**aerOS**
Autonomous, scalable, trustworthy, intelligent European meta Operating System for the IoT edge-cloud continuum

**aerOS** overarching goal is to design and build a virtualised, platform-agnostic meta operating system for the IoT edge-cloud continuum.

- **Delivers common virtualised services to enable orchestration, virtual communication, and efficient support for frugal, explainable AI and creation of distributed data-driven applications;**
- **Exposes an API to be available anywhere and anytime, flexible, resilient and platform agnostic;**
- **Includes a set of infrastructural services and features addressing cybersecurity, trustworthiness and manageability.**

**USE CASES**

- **Data-Driven Cognitive Production Lines**
  Manufacturing Autonomy Level 4 (MAL4) in 4 public-private Pilot Linus

- **Edge Computing near Renewable Energy Sources**
  EDDE Data Centers connected to smart infrastructure providing Cloud continuity

- **CO² Intelligent Neutral Farming**
  Smart agriculture, Precision Farming, maximising yields and quality of goods.

- **Smart EDGE services for the Port Continuum**
  Predictive maintenance of Container Handling Equipment & Risk prevention via computer vision

- **Energy Efficient, Health Safe & Sustainable Smart Buildings**
  Occupational safety & health, Cybersecurity and data privacy in building automation

**aerOS** will be implemented as virtualised modules, executed on top of any operating system (e.g., Linux-based, Android, ROS, etc.) of an Infrastructure Element (IE) of the IoT edge-cloud continuum, e.g., a smart device, IoT gateway, edge node or network component.

Each **aerOS** IE deployment will consist of the following key modules:

1. services and API;
2. virtualisation, abstraction and container runtime;
3. core **aerOS** modules;
4. supporting **aerOS** features;
5. orchestration;
6. security, privacy and trust;
7. management framework.

Five industry-driven heterogeneous use cases will demonstrate the value of **aerOS**

**USE CASES**

- **Meta operating system & Orchestration**
  Micro Edge, Far Edge, Edge, Cloud

**Project’s site:**
https://aeros-project.eu/

**Consortium:**
https://aeros-project.eu/consortium/

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