

European cyber security agency ENISA publishes Threat Landscape and Good Practice Guide for Smart Home and Converged Media, a report on the security risks and challenges smart home technologies involve.



Described as a "thematic threat landscape in the area of smart homes," the study identifies several sources of vulnerability. Cyber criminals are, predictably, the largest and most hostile threat category, while the potential abuse of smart homes should be considered high due to the increase in smart devices and homes, particularly converged media.

Adding further vulnerabilities are several economic factors, as design choices compete against cost and convenience.

ENISA says many of the risks are socio-technical due to the amount of data the close link between people and their environments generates on previously unrecorded activities. In addition the interests of different smart home asset owners are not necessarily aligned and might even be in conflict, bringing a complex environment for security activity.

Meanwhile converged media and TV raise security issues in terms of connectivity, embedded functionality, opaque systems and incompatibility with traditional security approaches, as well as privacy, access and copyright issues. Converged media devices are the first smart home devices many customers bring to their homes, making them the playing field for many initial smart home security issues.

The agency suggests the application of basic information security can "significantly" increase overall smart home security-- including the design of the smart home as a system, careful consideration of cloud-based system security, application isolation framework (like the one designed for smart cars) and keeping critical software separate from non-critical apps, network and communications security measures.

Approaches used in smart grids may also prove applicable in smart homes.

"The smart home is a point of intense contact between networked information technology and physical space, and therefore brings together security risks from both the virtual and the physical contexts," ENISA executive director Udo Helmbrecht says. "Identifying cyber threats is crucial for the protection of the smart home and is therefore a key element in ensuring its successful deployment."

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