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APPLICABILITY AND IMPACT OF DIAS AND DIAS-LIKE PLATFORMS ON EUROPEAN AND
NON-EUROPEAN MARKETS – LESSONS LEARNED FROM OPERATING CREODIAS BY
CLOUDFERRO.

Abstract

As a part of the Copernicus programme – a major GEO intelligence and Earth Observation (EO) data provider - the European Commission has introduced an initiative to facilitate access to Copernicus data and Information Services. This led the European Space Agency to launch, on behalf of the commission, a call for tenders to establish the Copernicus-DIAS (Data and Information Access Service) platforms. CloudFerro was granted contract for setting up a DIAS environment under ESA management. Six months later the CREODIAS was launched.

CREODIAS is a big-data enabled platform that brings the Earth Observation data closer to processing resources. It facilitates storage cluster equipped with tools for data ingestion, indexing, discovery and dissemination with a dedicated Infrastructure-as-a-Service (IaaS) cloud solution. On top of which a set of applications and interfaces for data interaction and cloud management is available. The storage cluster has reached the 21 PB milestone in the beginning of 2021 and is growing by 25 TB daily.

We are observing that CREODIAS is not only a public platform with IaaS, PaaS and EO data online. It is also becoming a toolset that can be used to construct dedicated private cloud solutions, e.g. in the field in Copernicus co-operative hubs. It can be even more than a toolset – it can be a source of data which is not present locally and source of elastic computing capacity that can be used in connection to CREODIAS.

Thus, in this paper we would like to discuss how, from the DIAS provider's perspective, the approach, set by the Copernicus programme, to EO data production and governance is resonating with different stakeholders on varied markets. The platform concept developed for DIAS – the CREODIAS especially - is becoming one the de-facto standards for EO data storing, dissemination and processing. It is represented by growing interest in creating collaborative ground platforms, expressed in actions of multiple institutional (national and local) and entities.

Using examples of:

- CODE-DE – German Copernicus Data and Exploitation Platform is an independent cloud platform, storing Copernicus data for Germany in an National Mirror, synergized with CREODIAS for additional data access
- Online Landcover Classifier for the National Space Science and Technology Center – Private workspace, processing chains and online dashboards delivered on CREODIAS

We will consider how a DIAS or DIAS-like platform can be leveraged, what are the challenges in establishing one and what might be future trends.