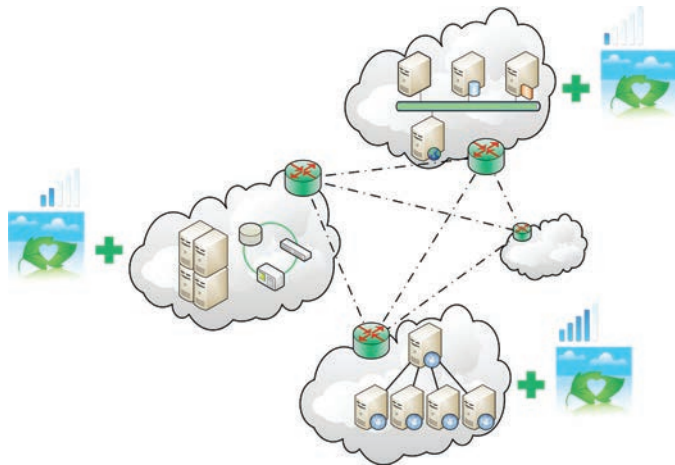


# ECO<sub>2</sub>Clouds

ECO<sub>2</sub>Clouds (Experimental Awareness of CO<sub>2</sub> in Federated Cloud Sourcing) will design and implement an energy-aware deployment strategy for multi-site cloud facilities. With the purpose of operating and validating that novel scheduling approach for cloud computing, ECO<sub>2</sub>Clouds will collaborate with the Future Internet Research and Experimentation project BonFIRE to enrich its capabilities by eco-aware parameters. Energy-aware deployment strategies will be used to optimize the deployment of virtual resources to physical hosts in order to decrease the carbon footprint of the services and with that, lower the costs of the whole execution.

The ECO<sub>2</sub>Clouds scheduler will be able to control and manage the execution of cloud services dynamically with respect to combine power consumption and processing performance in an optimal fashion, keeping the overall optimum.



Three main target groups are addressed within the ECO<sub>2</sub>Clouds project:

- Environment and society
- Cloud users and researchers
- Commercial enterprises



Due to the fact that cloud computing can be used as effective solution for computational problems, enterprises and governments are interested in porting their applications into flexible and scalable cloud services. In particular, novel approaches to distribute computational intensive models will help to improve cloud design, development and operation. However, power consumption and CO<sub>2</sub> emissions of cloud facilities still raise environmental concerns. With the dynamical energy-aware scheduling approach, the environment as well as the overall Internet of Services community will benefit from reduced costs and less pollution.

The project consortium consists of cloud computing and green IT experts from all over Europe:

- Atos Spain SA – Spain
- University of Manchester – United Kingdom
- University of Edinburgh, EPCC –United Kingdom
- Politecnico di Milano – Italy
- Institut National de Recherche en Informatique et en Automatique – France
- University of Stuttgart – Germany

### More information about the project:

<http://www.eco2clouds.eu>

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