Day 3

Detailed paper information

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Paper title	The DYDAS – “DYnamic Data Analytics Services” platform for HPC big data analytics of Earth Observation and Geospatial data
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Form of presentation	Poster
Topics	Open Earth Forum C5.02 Big EO data platforms
Abstract text	The DYDAS project was aimed at developing a collaborative platform for offering data, algorithms, processing and analysis services to a large number of users from different public and private user communities. The platform will act as an e-marketplace enabling transactions for accessing data and added value services enabled by HPC and based on Big Data technologies, machine learning, AI and advanced data analytics, with the purpose to match demand and offer among those who own intellectual properties on data/methods for their use and those who need or want to exploit them. In line with the objective of the CEF 2018 work programme and the CEF-T-5 call, the project contributes to the European data infrastructure by improving the sharing and re-use of public and private data. By enabling the use of dynamic data sets such as Earth observation satellite, in situ data from environmental monitoring networks and vehicle data, promoting HPC-based R&D through an integrated research laboratory and scientific knowledge and collaboration system, offering easy-to-use HPC-based services and tools, through specialised interfaces, and designed to provide different user experiences to a wide range of users. A key and differentiating element of the project will be the implementation of a Geospatial Data architecture connected with a dedicated Data Lake and an HPC processing framework. This specific components through the adoption of a geospatial data model and interoperability rules, allow seamless integration and processing capabilities of extremely large data sets for innovative use modes. Furthermore a large ensemble of dataset connectors are available to facilitate the Machine-to-Machine (M2M) acquisition of several datasets such as Copernicus Satellite data or Copernicus Services as well as for other kind of satellite data. In addition, DYDAS promotes the sharing and re-use of public and private data in a secure environment and through innovative monetisation mechanisms. This collaborative platform will act as an e-marketplace for data access, but as added value it will be equipped with HPC-enabled services based on Big Data technologies, machine learning, AI and advanced services. The project has tested the data analysis capabilities of the platform through the integration and operation of various use cases which relevant results will be presented.