

CREODIAS

powered by  CloudFerro

Your cloud solution for EO Data
access and processing

Stanisław Dałek – VP - CloudFerro

About CREODIAS

The platform

In 2017 European Space Agency, acting on behalf of the European Commission, signed a CREODIAS contract with a consortium led by Creotech Instruments S.A. which includes CloudFerro, Wrocław Institute of Spatial Information and Artificial Intelligence (WIZIPISI), Geomatys, Eversis and Sinergise.



EVERSIS



CREODIAS

CREODIAS Data Offer

Largest local EO data repository among all DIAS-es:

- Full archive of :
Sentinel-2, Sentinel-3, Sentinel-5p, Sentinel-1 GRD, Sentinel-1 SLC Europe&Africa
- Rolling archive of:
Sentinel-1 global SLC
- Full archive of:
Landsat-5, Landsat-7, Landsat-8, Envisat
- Data from Copernicus Services
- Full coverage of Copernicus satellites to be launched in the coming years
- Planned connection of additional repositories (external or mirrored)

7.5PB of EO data available now, growing to 25PB within 3 years

CREODIAS EO data access tools

Search:

- Data catalogue with fast, easy search tool (Finder)
- Powerfull semantic index and search tool (SPARQL)
- Accessible through Web GUI or API

Access:

- All data stored in unpacked form – individual files can be accessed
- No download necessary – the data catalogue can be directly mounted in VM
- Object access over S3 or SWIFT protocol
- Filesystem access over FUSE or NFS
- OGC WMS, WMTS, WCS – dynamic tile generation from data stored in the repository

CREODIAS ICT Services

General

- ▶ Open solution based on OpenStack & Ceph open source projects
- ▶ Fully integrated with the DIAS Data repository
- ▶ Industry standard open APIs for provider independence, easy integration and migration
- ▶ Fully separated processing environments for tenants
- ▶ All functionality available from web dashboard, standard APIs and command-line interface
- ▶ Automated infrastructure monitoring

CREODIAS ICT Services

Compute

- ▶ Virtual Machines 2 to 16 cores, up to 128GB of RAM
- ▶ Dedicated Server VM-s up to 32 cores and 256 GB RAM for top IO performance in the cloud with possible GPU use
- ▶ Dedicated Servers: flexible single and multiprocessor configurations for bare-metal speed, independence and reliability
- ▶ Advanced orchestration and automation

CREODIAS ICT Services

Storage

- ▶ Scalable, replicated petabyte-scale storage cluster based on Ceph
- ▶ Available as object, block (volume) or filesystem storage
- ▶ SSD and HDD tiers
- ▶ Remote incremental backups and immediate snapshots

Networking and security

- ▶ Separated tenant environments, multiple users, single sign-on
- ▶ Virtual networks, VPN-s, routers, load balancers, firewalls and local IP addresses available as a service
- ▶ Access rules per VM

CREODIAS ICT Services

Software and operating systems

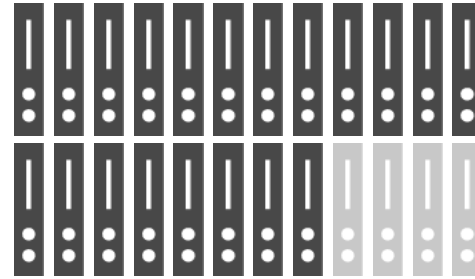
- ▶ Several flavours of free and commercial Linux and Windows images, including EO specific tools
- ▶ Bring Your Own OS or application policy
- ▶ Automated tool for cloud application management and deployment

Infrastructure

- ▶ Two independent Tier3 data centre locations
- ▶ Redundant 10G and 100G internal networking with
- ▶ Multiple redundant Internet uplinks to Tier I providers exceeding 50Gbit/s
- ▶ Tens of petabytes of data already stored in our cloud
- ▶ Easy integration with customer environments



Server infrastructure



More than 18 TB
of RAM, more
than 7000 vCores



More than 12
PByte of data
repository



Dynamically growing
resources

Big Data capability

Thank you for your attention. For more, please visit:

www.creodias.eu

Or link up with us on:

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