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Copernicus - eoSC AnaLytics Engine

openEO Platform in EO SC

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EO SC Symposium | 14 November 2022 | Prague, Czech Republic



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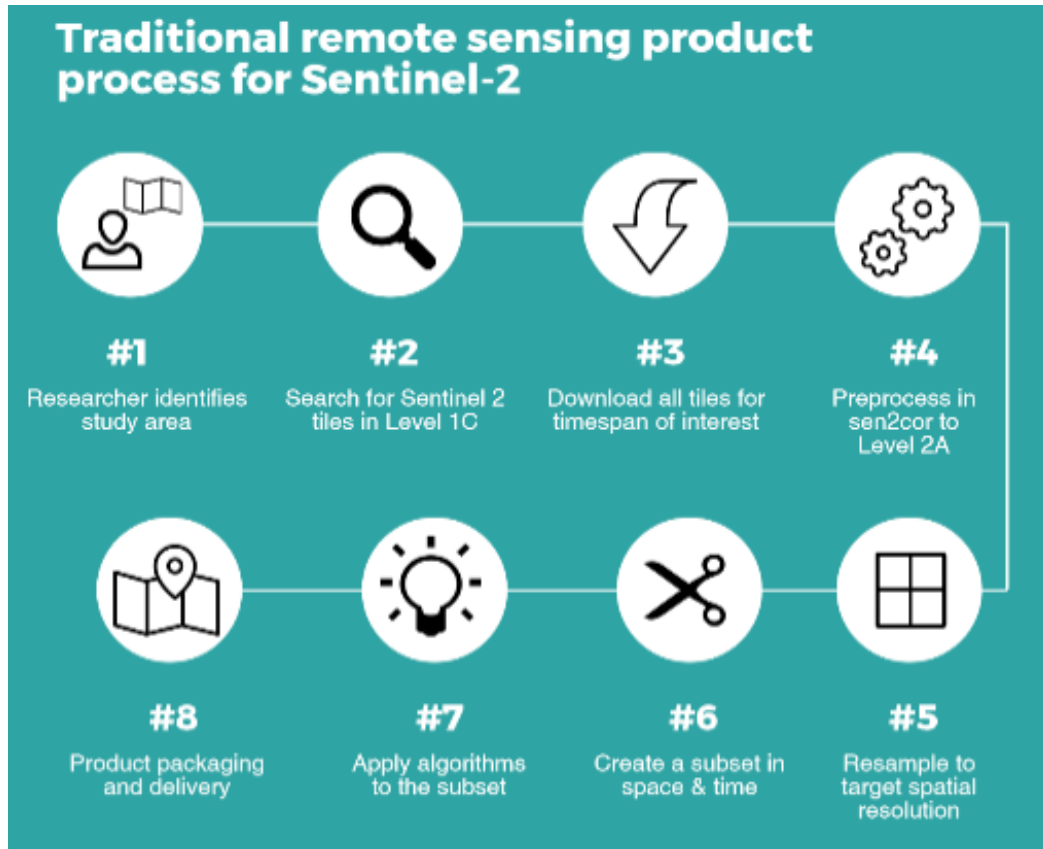
What is openEO Platform?



- openEO Platform: **federation of openEO backends** providing intuitive programming libraries to process a wide variety of Earth Observation datasets
- Run your Earth Observation analysis on our federated infrastructure!

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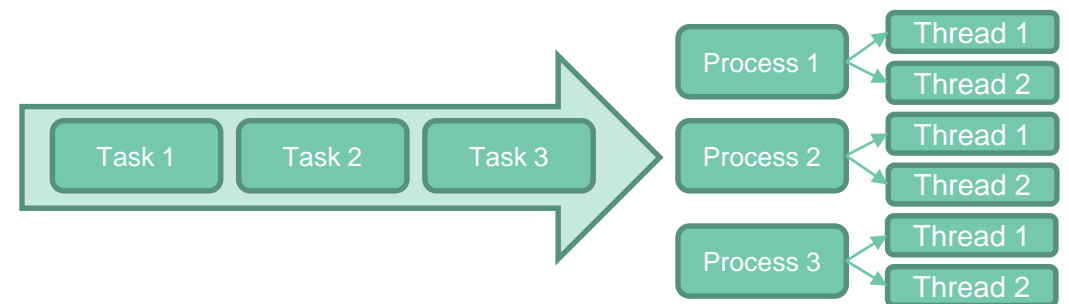
Why do we need openEO? The Data Management Burden...



Credits: H. Kristen – ESA open Science 2017



Allocated CPU	Allocated MEM	Status
8200 / 9600 (85%)	520GB / 1007.3GB (52%)	ON
4700 / 5600 (84%)	444GB / 503.6GB (88%)	ON
5200 / 5600 (93%)	358GB / 503.6GB (71%)	ON

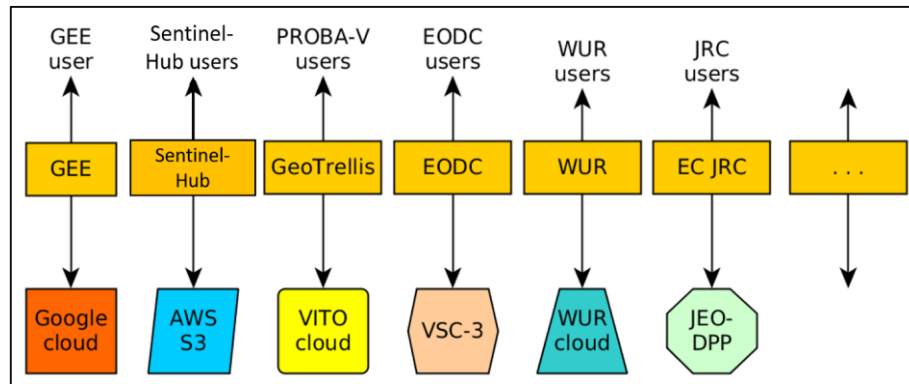


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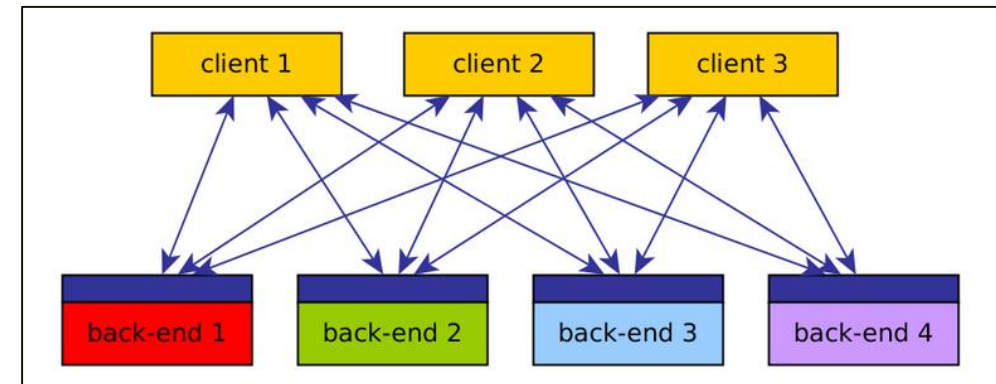
How does it work?



Situation before openEO:



openEO API:



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How does it work?



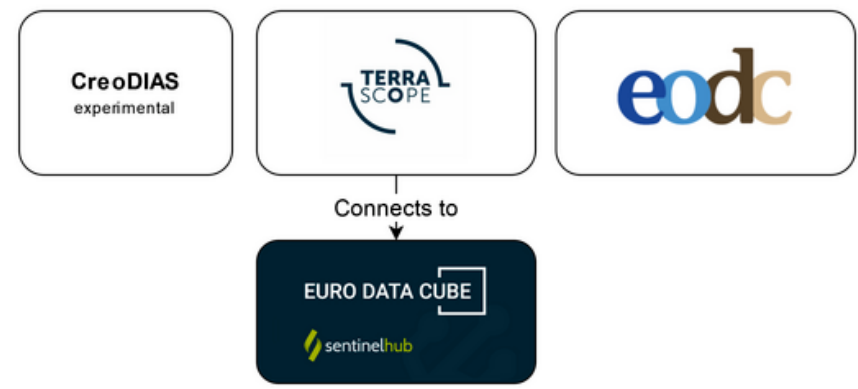
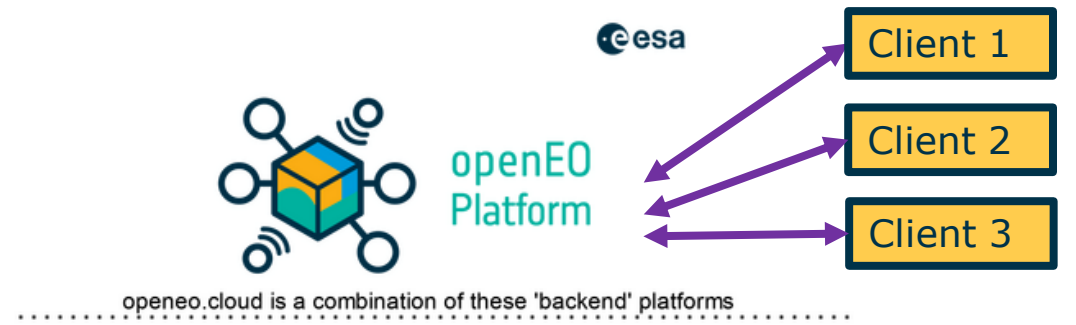
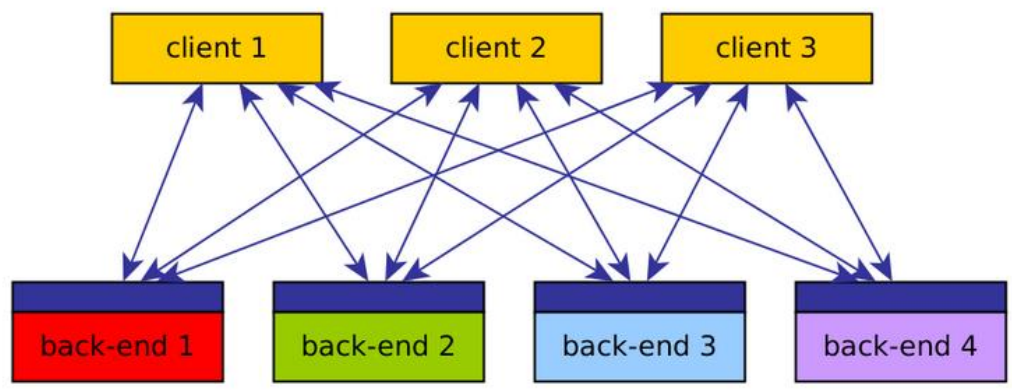
openEO Platform



openEO API:



openEO Platform Aggregator:



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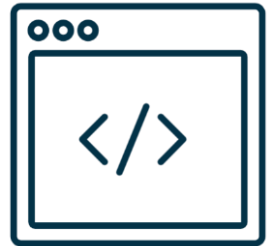
Client Libraries



openEO
Platform



JupyterLab (Python)
<https://lab.openeo.cloud/>



Web Editor (graphical)
<https://editor.openeo.cloud/>



R - Client
<https://docs.openeo.cloud/getting-started/r/>



Python - Client
<https://docs.openeo.cloud/getting-started/python/>



JavaScript - Client
<https://docs.openeo.cloud/getting-started/javascript/>

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Registration



- <https://openeo.cloud/#plans>
- Follow the Step-by-Step Guide

SERVICE OFFERING

openEO platform aims at covering the needs of real-world EO users and experts. Therefore, we invite you to join the development and evolution process! Play around with the platform using the free trial or become an early adopter for running larger use cases. We'd love to hear your feedback and get to know the features and capabilities that you need! The following offers are available right now:

Free Trial	Early Adopter	Network of Resources Sponsoring
free	free (sponsored by ESA)	free
You want to try and "play" with the Platform. You don't have a specific use case in mind and want to see how it works.	You have a specific use case in mind where you can use openEO Platform. You want to process data regularly and think about larger data processing workflows.	You want to use openEO Platform for longer running projects or get specific support from our development team for your workflows. Limited funding (5,000 EUR) for non-ESA projects.
Valid for: 30 days	Valid for: 90 days	Valid as per sponsoring request
Register	Apply	Apply

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ESA Network of Resources & C-SCALE

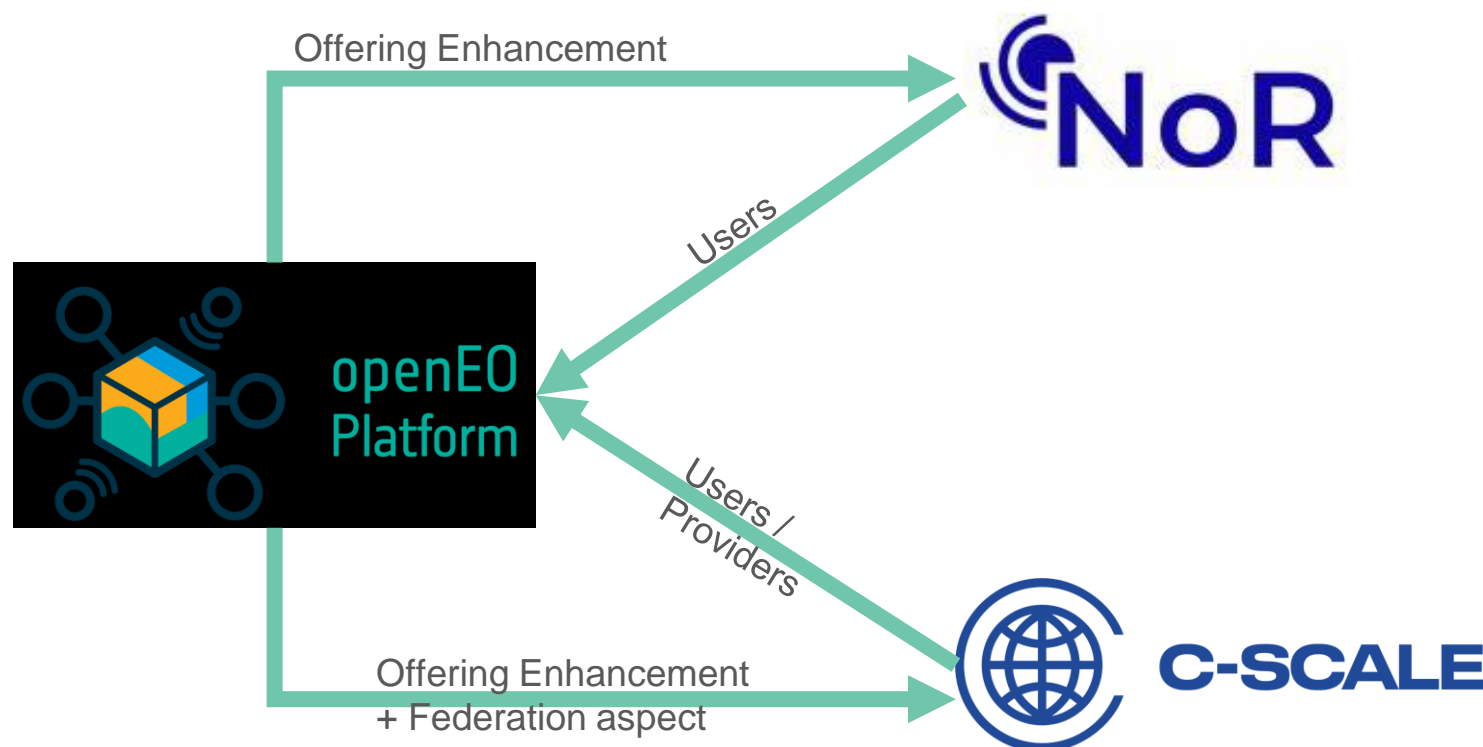


openEO
Platform



C-SCALE

The Network of Resources (NoR) is an ESA initiative to facilitate the use of cloud environments by users, sponsoring R&D users for the use of commercial platform resources.



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openEO Platform in EOSC



Onboarding into the EOSC Marketplace: by June 2023

The screenshot shows the EOSC Marketplace interface. At the top, there are navigation links: Contact us, Portal Home, Catalogue, Providers Dashboard, Providers Documentation, and Login. The main header features the European Open Science Cloud logo, a search bar with the placeholder text "Find resource...", a "Workflows" dropdown menu, and a search icon. Below the header, there is a breadcrumb trail: Resources > Processing & Analysis > Data Analysis > Workflows. A table lists categories and their counts: All Resources (365), 2D/3D Digitisation (2), Artificial Intelligence (9), Data Extrapolation (0), Forecast (4), Image/Data Analysis (45), Machine Learning (11), Quality Assessment (0), Visualization (12), Workflows (11), and Other (28). The main content area is titled "Workflows" and displays a "SUGGESTED" section with three featured workflow cards: "Multi-Messenger Online Data Analysis ..." (University of Geneva), "Virtual Imaging Platform" (Centre de Recherche e...), and "UMSA - Untargeted Mass Spectrometry d..." (CESNET).

<https://marketplace.eosc-portal.eu/services/c/data-analysis-workflows>

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Join the community!



- <https://openeo.cloud/>
- Documentation:
- openEO Platform: <https://docs.openeo.cloud/>
- openEO: <https://openeo.org/documentation/1.0/>
- Questions?
- Forum: <https://discuss.eodc.eu/c/openeo-platform/5>
- Contact e-mail address: openeo-platform@eodc.eu

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Thank you for your attention.

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<https://c-scale.eu>



[@C_SCALE_EU](https://twitter.com/C_SCALE_EU)

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