

# Novita GARR Cloud Platform

GIUSEPPE ATTARDI

Dipartimento CSD, GARR

Conferenza GARR

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# GARR Federated Cloud Computing Platform

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## Objectives

Facilitate **transition towards cloud computing** and building **native cloud applications**

Allow **resource sharing**, maintaining **control of use**

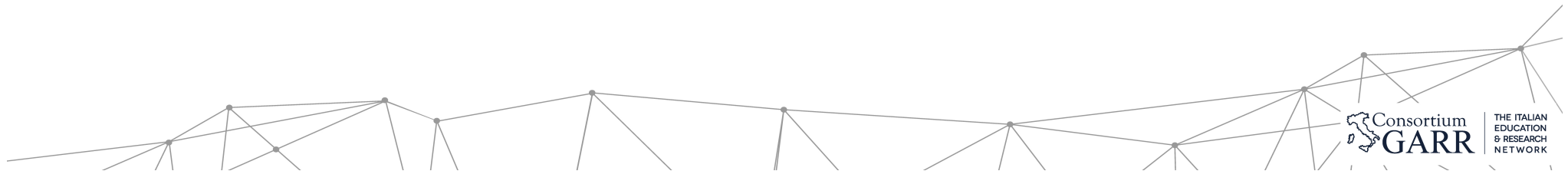
Exchange **best practices** on management and use

Share **catalogue of cloud applications**

**Large Scale Service** to the whole research community

## GARR Offer

- Architecture:
  - OpenStack + Kubernetes
- Coordination of Federation
  - Automated Region Deployment
  - Upgrades and Maintenance
- Solutions for:
  - Multiple Tenancy
  - Federation and Delegation
  - Federated Authentication
  - Accounting and Billing of resource usage
  - Integration of OpenStack and Kubernetes



## GARR Cloud Platform

The **GARR** Cloud Platform offers cloud services to the Italian academic and research community. **GARR** coordinates a federation of clouds, located in national datacenters owned by members of the GARR community, which participate to the federation by sharing resources and services.

The **GARR** cloud allows creating and managing Virtual Machines (**IaaS**) as well as deploying cloud applications (**DaaS**).

[Go to the dashboard](#)

### Virtual Machines

The **GARR** Cloud delivers **virtual machines** running in the data centers of the **GARR Federated Cloud** connected through the **GARR** high speed fiber network. The GARR Cloud provides tools for self provisioning computing resources and deploying applications and services, enabling scaling from single instances to clusters of integrated and load-balanced cloud computing.



- **Resources**
  - ~9000 vCPU
  - 10 PB Storage
- **Usage**
  - Over 500 users
  - Over 1200 VM
- **Guarantees**
  - Service Continuity
  - Data Protection



# Annunci

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## Federazione

Regione Cloud al Politecnico di Torino

Regione Cloud Università di Padova

- 500 VM per didattica

Enea

## GARR Workplace

Suite collaborativa per

- Documenti
- Project management
- Integrata con Sync&Share
- [Test.workplace.garr.it](https://test.workplace.garr.it)

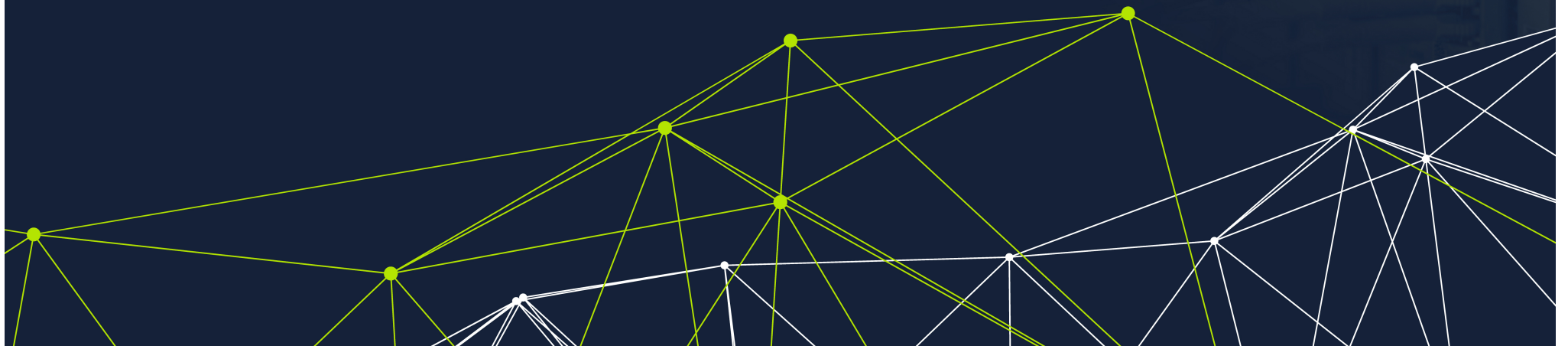
## Container Platform

Kubernetes

- On bare metal
- Integrata con OpenStack tramite **Application Credentials**
- Automazione di deployment di pacchetti
  - Helm

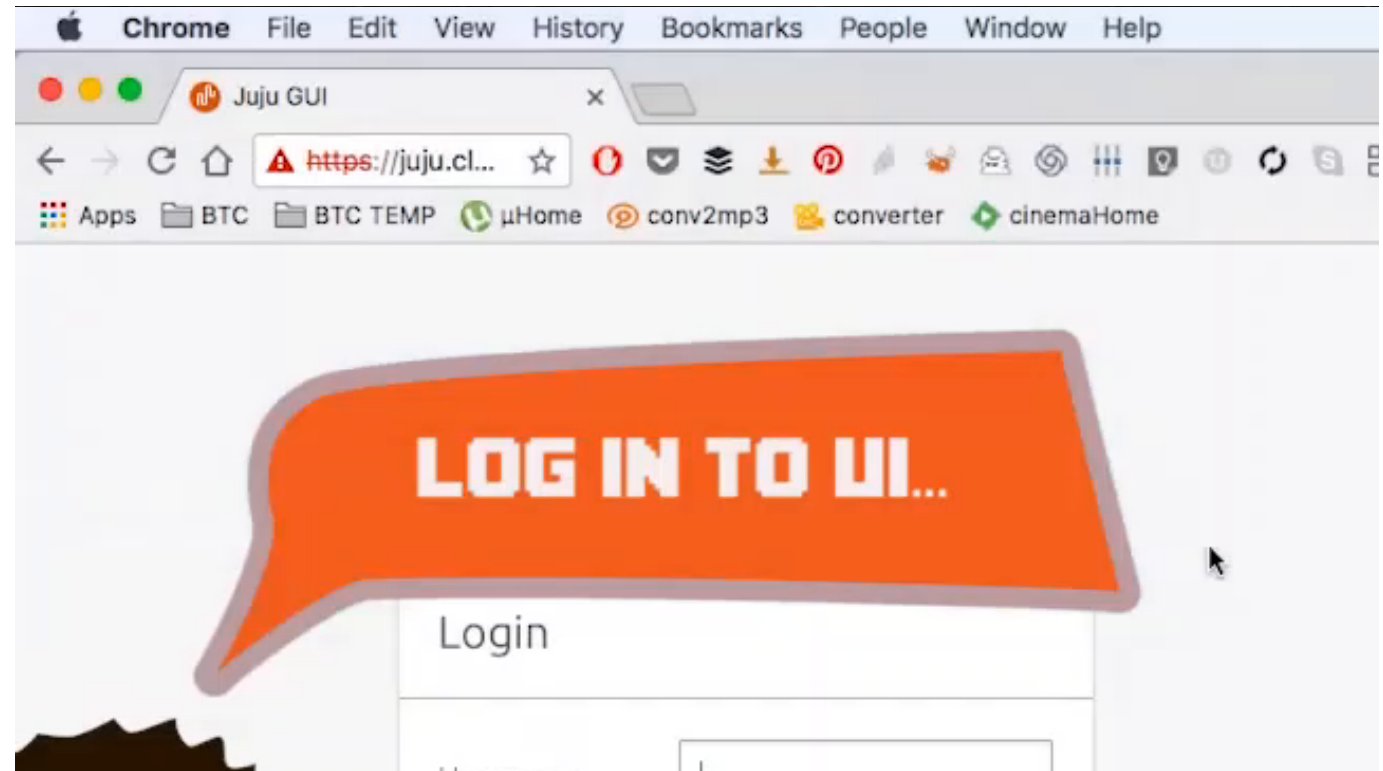


# Cloud Automation



# Self-service App Deployment

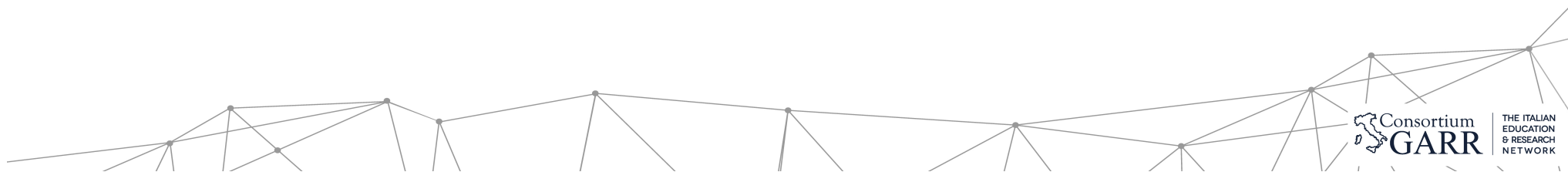
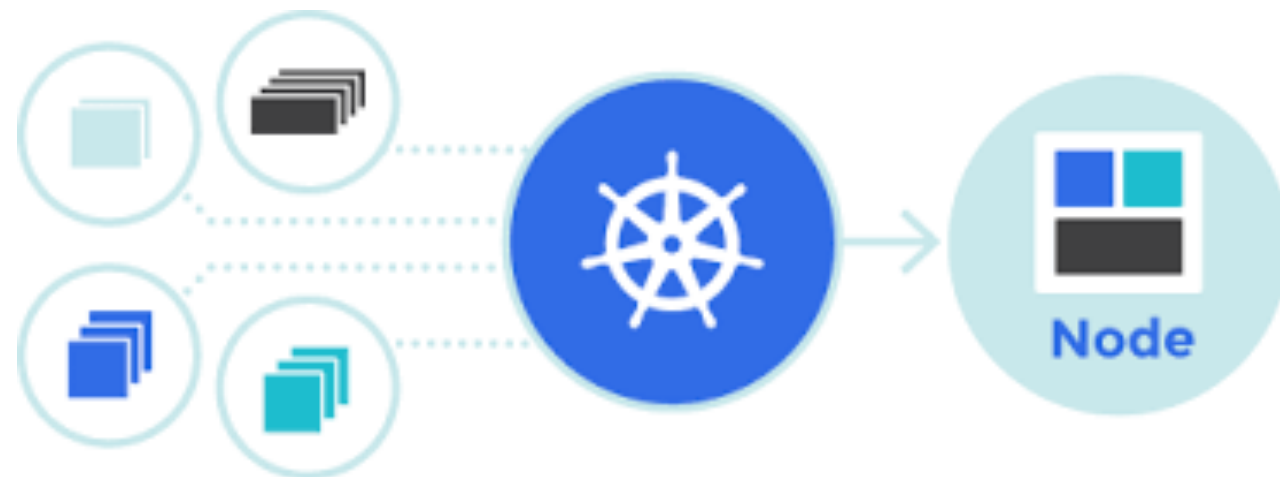
- Select Moodle App
- Deploy
- Scale
- Deploy on public cloud



# Kubernetes Orchestration

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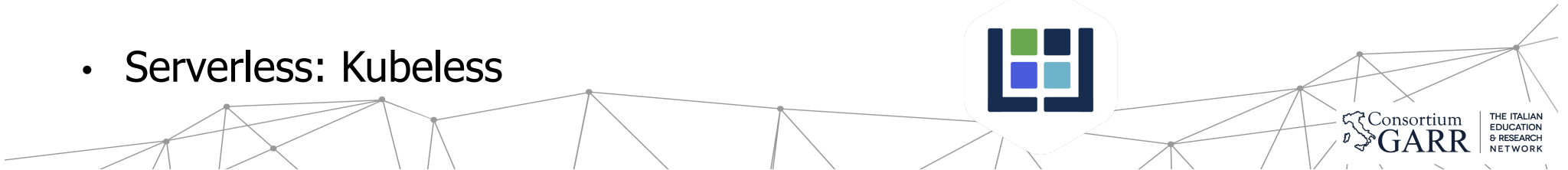
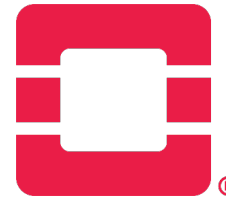
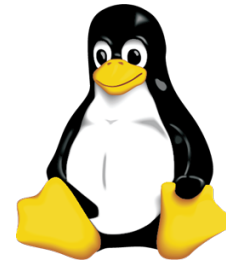
- Helm deployment orchestrator



# Serverless

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- Server: linux
- Virtual server: OpenStack
- Container: Kubernetes
- Serverless: Kubeless





Grazie. Partecipate!

