ETSI Research Conference 2023

Maximizing the Impact of European 6G Research through Standardization

RIGOUROUS: secuRe desIGn and deplOyment of trUsthwoRthy cOntinUum computing 6G Services

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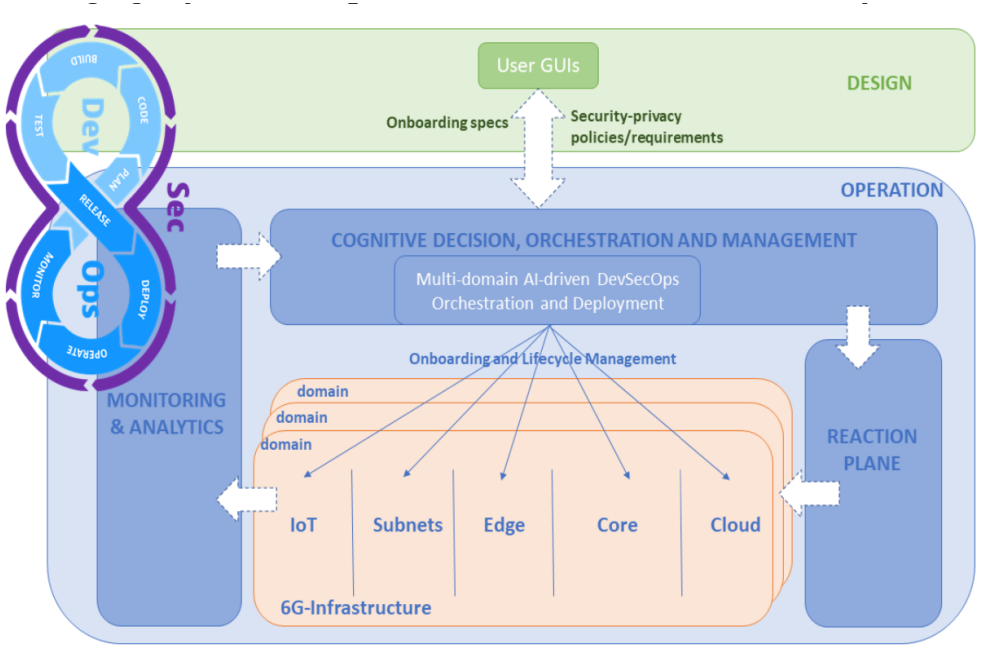
1. Project Overview

- **Project Name:** RIGOUROUS
  - **Project website:** https://rigourous.eu
- **Stream:** STREAM-B-01-04 “Secure Service development and Smart Security”
- **Members:** University of Murcia (UMUES), Orange Romania (ORORO), Lenovo Deutschland (LNVODE), RHEA Systems (RHEALU), EBOS Technologies (EBOSCY), WINGSGR, OneSource (ONEPT), ICT-FIFI, University of Oulu (OULUFI), Instituto de Telecomunicações (ITAVPT), University of the West of Scotland (UWSGB)
- **Other:** RIGOUROUS project aspires to identify and address the major cybersecurity, trust and privacy risks threatening the network, devices, computing infrastructure, and next generation of services by introducing a new holistic and smart service framework leveraging new machine learning (ML) and AI mechanisms, which can react dynamically to the ever-changing threat surface on all orchestration layers and network functions.
- Verticals addressed: Telecommunications, Smart Cities, Utilities (W/E/G), PPDR

2. Technical Information

- **Project Key Objectives:** Holistic Smart Service framework for securing the IoT-Edge-Cloud continuum lifecycle management; Human-Centric DevSecOps; Model-based and AI-driven Automated Security Orchestration, Trust Management and deployment; Advanced AI-driven Anomaly Detection, decision and Mitigation Strategies; Demonstration of a Set of Industrially Relevant Use Cases in Operational Environments
- **Key technologies used/investigated:** A.I.-based SOAR; Privacy- preserving Federated AI for anomaly detection; End-to-End multi- Domain 6G slicing over zero-touch security network management; 6G Zero Trust Security (ZTS) Adaptations; Intelligent Detection and Mitigation of DDoS Attacks against 6G Network Slicing,



3. Planned Standardization Activities

- **Standardization plans / objectives:** Leveraging the RIGOUROUS cross-sectorial consortia, the project aims at having a wide impact on the ongoing standardisation effort in the field of cloud computing, maximize the impact of the project and foster its exploitation strategies (ensuring RIGOUROUS outcomes are aligned with relevant standards' directions, in order to ensure their market competitiveness). Building on the RIGOUROUS partner's experience in European and global standard organisations, the project will ensure that results and findings will reflect in corresponding impact globally.
- **Project activities / technologies that may lead to standardization:**
- **LNVO's Distributed Ledgers and EDGE Services (ETSI PDL / ETSI MEC);**
- **prediction of the performance of the physical devices and dynamic task allocation (IEEE P2413);**
- **IoT security architecture for trusted IoT devices (AIOTI WG5);**
- **Machine Learning applied for 5G/6G Network Management (ITU 5GMLFG)**

3. Planned Standardization Activities (2)

- **Potential targeted standardization bodies / groups:**
- ETSI ISG MEC, ISG ZSM, ISG NFV, PDL
- IEEE ComSoc IoT Emerging Technologies Subcommittee
- AIOTI Standardization WG
- 5G-PPP / 6G-IA
- 3GPP (CT1 / SA2 / SA3 / SA5 /SA6)
- ITU 5GML FG
- **Standardization planning and estimated time plan:** **Work on Standardization is part of Task 6.3 of WP6, due start in M6 (June 2023) and will conclude in M36 (December 2025) at MS8.**