Open Nebula
one edge
European Open Source
for a Sovereign Edge
planetic

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🗺️ Xàbia, Alicante (Spain)

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OpenNebula

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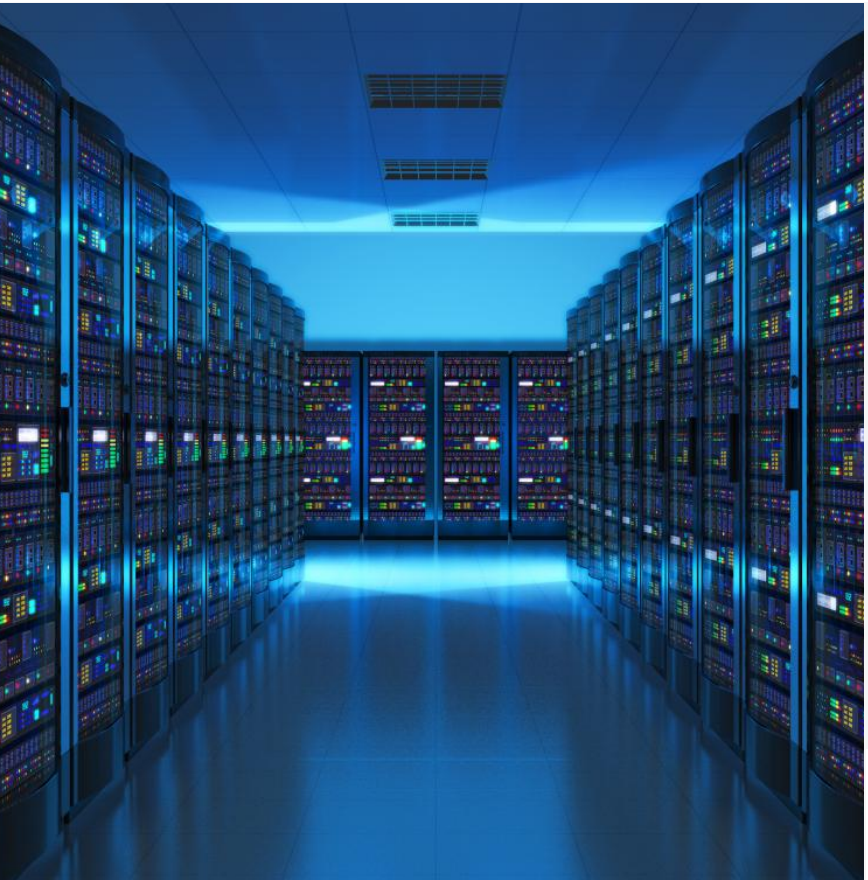
OpenNebula Systems

The company behind **OpenNebula**



- EU-based open source company.
- The only European open source IaaS solution, born in 2008.
- A success story emerged from the EU innovation programs.
- Offices in the US (Massachusetts) and Czech Republic.
- Day1-Members of GAIA-X.

LINUX FOUNDATION SILVER MEMBER

CLOUD NATIVE COMPUTING FOUNDATION SILVER MEMBER

LF EDGE GENERAL MEMBER

EUROPEAN OPEN SCIENCE CLOUD

ONEedge.io

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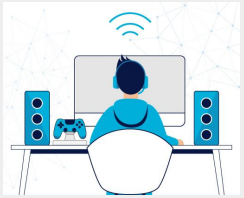
Next Generation Edge Cloud Platform

Build & Manage an On-Demand Edge Cloud Using Resources from Bare-Metal Providers

OpenNebula one edge

Edge Computing

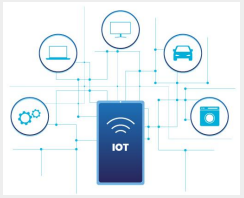
Opening up **new business models** and disrupting old ones



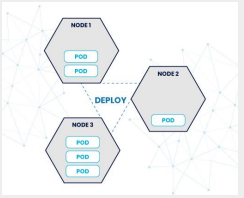
Gaming

OTT & Broadcasting

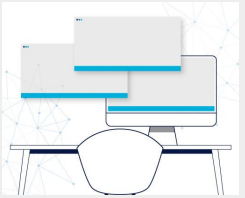
5G Applications



Internet of Things



Smart Cities



Virtual Desktop

- 🚀 Deploy (Ultra-)Low-Latency Applications
- 🚀 Improve User Experience
- 🚀 Expand Service Availability
- 🚀 Reduce Data Transfers and Security Risks
- 🚀 Reduce Energy Consumption
- 🚀 Minimize Vendor Dependency
- 🚀 Foster Local Ecosystem of Infrastructure Providers

🇪🇺 New Industrial Strategy

Strategic Dependencies & Capacities — **Key Issues**

🐌 Use of cloud in Europe is rising very slowly

Only 36% of European enterprises used cloud services in 2020, mostly for simple services such as for email and storage of files. This slows down Europe's green & digital transformation, and the new data economy.

🔍 Small market share for European actors

The largest European cloud provider accounts for less than 1% of total revenues generated in the European market. Increasingly higher entry barriers for new CSPs, unable to compete against hyperscalers.

💸 Investment gap

Estimated gap of 11,000 million EUR annually between what the US & China and Europe invest in cloud.

🤔 Concerns of European users

They have in practice a very limited if non-existing possibility to switch between different cloud service providers. They also express their concerns with the use of non-European cloud services for reasons of personal data protection (e.g. GDPR compliance), cybersecurity, or applicable laws (e.g. CLOUD Act).

European Commission

MY AGENDA FOR EUROPE:
POLITICAL GUIDELINES FOR THE NEXT COMMISSION (2019-2024)

"It may be too late to replicate hyperscalers, but it is not too late to achieve technological sovereignty in some critical technology areas"

Ursula von der Leyen
President of the European Commission

🇪🇺 New Industrial Strategy

Strategic Dependencies & Capacities — **Opportunities for Europe's Autonomy**

🚀 "Europe has a unique market opportunity in the next five years to strengthen its data processing technologies by capitalising on the changes to come, in particular related to edge computing".

- 80% of data now processed in the cloud but expected to move to the edge in 5 years, with no current dominant market players.
- This will give a market advantage to those actors who deploy the edge nodes.

🚀 Europe can leverage its current strengths in Industrial Internet of Things, 5G networks, and telco-cloud solutions:

- "A competitive European alternative for a multi-cloud solution would be needed, building on an **open source** and governance by an independent organisation."

Europe's Open Source Strategy

ec.europa.eu/info/news/european-commission-adopts-new-open-source-software-strategy-2020-2023-2020-oct-20_en

"Open source impacts the digital autonomy of Europe. Against the hyperscalers in the cloud, it is likely that **open source** can give Europe a chance to create and maintain its own, independent digital approach and stay in control of its processes, its information and its technology, because...

- 🚀 by leveraging open source, Europe can devise an approach to **cloud computing** and software-as-a-service that balances their advantages and risks (...)
- 🚀 with open source, Europe invests in its own, independent and competitive position in these technology areas (...)"

+ "Building the next generation cloud for businesses and the public sector in the EU" :

- 🚀 "Completely interoperable, open, multi-vendor cloud platforms and services, based on European, international or **open source** **standards**, will enable users to migrate effectively to the cloud (...)".

Alliance for Data, Edge & Cloud

digital-strategy.ec.europa.eu/en/library/today-commission-receives-industry-technology-roadmap-cloud-and-edge

- "European collaborative edge platforms could also be developed further, based on open standards and maximized use of open source code to reinforce competitiveness, portability and interoperability.".
- "Development of open standard/open source cloud software stack (...) that reduces or removes dependency on 'as a service' infrastructure products from non-EU players.

Required investment by 2025	250 M€
Private:public ratio of expected investment	20:80

European Commission

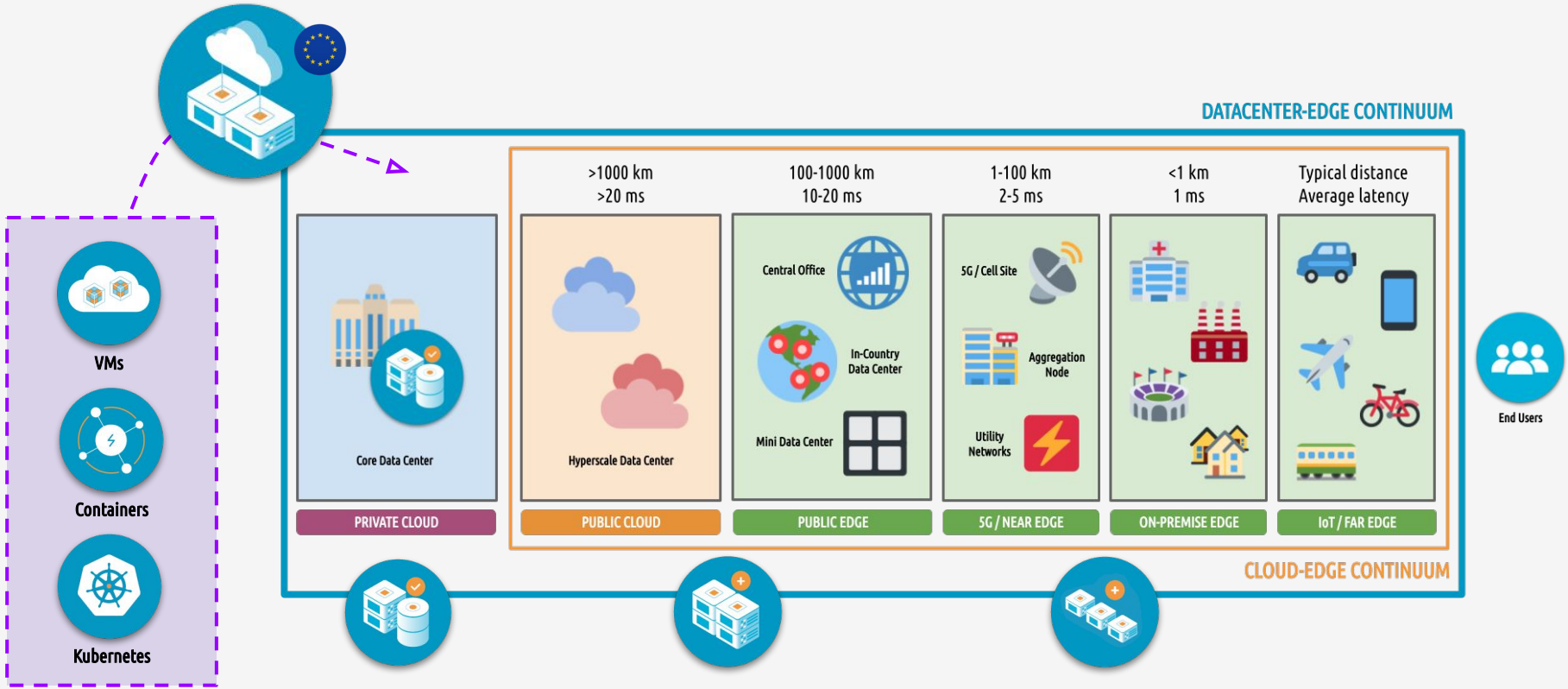
"In the digital decade, open source will be a key element to achieve Europe's resilience and digital sovereignty. Open source helps breaking entry barriers for innovative companies and cutting costs for users. It improves market competition and technology neutrality. In one word: it gives people choice".

Commissioner Thierry Breton

Open Source in the European Economy: A Driver for Digital Sovereignty
(Open Source Lisbon 2021)

Edge Computing

How to manage & orchestrate the **Datacenter-Cloud-Edge-IoT** continuum?



Sovereign EDGE.EU

European Open Source for Europe's Next-Gen Edge Cloud

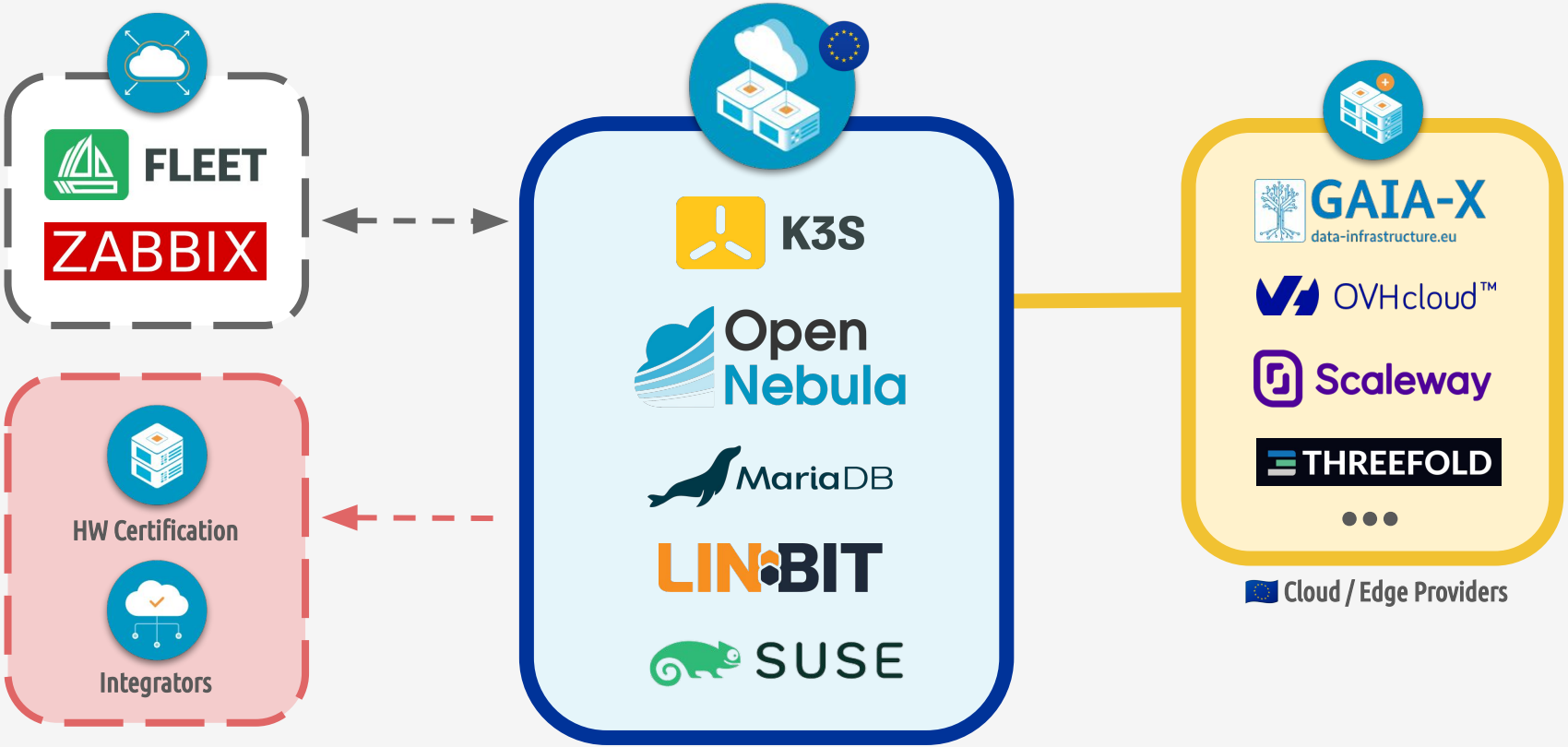
Building a Sovereign Edge Cloud Stack for the Digital Decade

Technologies

Webinar

SovereignEdge.EU

Let's use **European Open Source** to build a **Sovereign Edge Cloud** for Europe!



IPCEI Cloud Infra & Services

11 EU Member States, led by Germany and France, an with the support of the European Commission, are already working on a proposal for an Important Project of Common European Interest (IPCEI) on **Next Generation Cloud Infrastructure & Services**:

The main objectives of this initiative include:

- Enable Multi-Provider Cloud-Edge Continuum.
- Strengthening of EU digital industry.
- Development of European Open-Source technologies.

"The IPCEI will comprise both the research, development and innovation (R&D&I) and the first industrial deployment (FID) of the next generation of cloud and edge infrastructure and services including the associated middleware based on cutting-edge open-source frameworks..."

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OpenNebula.io/TechDays