Introducing ONEedge
OpenNebula's Edge Computing Initiative

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Cloud Technical Evangelist

OpenNebula

CLOUD NATIVE COMPUTING FOUNDATION SILVER MEMBER

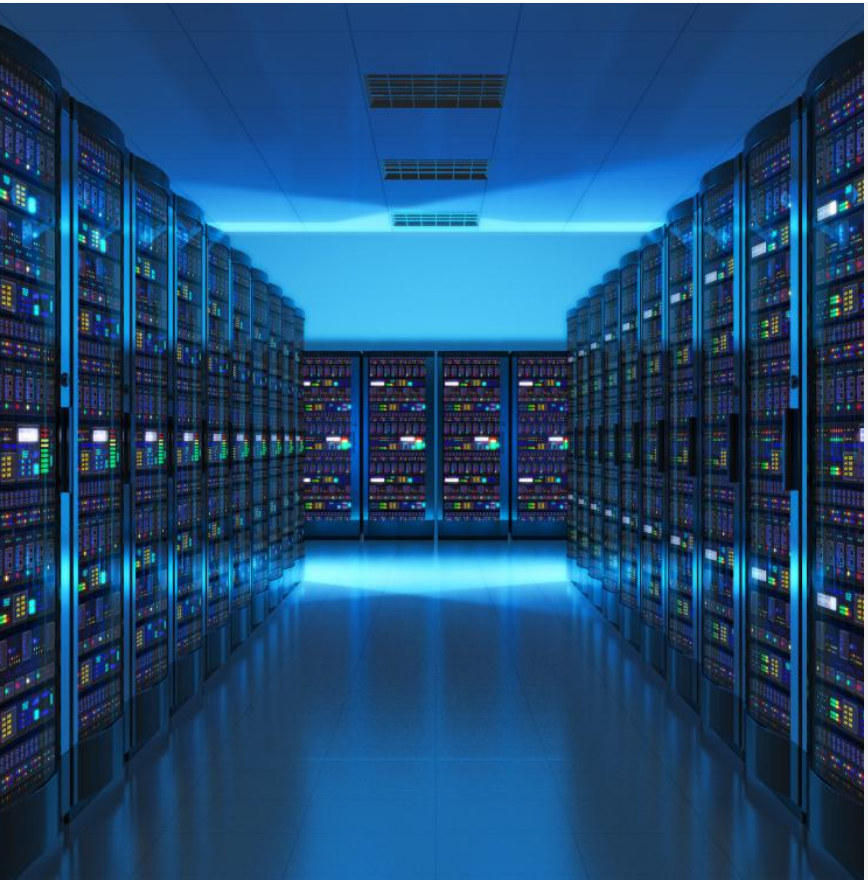
LF EDGE GENERAL MEMBER

GAIA-X data-infrastructure.eu

EUROPEAN OPEN SCIENCE CLOUD

OpenNebula Systems

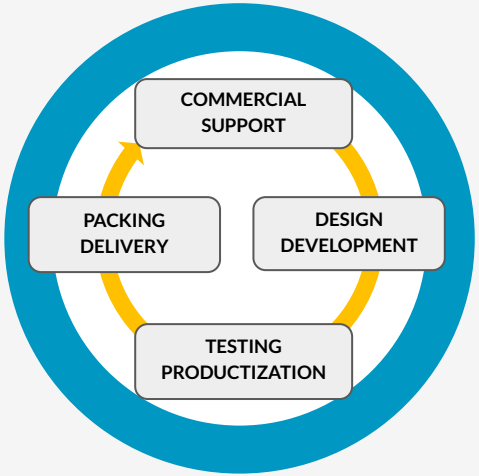
The company behind **OpenNebula** 🪜



- European open source company.
- HQ in Madrid with offices in the Czech Republic and USA.
- Born in 2005 as a research project.
- The only European open source solution for IaaS.
- A success story emerged from the FP7 innovation programme *
- Day-1 Members of GAIA-X.

Who is Using OpenNebula?

Well established in **several sectors, worldwide**



- >100K downloads in the last year
- >5K active clouds
- Largest 16DC and 300K cores
- 2K evaluations per month

Vendor

HITACHI DATA SYSTEMS, Hewlett Packard Enterprise, ca technologies

Telco

Akamai, T-Systems, BlackBerry, Telefónica

IT Services

Dustin, iguane solutions, avalon, bit internet technology, ptisp

Gaming

Nintendo, unity, ludia, CRYTEK, NORDEUS

Banking

BDO, TransUnion, CAJA RURAL, Nasdaq Dubai

SaaS

intuit, Direct, runtastic, fuze, Booking.com, trivago

Public

U.S. ARMY, HARVARD, UNIVERSITÉ DE STRASBOURG, UCL Université catholique de Louvain

ONEedge.io

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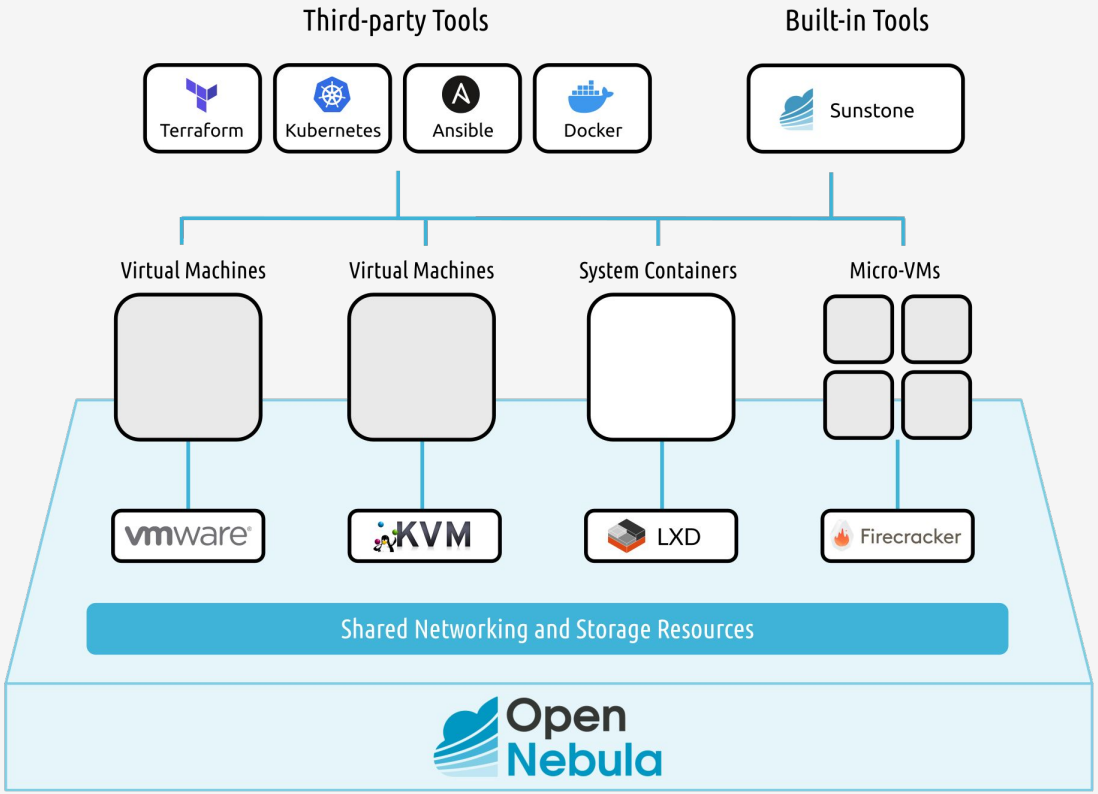
Next Generation Edge Cloud Platform

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

What is OpenNebula?

The open source **Cloud & Edge Computing Platform** developed for the Enterprise 🚀



- ✓ Self-Service
- ✓ Multi-Tenancy
- ✓ Provisioning
- ✓ Multi-Tier Apps
- ✓ Elasticity
- ✓ Federation
- ✓ High Availability
- ✓ VMs + Containers

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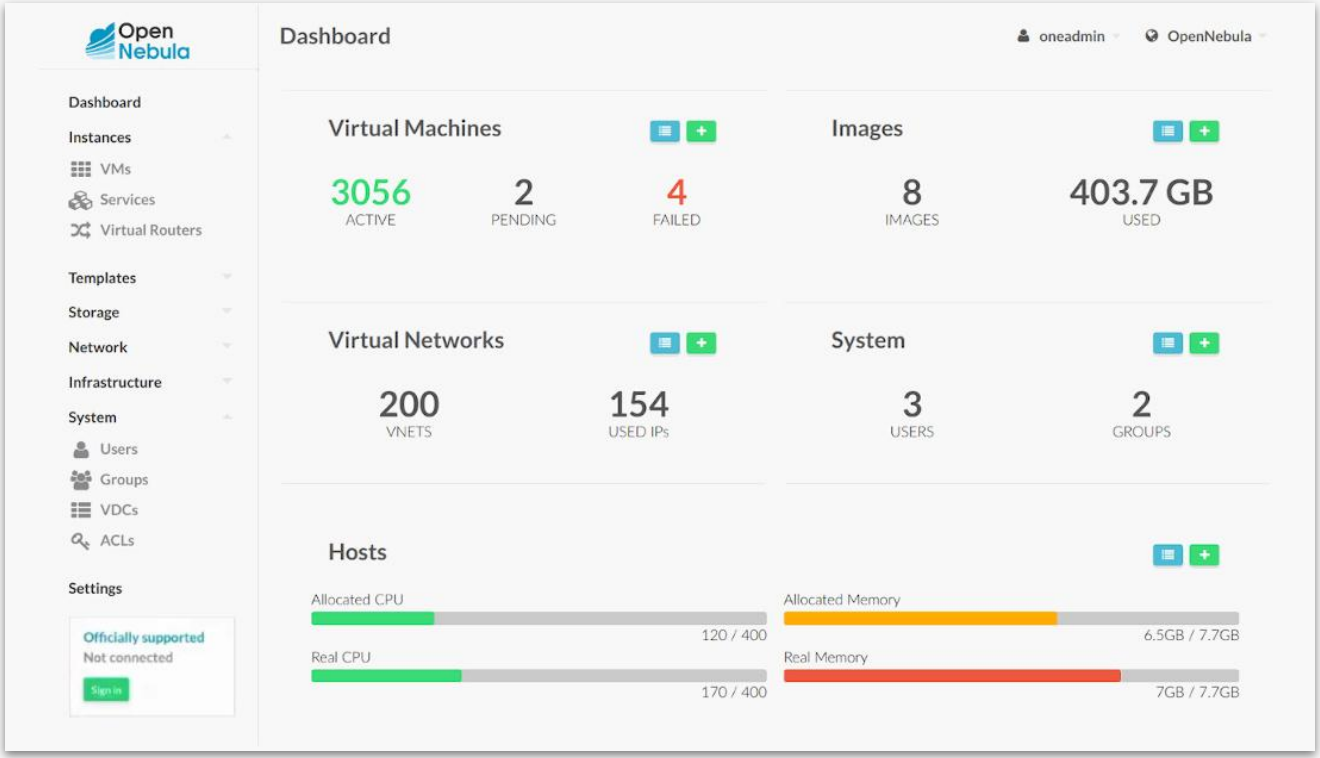


OpenNebula Edge Cloud

Automatic Deployment of Containerized Applications on **Cloud & Edge Providers**

3 Any Application

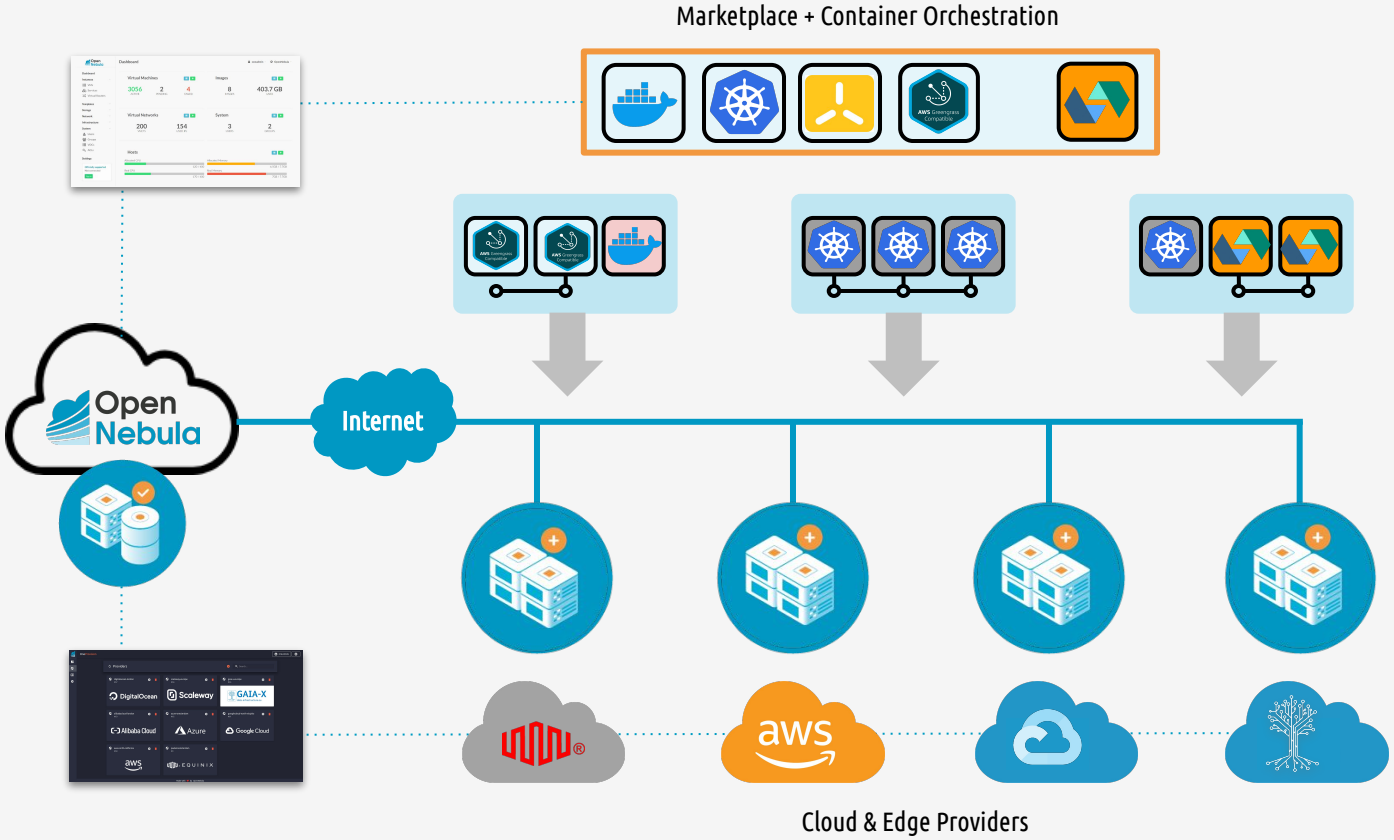
VMs, multi-VM services, **containers**, and **k8s clusters** on a shared environment

2 Uniform Management

Homogeneous layer for user and workload management and operation

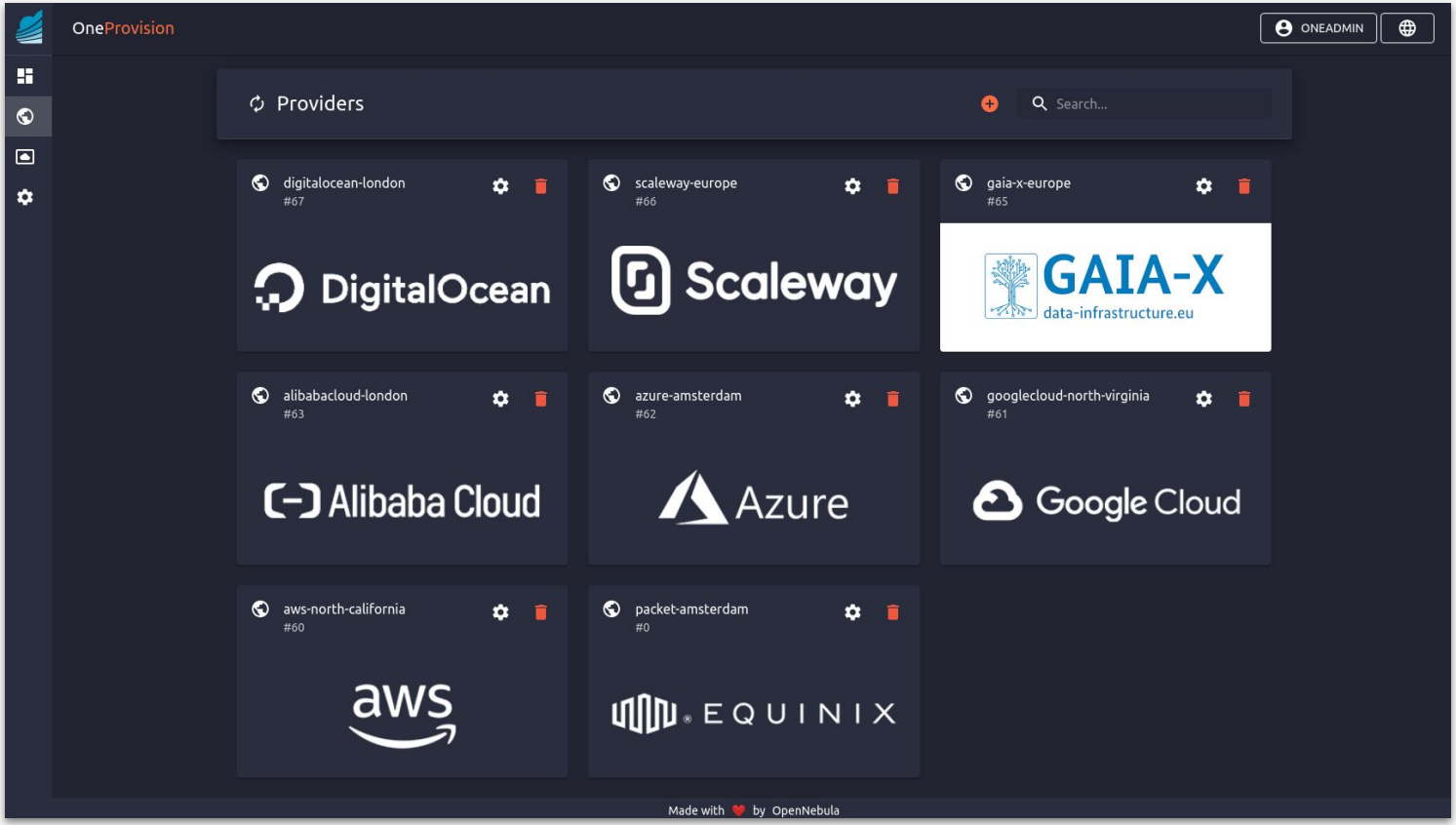
1 Any Infrastructure

Automatic provision of resources from **cloud and edge providers**



OpenNebula OneProvision

New Automatic Provision of **Cloud & Edge Resources** 🎉



OpenNebula Edge Cloud

Use Cases

Low-latency Gaming

Fully automated deployment of gaming servers on *17 edge locations* in *25 minutes*

https://opennebula.org/opennebula-a-lightning-fast-video-gaming-edge-use-case-2/

OTT & Live Broadcasting

Build live and on-demand video workflows on a geo-distributed cloud to meet latency, bandwidth and regulatory requirements

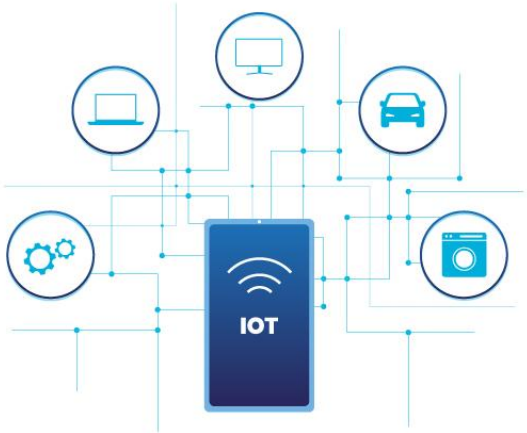
https://opennebula.io/an-elastic-private-cloud-open nebulas-solution-for-media-services/

OpenNebula Edge Cloud

Use Cases

Internet of Things

Leverage the IoT features of “AWS IoT Greengrass” to create a distributed Greengrass Edge Cloud



https://opennebula.io/automatic-deployment-of-aws-iot-greengrass-at-the-edge/

Telecom Edge Cloud

OneEdge as a core component of edge computing CORD (Central Office Re-architected as a Data center)

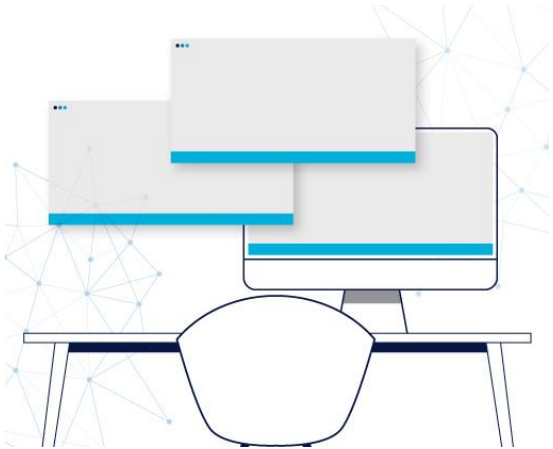
https://www.telefonica.com/documents/737979/14498 1357/whitepaper-telefonica-opa-mec-feb-2019.pdf

OpenNebula Edge Cloud

Use Cases

Desktop Virtualization

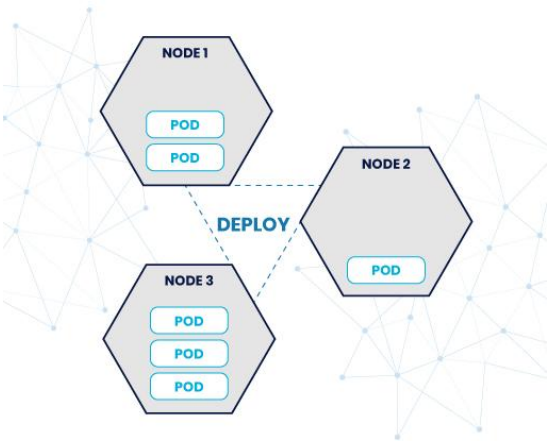
Deploy a pay-as-you-go VDI solution that is compliant with local data protection regulations



https://opennebula.io/opennebula-for-vdi-at-the-edge/

Kubernetes Deployment

Configure and manage multiple Kubernetes clusters on the edge for the orchestration of containers



https://opennebula.io/using-opennebula-and-kubernetes-to-deploy-multiplayer-game-servers-on-the-edge/

OpenNebula Edge Cloud

Additional Resources

OpenNebula's Approach to Edge Computing

WHITE PAPER

Open Cloud Reference Architecture

WHITE PAPER

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