Τίτλος Προτεινόμενης Διπλωματικής Εργασίας

Public Dataset for 802.11 Security

Επιβλέπων Γ. Καμπουράκης

Αριθμός Φοιτητών Ένας

Στόχος Διπλωματικής Εργασίας

….

Συνοπτική Περιγραφή Διπλωματικής Εργασίας

802.11 is arguably the most popular wireless communication protocols. However, several attacks have been documented against both its home and enterprise versions. Machine learning and Artificial Intelligence-based methods of protection have been proven extremely promising. Yet, the evolution of such methods is stagnated by the lack of open datasets that may act as training sets to ML algorithms or more importantly provide a common denominator for the comparison of novel methods. In this topic, the student will have the opportunity to develop an easy-to-replicate methodology of collecting and describing 802.11 traffic, replicate theoretical and well-known 802.11 attacks, analyse and describe the internal mechanisms of these attacks and deliver a dataset of normal and malicious 802.11 traffic to the research community.

Deliverables:

A documented method and software tool for automating the process of collecting and transforming network traces from 802.11 networks.
A dataset containing normal and anomalous traffic on home and enterprise 802.11 networks.

Προαπαιτούμενες Γνώσεις

Strong Python or C skills
Familiarity with some network modules
Familiarity with the Metasploit framework
Familiarity with Git
Familiarity with Latex

Ενδεικτικές Βιβλιογραφικές Αναφορές

Ημερομηνία: 29.06.2017