aerOS

EUROPEAN IOT-EDGE-CLOUD

ABOUT aerOS

Rapidly increasing data volumes and computing capabilities of smart devices enables processing to be performed closer to the data sources (devices); i.e., edge computing. In fact, the global edge computing market size will reach 7.013 M€ in 2028, responding to a CAGR of 36,2 %.

Traditional cloud services move towards commoditisation. The challenge is now leveraging a IoT **edge-cloud continuum**, as an extended network computing fabric between physical devices and cloud.

aerOS, starting 1st September 2022, tackles this need by the development of a meta Operating System (metaOS) for an heterogeneous and segmented/federated IoT **edge-cloud continuum**, which will enable the orchestration hyper-distributed applications.

aerOS will deliver a next generation high level meta-OS for IoT and open **edge-cloud continuum** ecosystems, SME friendly and with strong computing capability, contributing to the increase of European autonomy in data processing.

12 M€ **27** partners **11** countries **3** years

aerOS CAPABILITIES

Modular and Holistic Data Autonomy: aerOS will include an advanced management and control of data, automated and efficient management of resources and operations.

Service Smartness Suite: Automated self-X processes for infrastructure elements, frugal and explainable AI, benchmarking tools for gathering metrics and advanced embedded real-time analytics.

DevPrivSecOps Continuum "by-design": aerOS will offer the most innovative protection techniques in real time, including privacy in access, trust and data sovereignty by design.

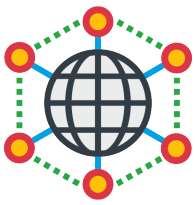
Autonomous Continuum Management: automation of deployment, maintenance and management process of components.

Federated Orchestration: aerOS will offer an intelligent orchestration, allowing an efficient and automated deployment of new resources, services and tools.

aerOS TECHNICAL FOUNDATION

EDGE Cloud

Design, implementation and validation for optimal orchestration



Internet of Things

Foundation for IoT edge-cloud continuum

Artificial Inteligence

Design, implementation and validation for optimal orchestration

Security, Privacy, Trust

Holistic cross-layer solution for cybersecurity, with federated & distributed data governance

DOMAIN APPLICATIONS

Renewable Energy

Management of edge data centres and located directly at energy sources, connected to the smart infrastructure and providing cloud continuity

Smart Agriculture

Utilizing aerOS for connected and cooperative mobile machinery farming, construction and forestry

Industry 4.0

Use of aerOS in data-driven cognitive automated production lines

Transportation and Logistics

Orchestrate smart services in the edge, allowing maritime companies run predictive container handling via computer vision

Smart Buildings

Applied in Smart Buildings market to optimise efficiency, using real-time processing

OUTCOMES

Smart Grid Management

Swarm Farming

Factory Automation Level 4

Predictive and Automated Ports

Net Zero Buildings

CONSORTIUM

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