Plant Data @LW-ITA

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The e-Biodiversity Research Institute of LifeWatch-ITA latter has branches distributed throughout Italy, focusing on the construction of a functional backbone, and seeks to reinforce integrated scientific research into biodiversity.

The e-Biodiversity Research Institute of LifeWatch-ITA is organised into four thematic centres: Biomolecular, Collections, Interactions and Mediterranean, focusing on species, their genetic and phenotypic traits (including behavioural traits), their niches and their interactions.
LifeWatchPLUS

A proposal for enforcing the infrastructure of LifeWatch Italia was presented by a consortium made up by:

- CNR
- Istituto Nazionale di Fisica Nucleare
- Università del Salento
- Università di Bologna
VEGETATION dataserver @ UNIBO

**Scopes:** archive, discovery, distribution, analysis & modelling of plant biodiversity data (floristic data, herbarium data, community data; map data, citizen science data).

**Requirements:**

1) **Data access and distribution:**
   - database and web services for data aggregation and exploitation
   - multiple access support
   - cloud services for data use
   - big data analysis and modelling

2) **Storage:**
   - storage space for big data on plant diversity
   - data preservation
   - effectiveness and scalability

**Hardware:**

- Frontend/access node with large RAM pool and high number of cores
- Redundant storage space
  - Backup space
Scopo: archive, discovery, distribution, analysis & modelling of plant biodiversity data (floristic data, herbarium data, community data; map data, citizen science data).

Configuration:

Calcolus:
Netapp compute
96 core Xeon, HCI C
2048 GB memory
5Y support

Storage:
Netapp HCI Storage 22.4 TB
(8.8 TB ridondante)
5Y support

Backup Storage:
EMC Datadomain

Network:
Switch Cisco Nexus 100Gb

SW:
Hypervisor: VMware vSphere
Backup Sw: Veritas Netbackup
Partners of the project
Partners' skills and collaborations
Goals

• Improve data storage and accessibility;
• Integrate taxonomy cleaning services across systems;
• Provide virtual labs for data analyses and modelling;
• Provide integration of plant occurrence and community data with other resources;
• Improve data sharing and community projects among various organisations.