Open Security Standards and their Adoption Mapping

Prof. Dr. José Legatheaux Martins

ISOC.PT - President of the ISOC Portugal Chapter FCT UNL Faculdade de Ciências e Tecnologia Universidade Nova de Lisboa

https://legatheaux.eu

The principles of the basic architecture of the Internet have always favored simplicity and scalability over security. This was a clever decision at that time since it prevented the adoption of wrong solutions to poorly understood problems, which would make the Internet architecture centralized, fragile and unable to scale and evolve. Public-key cryptography, for example, was still little known at the time, while today it forms the basis of all decentralized and scalable Internet security solutions.

Thus, security mechanisms were added later in a continuous trial and error process, and standardized year after year by the IETF. Some of these standards bring new operational costs that sometimes do not immediately produce the intended results. Thus, sometimes, progress in their deployment is disappointingly slow. For this reason, users, whose privacy and security protection should be the ultimate goal of these standards, must have a say and be able to ask their software, service and connectivity providers to deploy all possible security mechanisms.

In this presentation we will briefly review some fundamental standards for Internet security as well as how users can know their degree of adoption by their providers, or in their country, and put pressure on them to adopt and deliver services based on the proper security standards. We will introduce several sites that allow us to know how some of our providers are performing in this respect, as well as sites that monitor the adoption of some of these standards in different regions. This way, suppliers may have market driven reasons to enhance their services, instead of postponing the decision of deploying all safety standards already available.

José Legatheaux Martins is a Professor at the Department of Informatics of the New University of Lisbon, in the Computer Systems group, and president of the Portuguese Chapter of the Internet Society. From 2007 to 2011 he served as department head and vice-dean for scientific affairs. He earned his Phd from the Université of Rennes II and worked as a researcher at INRIA Rocquencourt, Paris in France. His research is in distributed computer systems and networks. He is the author of several papers and a book on Computer Networks Fundamentals. From long ago he has a significant activity in computer and network technology related associations (EUUG and ISOC). He led the project that established the Portuguese branch of the Internet in 1990's and managed the PT ccTLD from 1990 to 1994, founded one of the first ISPs in Portugal and acted as member of the board and technical consultant of two networking companies.