

EUBrazilCC: EU-Brazil Cloud infrastructure Connecting federated resources for Scientific Advancement

Description

The EUBrazilCC project was a first step towards providing a user-centric, cross-Atlantic test bench for European & Brazilian research communities. EUBrazilCC was centred in practical scientific use cases, and it is built on a close collaboration among European & Brazilian excellence centres.

EUBrazilCC exploited & coordinated, through a 2 year project, existing heterogeneous e-Infrastructures (virtualized datacentres, supercomputers and opportunistic resources) with more than 5500 CPU and 17000 GPU cores. EUBrazilCC includes three multidisciplinary & highly complementary scenarios, covering Epidemiology, Health, Biodiversity, Natural Resources & Climate Change. All those scientific scenarios involve complex workflows & access to huge datasets.

EUBrazilCC leveraged from the experience in Brazil & Europe for the federation of resources (JiT Cloud, OurGrid, CSGrid and InterCloud), programming environments & scientific gateways (mc2, COMPSs, eScienceCentral) & distributed scientific data access (parallel data analysis). For the use cases, EUBrazilCC involved lead institutions, such as FIOCRUZ, world leader in Leishmaniasis; BSC, developer of the heart simulator Alya, which received an HPC Innovation Excellence Award; & CMCC, key node in the Earth System Grid Federation.

EUBrazilCC defined a strong, networked dissemination to promote the infrastructure among new communities, leveraging from the networks of SINAPAD and Brazilian National Institutes of Science and Technology, LifeWatch-ESFRI & the European Network for Earth System Modelling. The project incorporated a specific interoperability task involving Helix-Nebula initiative and EGI & it will exploit the opportunities in mobility for the cooperation among the partners, such as “Science without borders”. Finally, EUBrazilCC defined a focus on sustainability through dedicated tasks related to draw an exploitation plan for the platform & the three use cases whilst adhering to the adoption of international standards.

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