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Big Data Analytics needs for the Earth Observation Science Community

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Earth Observation (EO) data from open access sensors, such as those from the European Copernicus Sentinel fleet, are streaming in at rates of multiple Terrabytes per day. Comprehensive processing of these data streams, their analysis and integration into scientific maritime and land
disciplines requires adoption of Big Data Analytics. EO use cases cover a wide range of data processing patterns across varying access profiles and have long term data curation requirements. Effective uptake relies on Petabyte-scale storage solutions coupled with massive parallel processing
and access to efficient, state-of-the-art geospatial data analysis routines. Open cloud solutions are expected to make major contributions in providing consistent long term storage, facilitate rapid on-demand data staging and marshalling advanced compute resources to apply open source algorithms. However, uptake of cloud solutions in science also requires efforts in education in order to apply scalable and reproducible science methods in disciplines that are beyond the "space data"domain.

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