Securing against intruders and other threats through a NFV-enabled environment

Fact Sheet

Project Information

SHIELD

Grant agreement ID: 700199

Funded under H2020-EU.3.7.

Project website

Overall budget € 4 552 060,69

Start date 1 September 2016

End date 28 February 2019

EU contribution € 3 607 245

Coordinated by

SPACE HELLAS ANONYMI ETaireia SYSTIMATA KAI YPIRESIES TILEPIKOINONIONPLIROFORIKIS ASFALESIAS - IDIOTIKI EPICHEIRISI PAROCHIS YPERISION ASFA

Greek

Objective

Nowadays, cybercrime is one of the most relevant and critical threats to both the economy and society in Europe. Establishing efficient and effective ways to protect services and infrastructures from ever-evolving cyber threats is crucial for sustaining business integrity and reputation as well as protecting personal and sensitive data.

To that end, the SHIELD project proposes a universal solution for dynamically establishing and deploying virtual security infrastructures into ISP and corporate networks. SHIELD builds on the huge momentum of Network Functions Virtualisation (NFV), as currently standardised by ETSI, in order to virtualise security appliances.
(NFV), as currently standardised by ETSI, in order to virtualise security appliances into virtual Network Security Functions (vNSFs), to be instantiated within the network infrastructure using NFV technologies and concepts, effectively monitoring and filtering network traffic in a distributed manner. Logs and metrics from vNSFs are aggregated into an information-driven Data Analysis and Remediation Engine (DARE), which leverages state-of-the-art big data storage and analytics in order to predict specific vulnerabilities and attacks by analysing the network and understanding the adversary possibilities, behaviour and intent.

The SHIELD virtual security infrastructure can either used by the ISP internally for network monitoring and protection, but it can also be offered as-a-service to ISP customers; for this purpose, SHIELD establishes a “vNSF Store”, i.e. a repository of available virtual security functions (firewalls, DPIs, content filters etc.) from which the ISP customers can select the ones which best match their needs and deploy them to protect their infrastructure. This approach promotes openness and interoperability of security functions and offers an affordable, zero-CAPEX security solution for citizens and SMEs. Moreover, SHIELD services can be easily scaled up or down, configured and upgraded according to customers’ needs, as opposed to security solutions based on monolithic hardware.

Field of science
/natural sciences/computer and information sciences/computer security/network security
/social sciences/economics and business
/social sciences/sociology/governance/public services
/natural sciences/computer and information sciences/data science/big data
/natural sciences/computer and information sciences/data science/data analysis

Programme(s)

Topic(s)

Call for proposal

H2020-DS-2015-1

Funding Scheme

IA - Innovation action

Coordinator

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Greece

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

EU contribution
€ 483 437,50

Website
Contact the organisation

Participants (11)

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Spain
EU contribution
€ 531 062,50

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Activity type
Research Organisations

Website
Contact the organisation

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Portugal
EU contribution
€ 304 093,13

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Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Website
Contact the organisation

POLITECNICO DI TORINO
Italy
EU contribution
€ 483 731,25

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Activity type
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<td>&quot;NATIONAL CENTER FOR SCIENTIFIC RESEARCH &quot;&quot;DEMOKRITOS&quot;&quot;&quot;&quot;</td>
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EU contribution
€ 205 875

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Website

Activity type
Research Organisations

AUVIK NETWORKS ES SL
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EU contribution
€ 168 374,98

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Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation

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