CITADEL

Project ID: 700665
Funded under: H2020-EU.3.7. - Secure societies - Protecting freedom and security of Europe and its citizens

Critical Infrastructure Protection using Adaptive MILS

From 2016-06-01 to 2019-05-31, ongoing project | CITADEL Website

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tbody>
<tr>
<td>EUR 6 065 267,25</td>
<td>DS-03-2015 - The role of ICT in Critical Infrastructure Protection</td>
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<tr>
<th>EU contribution:</th>
<th>Call for proposal:</th>
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<tr>
<td>EUR 4 842 819,47</td>
<td>H2020-DS-2015-1 See other projects for this call</td>
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<tr>
<th>Coordinated in:</th>
<th>Funding scheme:</th>
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<td>United Kingdom</td>
<td>IA - Innovation action</td>
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Objective

Critical infrastructures (CI) rely on complex safety- and security-critical ICT systems placed into unpredictable environments and forced to cope with unexpected events and threats while exhibiting safe adaptive behavior. Recent security trends stress continuous adaptation to increase attacker work factor and to confound reverse-engineering. Critical CI systems must undergo extensive and costly scrutiny under diverse certification regimes. Improved, effective and affordable development and certification methods are essential.

CITADEL will provide innovative platform technology, methodology and tools for development, deployment, and certification of adaptive MILS systems for CI, to be demonstrated in three industrial CI use cases. The solution enables robust and resilient CI through monitoring and adaptive self-healing mechanisms that respond to natural and malicious occurrences by intelligently reconfiguring hosts, functions, and networks, while maintaining essential functions and defences.

CITADEL is based on MILS, an approach featuring modular construction and compositional assurance, reducing the time and cost for development, certification, and maintenance of dependable systems. The MILS platform, based on a separation kernel, manages physical resources while establishing and enforcing a verified application architecture.

Leveraging advances from the D-MILS and EURO-MILS projects, CITADEL will extend the MILS approach by adding dynamic reconfiguration to the MILS platform, and Monitoring and Adaptation Systems enabling resilience to adversity while preserving vital system properties.

CITADEL supports certification of Adaptive MILS systems by analyzing configuration change mechanisms, adaptation system, configuration properties, and configuration change policies with automated verification tools, and by providing an innovative runtime evidence management agent to automatically generate up-to-date certification assurance artifacts as the system adapts.

Related information

Report Summaries

Periodic Reporting for period 1 - CITADEL (Critical Infrastructure Protection using Adaptive MILS)
Coordinator

X/OPEN COMPANY LIMITED
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EU contribution: EUR 578 539,50

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

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EU contribution: EUR 437 085

Activity type: Research Organisations

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EU contribution: EUR 370 503,75

Activity type: Higher or Secondary Education Establishments

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EU contribution: EUR 529 273,50

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

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EU contribution: EUR 599 967,38

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

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

**EU contribution:** EUR 214 348,75

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**Activity type:** Higher or Secondary Education Establishments

**EU contribution:** EUR 293 140

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**Activity type:** Research Organisations

**EU contribution:** EUR 453 378,75

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

**EU contribution:** EUR 285 522,83

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

**EU contribution:** EUR 159 688,38

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

**EU contribution:** EUR 171 356,50
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EU contribution: EUR 162
112,13

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Activity type: Research Organisations

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EU contribution: EUR 436
333,75

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

Contact the organisation

EU contribution: EUR 151
569,25

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