Cloud-based Network Defense System for National Research and Education Networks (NRENs) is a European Commission / TEIN* Cooperation Center funded grant under the Asi@Connect Project to develop specialized network products, services and applications, as well as associated capacity development for the Asian region.

Rationale

There are increasing network threats in the form of web security compromises and distributed botnets which disrupt the normal operation of networks. Botnets are a serious problem in the Internet today, and they result in economic damage for organizations and individuals.

Botnet infections are closely related to Internet activities of the users. Unsafe web surfing practices and unrestricted Internet access leads to greater risks of downloading malicious content and consequently unleashing new botnet infections into the network.

Traditional web security solutions are no longer viable options to ensure high level of security. In addition to blocking malicious code, inappropriate websites, and targeted attacks, security managers also need to protect an increasingly mobile workforce that demands access to new Web 2.0 and cloud-based consumer applications — all while reducing management and networking costs.

List of Project Partners

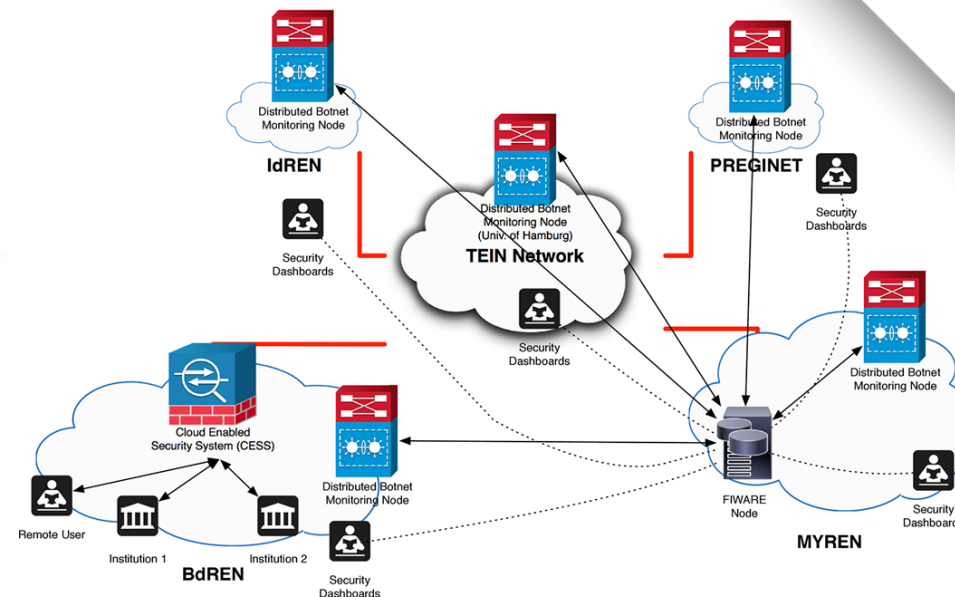
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Partners

Advanced Science and Technology Institute (ASTI), Philippines
Philippine Research Education and Government Information Network (PREGINET)
Universiti Sains Malaysia (USM), Malaysia
Malaysian Research and Education Network (MyREN)
Bangladesh University of Engineering and Technology (BUET), Bangladesh
Bangladesh Research and Education Network (BdREN)
Universitas Brawijaya (UB), Indonesia
Indonesia Research and Education Network (IdREN)
FIWARE Foundation, European Union
Universität Hamburg (UHH), Germany

Activities



1. To setup a Distributed and Cloud-based Network Defense System, which consists of two main components:
 - Distributed monitoring nodes embedded in each NREN for analyzing network traffic for malicious botnet behavior
 - Cloud-based web security service platform to manage web security for participating institutions
2. To develop Network Security Dashboards for Botnet detection and security monitoring using FIWARE platform
3. Workshops for Capacity Building and Stakeholders Engagement to be conducted in four countries: Bangladesh, Indonesia, Malaysia, and the Philippines covering the following areas:
 - Cloud-based Network Security and FIWARE Platform Development
 - Distributed botnet monitoring and Security Best practices
4. To curate a research dataset consisting of anonymized web-usage metadata and botnet traffic statistics for security research use