D13.2 Periodical assessment of the services

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Deliverable Abstract
The report provides assessment and statistics of services provided under virtual access. Furthermore, a set of key common metrics (number of users, number of visits to web-site and marketplace, satisfaction, etc) have been used to perform a global analysis of the impact of the Virtual Access to the EOSC-hub services that shows a remarkable growth of all these metrics during the project lifetime.

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TERMINOLOGY

https://wiki.eosc-hub.eu/display/EOSC/EOSC-hub+Glossary

Executive summary

This deliverable is providing an overview of the installations for the first reporting period (M1-M18) that are provided through the Virtual Access mechanism to the research communities. Values of the installation metrics, which has been defined to measure installations usage and uptake, have been reported. Installation metrics can be generic (e.g. number of users, marketplace visits, etc) or specific for a given installation.

A set of key common metrics have been used to perform an analysis of the impact of the Virtual Access to the EOSC-hub services. This set includes the *number of users*, as a measurement of the service uptake, *website and marketplace visits*, as an estimation of the interest on the EOSC-hub services, *average of reached countries*, as an indication of the EOSC-hub service coverage, *satisfaction*, which reflects the quality of the offered services, and *integration of the service providers*, as a measurement of the adoption of the EOSC-hub Federation and Collaboration services in the European Research Area.

Results of this analysis show a growth of all these metrics during the project lifetime. EOSC-hub services operated with the VA have more than 14000 new users from the project start. The increase of the number of users has been significative for all the service categories, around 5000 new users for Thematic Services (+283%), 5000 for Federation and Collaboration services (+37%) and 3500 for Common Services (+104%). It is also worth to mention that the launch of the EOSC Marketplace, where all the EOSC-hub Common and Thematic services are published and accessible, and its integration with the EOSC Portal, clearly allowed the project to reach new and diverse communities. Indeed, the total number of visits to the EOSC-hub services (website + marketplace) increased of around the 400% (from 400 in M1-M9 to around 2000 in M10-M18) after the Marketplace became operational and the EOSC Portal was launched. The number of reached countries for Thematic Services increased of the 116% (from 32.4 to 70) from M1-M9 to M10-M18 showing a widespread usage of the EOSC-hub services in many EU and non-EU countries. Satisfaction is also growing between the two VA periods (more than 4.5 over 5 in the second period). After usage, communities are well evaluating EOSC-hub services, and this is increasing the confidence of scientists and researchers on them. Finally, the uptake of the EOSC-hub Federation and Collaboration services in the EOSC landscape is continuously growing as demonstrated by the number of service providers integrated with them that from 1046 in the period 1 reached 1384 service providers in the period 2 (+32%).

Virtual Access has been supported by several activities within EOSC-hub. To increase usage of the installation a proper communication and outreach to new users have been established by WP3 *Innovation Management, Communication and Stakeholder Engagement*. WP2 *Strategy and Business Development* have been working on definition and creation of Service catalogue to expose information about services to the users via Marketplace and EOSC-hub website. Procedures and guidelines for training provisioning have been produced by WP11 *Training and Services for Service operators, Research and Higher Education*. WP4 *Federated Service Management* has been working on establishing a service management system to support installation provisioning and metrics gathering.

During initial months of the project some of those activities have been delayed for various reasons. The one that had the most significant impact on Virtual Access was the delay in launching the EOSC-hub marketplace, where customers can discover and order installations. This delay has been caused by the additional work required to launch the EOSC Portal and integrate the Marketplace with it.

Nowadays, the majority of installations are exposed to the users and customers on EOSC-hub website (Federation services) or on the EOSC-hub marketplace connected to EOSC portal. Installations present on EOSC-hub marketplace can be now ordered by customers.

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1. Introduction

Virtual Access (VA) is financial instruments to reimburse the access provisioning costs to access providers. This instrument is provided by the European Commission to increase the sharing of research infrastructures and services that otherwise would not be available to international user groups.

In VA, the services – also called "installations" – must be made available 'free of charge at the point of use' for European or International researchers. VA access is open and free access to services through communication networks to resources needed for research, without selecting the researchers to whom access is provided.

Virtual Access to services of the EOSC-hub catalogue applies to the following four categories:

- **Common services**, including baseline services like compute and storage, and specialized services for data management, federation of storage and data, service and data discovery, orchestration of compute and data workflows, etc.
- **Thematic services** delivering community-specific data and applications;
- **Federation services** necessary in order to have federated IT service management processes involving multiple distributed providers.
- **Collaboration services** enabling the sharing of open source software, applications and other research objects.

1.1 Installations

Within EOSC-hub project 38 installations are part of Virtual Access work package. 34 installations started their operation before M18, 4 installations are planned to start later.

Following installations have been subject to change since the beginning of the project:

EUDAT – B2HANDLE

- Change of provider and change of start date from M01 to M10
- B2HANDLE installation transferred from SURFsara to GRNET. SURFsara's effort for the period PM10-Pm36 (26 project months) and the equivalent budget, according to GRNET PM rate plus overhead, will be transferred to GRNET. The number of PMs is 2.25 PMs (17437.5 €)

EGI – Helpdesk

- During the period PM01-PM24 the EGI GGUS helpdesk installation was offered in-kind. The equivalent Virtual Access costs for 24 months (12 PMs) will be retained by EGI.eu in a central pot, in order to build an effort reserve in case the EGI Foundation must find a new service provider.

Lifewatch

- Change of start date from M1 to M19 do to delay of work within WP7

CMS – Dynamic On Demand Analysis Service

- Change of start date from M8 to M3 without budget change

EOSC-hub – Marketplace

- Change of start date from M1 to M11 due to additional work required by EOSC portal

1.2 Metrics definition

For each installation several metrics has been defined between the provider and WP13 leader, taking into account following categories:

- **Number of users** – depending of the nature of installation, number could be defined based on accounts (if registration was required) or number of unique IPs (if registration is not needed to benefit of the service)
- **Usage** – the goal of this metric is to report how much the service is used. This metric depended on functionality provided by the service.
- **Number and names of the countries reached** – the goal of this metric was to report how broadly the service is used and how the geographical coverage is changing with time
- **Satisfaction** – the goal of this metric is to provide subjective feedback about the service from the customers.
    - Satisfaction feedback has been organized and collected by WP4 responsible for customer relationship
    - Customers were asked with the scale (1-5) about each installation:
        - Overall, how satisfied or dissatisfied are you with the received service?
        - How would you rate the quality of the service?
        - How would you rate the quality of documentation and customer support?
- **EOSC-hub website views** – for those services that were published on EOSC-hub website, information about views has been provided
- **Marketplace views** – the goal of this metrics is to provide information about how often the service is being viewed by the potential customers
    - This metric is not applicable to federation services due to the nature of the service. Federation services are enabling federation and are supporting delivery of customer facing services. Thus, cannot be ordered.
- **Marketplace Orders** – the goal of this metrics is to provide information about how often the service is being ordered via EOSC-hub Marketplace
    - This metric is not applicable to federation services due to the nature of the service. Federation services are enabling federation and are supporting delivery of customer facing services. Thus, cannot be ordered.

2. Virtual Access metrics analysis

A global analysis of the Virtual Access metrics of the first two monitored periods (period 1: M1-M8 and period 2: M9-18) has been executed to have an estimation of the impact of the Virtual Access instruments on the uptake of EOSC-hub services. For this aim, key metrics have been selected and computed for classes of services (Federation & Collaboration, Common and Thematic) highlighting their trends during the project lifetime.
The metrics that have been considered in the analysis are:

- Number of users: a measurement of the uptake of the services;
- Website and Marketplace visits (only Common and Thematic services): an estimation of the interest of the scientific communities on the EOSC-hub services;
- Average of reached countries: a measurement of the EOSC-hub services coverage;
- Satisfaction: reflects the quality of the offered services;
- Integration of service providers (only Federation and Collaboration services): a measurement of the adoption of the EOSC-hub Federation and Collaboration services in the EOSC landscape.

For each of these metrics, values have been reported with some general consideration.

Number of users

The following table shows the total number of users per service category at project start (baseline) and during the period 1 and period 2. Number of users has grown for all the service categories, in particular we observed:

- More than 5000 new users for Thematic services (+283%);
- More than 5000 new users for Federation and Collaboration services (+37%);
- Around 3500 new users for Common services (+104%).

The growth of the number of users has been significative for all the categories. The minor relative increase of users for the Federation and Collaboration services is mainly due to the fact that such services, coming from well-established e-infrastructures, had already a quite large user base before the start of the project.

In total, EOSC-hub services operated with the VA have more than 14000 new users from the project start.

Service type	Baseline	Period 1 M1-M8	Period 2 M9-M18	Increase RP1 → RP2	Increase from project start
Thematic service	1786	2820	6846	4026 (+143%)	5060 (+283%)
Federation service	15287	16480	20966	4486 (+27%)	5679 (+37%)
Common service	3327	4303	6791	2488 (+75%)	3464 (+104%)
Total	20400	23603	34603	11000 (+54%)	14203 (+70%)

Website and Marketplace visits

This global metric, computed only for Common and Thematic services, shows an increased interested of the scientific communities on the EOSC-hub services. In particular, the launch of the Marketplace (period 2) accessible through the EOSC Portal, where all the EOSC-hub Common and Thematic services are published, clearly allowed the project to reach new and diverse communities. Total number of visits to the EOSC-hub services increased of around the 400% during M9-M18.

Service type	Period 1 M1-M8	Period 2 M9-M19	Increase RP1 → RP2
Thematic service	405	1916	1511 (+373%)
Common service	493	2232	1739 (+452%)
Total	405	1916	1511 (+373%)

Average of reached country

This metric gives a measurement of the EOSC-hub services coverage. Values collected in period 1 and period 2 shows an increase of the number of reached country per service category with, in particular, a big increase for thematic services, from 32.4 to 70 (+116%).

Service type	Period 1 M1-M8	Period 2 M9-M18	Increase RP1 → RP2
Thematic service	32.4	70	+116%
Federation service	45	48	+7%
Common service	19	25	+24%

Satisfaction

This metric reflects the quality of the offered services from a user's point of view. Satisfaction is expressed with a value from 1 to 5. At the end of the period 2 satisfactions for both Thematic and Federation services reached 4.5/5 showing a good increase with respect the period 1.

Service type	Period 1 M1-M8	Period 2 M9-M18	Increase RP1 → RP2
Thematic service	4.25	4.62	+9%
Federation service	3.9	4.5	+15%

Integration of service providers

This metric valid only for Federation and Collaboration services gives a measurement of the adoption of the EOSC-hub Federation and Collaboration services in the EOSC landscape. From period 1 to period 2, the number of service providers integrated with Federation and Collaboration services increased from 1046 to 1384 (+32%).

3. Installations

3.1 CLARIN - The Component MetaData Infrastructure

Description	Provides a framework to describe and reuse existing metadata blueprints. There are 3 concrete services offered that build on this framework: the Virtual Language Observatory (metadata search portal), the Virtual Collection Registry (publication platform for link collections) and the Language Resource Switchboard (a bridge providing tools that can process a given data object).
Task	T13.1.1
URL	www.clarin.eu/services
Service Category	Thematic Services
Service Catalogue	https://eosc-hub.eu/catalogue/Component%20MetaData%20Infrastructure https://marketplace.eosc-portal.eu/services/virtual-language-observatory https://marketplace.eosc-portal.eu/services/language-resource-switchboard https://marketplace.eosc-portal.eu/services/virtual-collection-registry
Location	Germany
Duration	M07-M36
Modality of access	The read-only services are available under wide access. Certain parts that require writing rights can be accessed by anyone with academic credentials. Other interested scientists can register an account in the CLARIN Identity Provider.
Support offered	Dedicated hands-on training events on how to create community specific CMDI profiles and how to efficiently convert existing metadata descriptions into CMDI will be provided. The training material will be provided as in-kind contribution.
Operational since	non-EOSC-hub versions: 2010 (VLO), 2012 (VCR), 2016 (LRS) EOSC-hub version: July 2018 (VLO), January 2019 (VCR), March 2019 (LRS)

3.1.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE17	CLARIN	8,000 €	15.00	120,000	30,000.00	150,000	100%	150,000.0	-

3.1.2 Definitions

User: Individual researchers accessing the installation. No registration. User is counted based on unique IP addresses.

3.1.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M7-M8	Period 2 M9-M17
Number of visits to metadata search portal	2017: 5,103 visits/year = 425 visits/month	no registration, reported is number of visits over a certain timespan – measured using Matomo	16 July until 31 August: 389 visits = 259 visits/month	1 September until 31 May: 4,749 visits = 528 visits/month
Usage: Number of harvested metadata records	1 August 2018: 896,473	The number of metadata records harvested via OAI-PMH and inserted into the Virtual Language Observatory.	896,473	909,388
Usage: Number of virtual collections registered	2017: 0	The number of virtual collections made publicly available via the virtual collection registry over a certain timespan. Note: the baseline is low since not much publicity was made before the EOSC-hub release.	Data not reported	7
Usage: Number of connected processing tools via the LR Switchboard	1 January 2018: 60 (source)	The number of web applications registered at the Language Resource Switchboard that can process incoming requests.	Data not reported	70
Number and names of the countries reached (measurement for metadata search portal)	2017: 89 countries (list available upon request)	(based on IPs, measured using Matomo)	45	101
Satisfaction	not applicable	5-point scale Customer Satisfaction measurement measured using Mopinion. In July 2018 integrated into the Virtual Language Observatory.	3 (based on only 4 ratings in August)	3.9 (based on 120 responses)
EOSC-hub website views	not applicable	Google analytics (from WP3)	45	77
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	Virtual language observatory 41 Language resource switchboard 36 Virtual collection registry 30

Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	Virtual language observatory 1 Language resource switchboard 0 Virtual collection registry 0

3.1.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.1.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	https://eosc-hub.eu/clarin-vlo	no activities	no trainings

3.2 CMS - Dynamic On Demand Analysis Service (DODAS)

Description	DODAS (Dynamic On Demand Analysis Service) provides the end-user with an automated system that simplifies the process of provisioning, creating, managing and accessing a pool of heterogeneous (possibly opportunistic) computing resources. DODAS allows to generate both HTCondor batch systems and BigData platform such as Spark, HDFS. Moreover, the service provides a pluggable system which allow to support multi cloud providers such as EGI Federated Cloud, OpenStack, OpenNebula, Amazon AWS and Microsoft Azure etc.
Task	T13.1.2
URL	https://dodas-iam.cloud.cnaf.infn.it https://dodas-ts.github.io/dodas-doc/
Service Category	Thematic Services
Service Catalogue	https://eosc-hub.eu/catalogue/Dynamic%20On%20Demand%20Analysis%20Service https://marketplace.eosc-portal.eu/services/dynamic-on-demand-analysis-service-dodas-portal

Location	Bologna & Bari (IT)
Duration	M03-M36
Modality of access	The service is freely accessible to scientific communities.
Support offered	The planned activities are: training CMS Site Manager and Data Manager on service description and best practices to use and configure site specific CMS parameters, training for data analysts for using their private computing resources through DODAS and to share them with collaborators, training for data analysts finalised to R&D on advanced analysis techniques. Moreover, there will be support for the integration of specific use cases and workflows as required by research communities.
Operational since	March 2018

3.2.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE03	INFN	5,800 €	29.00	168,200	42,050.00	210,250	100%	210,250.0	-

3.2.2 Definitions

User: a user is an individual researcher using the clusters instantiated

3.2.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M3-M8	Period 2 M9-M17

# of active users	10	Number of users using the instantiated clusters (batch systems or big data). Data is collected through the users' communities monitoring system.	10 active users. 8 from CMS plus 2 from AMS. NOTE: Users mentioned here for CMS can be checked in the historical monitoring of the Experiment filtering by siteName. Regarding AMS we still don't have a central service storing this and we'll take care of it in the upcoming months.	32 users. NOTE: to make the estimation homogeneous and experiment independent we take the number from Infrastructure Manager.
Usage: CPU time and storage consumed by DODAS at Bari and CNAF	0	CNAF and Bari resources made available for the TS. Data will be collected both from the DODAS monitoring system and accounting at two sites. (These are new resources, installed and configured for the EOSC-hub project)	BARI: "CPU Hours": 148,051.78, "Disk GB-Hours": 792,542.91 (risultati dal 2018-01-01 CNAF:"CPU Hours": 308,068.78, "Disk GB-Hours": 5,986,141.3 Value taken from the underling Openstack Provider.	BARI: "CPU Hours": 1,122,077.27, "Disk GB-Hours": 5173505.44, CNAF: "CPU Hours": 541,744.2, "Disk GB-Hours": 9,798,183.68
Usage: number of jobs	0	Number of grid/cloud jobs submissions over the measurement's period using the clusters instantiated through the DODAS TS (These are new resources, installed and configured for the EOSC-hub project)	~ 30k (11,894 (CMS) + 17,465 (OpenData)) + ~20k (AMS) NOTE: while OpenData belong to CMS this is a new Use case so for the sake of completeness we consider this as a new activity always related to CMS. NOTE2: Also, in that case number of AMS Jobs is not tracked in a central service. While we've the source of the information in the HTCondor logs, we are not storing them in a persistent manner. We'll improve this in the upcoming months.	522,933 (CMS) + ~600k (AMS) NOTE: numbers of AMS Jobs are not tracked in a central service. While we've the source of the information in the HTCondor logs, we are not storing them in a persistent manner. Still work in progress
Usage: number Clouds accessible through DODAS	0	Number of Cloud Providers used to generate complete DODAS Clusters Metric will be based on the deployments registered on the DODAS PaaS Orchestrator / Infrastructure Manager / Identity and Access Management and Experiment Dashboard.	2 (Imperial College + T-System) These are taken from IM and CMS Dashboard. About T-System: Both AMS and CMS using this IaaS provider.	4 (Imperlial College, T-System and Google Cloud and Amazon) Both T-System and Google Cloud have been used by AMS and CMS experiments
Usage: Total Number of Cluster deployments	0	Number of cluster deployments made through the DODAS Core Services. Metric will be based on the deployments registered on the DODAS PaaS Orchestrator and Infrastructure Manager	622 distinct cluster deployments. Value taken from IM Database	1,084 distinct cluster deployments

Number and names of the countries reached	1	sum of individual users + communities Metric based on the aggregated information on users registered on the DODAS-IAM and users submitting jobs on the clusters instantiated through DODAS Baseline is based on the number of users registered in DODAS-IAM at the beginning of project.	3 Those are values taken from IAM-Dodas service.	4
Satisfaction	not applicable	Periodic satisfaction feedback reports, on a scale of 1 to 5, will be requested per reporting period to the uses registered to DODAS-IAM, and to communities they represent	4.5 This is a mean value based on the answers we got from the use cases/communities' representatives. NOTE: For the upcoming months we are implementing a more automated system for rating the DODAS satisfaction.	Not available
Communities: number of scientific communities and/or use cases adopting DODAS	1	New communities adopting DODAS. Data will be taken from the DODAS-IAM - TS's authentication and authorization system, where new communities will be registered under different Groups Baseline is the CMS community	4 (CMS, AMS, ImpCollege, OpenData) Number come from the group organization of DODAS-IAM	5 (CMS, AMS, Imperial College, OpenData and Virgo)
Visits: number of visit/requests to the DODAS core services	0	Number of people registered in the DODAS-IAM service. Since we refer to DODAS TS services the baseline is 0 since those resources were not there before.	31 "Number of people registered in the DODAS-IAM service."	56
EOSC-hub website views	not applicable	Google analytics (from WP3)	92	135
Marketplace views	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	57
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	0

3.2.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	D. Spiga et al. “DODAS: How to effectively exploit heterogeneous clouds for scientific computations”, PoS(ISGC 2018 & FCDD)024, DOI: https://doi.org/10.22323/1.327.0024

3.2.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings

Period 1	• DODAS: How to effectively exploit heterogeneous clouds for scientific computations
	  ○ http://indico4.twgrid.org/indico/event/4/session/19/contribution/29
	• Exploiting private and commercial clouds to generate on-demand CMS computing facilities with DODAS
	  ○ https://indico.cern.ch/event/587955/contributions/2937198/attachments/1682105/2702791/CHEP-2018-Spiga.pdf
	• BoF: HPC, Containers and Big Data Analytics: How can Cloud Computing contribute to the New Challenges
	  ○ https://2018.isc-program.com/?page_id=10&id=bof138&sess=sess357
	• The AMS and DAMPE computing models and their integration into DODAS
	  ○ https://agenda.infn.it/materialDisplay.py?contribId=116&sessionId=17&materialId=slides&confId=15310
		A lot of meeting and internal discussions with AMS researchers.	no trainings

Period 2	• Using DODAS as deployment manager for smart caching of CMS data management system
	  ○ https://indico.cern.ch/event/708041/contributions/3276221/
	• Dynamic On Demand Analysis Service
	  ○ https://events.ego-gw.it/indico/getFile.py/access?contribId=11&resId=0&materialId=slides&confId=77
	• Vacuum model for job execution
	  ○ https://indico.cern.ch/event/759388/contributions/3361772/attachments/1815562/2968683/20190321-mcnab-vacuum.pdf
	• DODAS as no CE solution
	  ○ https://indico.egi.eu/indico/event/4431/session/16/contribution/99
		Several internal meeting with AMS, CMS and Virgo community which recently started exploiting resources.	Training event in the context of SOS18 school: https://agenda.infn.it/event/15534/sessions/5373/#20180920

3.3 DARIAH - DARIAH Science Gateway

Description	The DARIAH (Digital Research Infrastructure for the Arts and Humanities) Thematic Service (TS) aims to enhance and improve the usage of the cloud-based services and technologies in the domain of the digital arts and humanities research. It will enable end-users to seamlessly store, describe (metadata) and share their datasets, discover, browse and reuse datasets shared by the others and to perform analysis on various data volumes. The DARIAH TS is providing the following services: • DARIAH Science Gateway, • Invenio-based repository in the cloud, • DARIAH repository (based on CDSTAR. The DARIAH Science Gateway is a web-oriented portal, developed during the EGI-Engage project (DARIAH Competence Centre) and is specially tailored for the researchers coming from digital arts and humanities disciplines. It currently offers several cloud-based services and applications: Semantic and Parallel Semantic Search Engines (SSE, PSSE), DBO@Cloud, Workflow Development and supports several file transfers protocols. The Invenio-based repository is the cloud is a service that enables researchers and scholars to easily create, deploy and configure their own Invenio-based repository and host it on the cloud infrastructure (Federated Cloud). The service aims to a smaller research groups lacking in adequate technical support and budget to acquire their own infrastructure for hosting data repositories. DARIAH repository is a new service based on the Common Data Storage ARchitecture (CDSTAR), a system for storing and searching objects in research projects.
Task	T13.1.3
URL	DARIAH Science Gateway - https://dariah-gateway.lpds.sztaki.hu/ DARIAH repository - https://projects.gwdg.de/projects/dariah-de-repository Invenio-as-a-Service portal - https://dariah-portal.cloud.ba.infn.it
Service Category	Thematic Services
Service Catalogue	https://eosc-hub.eu/catalogue/DARIAH%20Science%20Gateway https://marketplace.eosc-portal.eu/services/dariah-science-gateway
Location	INFN (IT), SZTAKI (HU), GWDG (GER)
Duration	M01-M36
Modality of access	On the DARIAH Science Gateway, services SSE, PSSE and DBO@Cloud can be freely used (on authentication is required). All other services as well as Invenio-based repository and DARIAH repository require authentication. All services are free of charge.
Support offered	The training material (presentations, demos, and training videos) on how to access and exploit core DARIAH services will be prepared. Training events (workshops and hackathons) will take place at major DARIAH and other relevant digital arts and humanities events and conferences.
Operational since	non-EOSC-hub versions: Sep 2016 (DARIAH SG), June 2017

3.3.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE37	GWDG	6,260 €	2.00	12,520	3,130.00	15,650	100%	15,650.0	-
BE55	MTA-SZTAKI	5,200 €	3.00	15,600	3,900.00	19,500	100%	19,500.0	-
BE60	RBI	5,200 €	5.00	26,000	6,500.00	32,500	100%	32,500.0	-

3.3.2 Definitions

User: Individual users from digital arts and humanities research domain (no registration required). Members of the DARIAH-EU community (with a valid DARIAH IdP account). Have the access right to upload and modify records on the repositories and request cloud infrastructure and services via DARIAH SG.

3.3.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users: Number of registered users	36	Number of registered users of the sub-services (users with valid DARIAH IdP account)	36	40
Visits: Number of visits	249	Number of visits of the sub-services collected via Google Analytics	77	173
Usage: number of supported services/applications on the gateway	5	Number of end-user applications and user-cases based on the DARIAH TS services. Number of new applications integrated into DARIAH SG (number of new portlets). Number of external services accessing to DARIAH TS services via APIs.	5	5
Number and names of the countries reached	10	Based on the IPs, measured using Google Analytics	10	10
Satisfaction	not applicable	from WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	10	109
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	86

Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	0

3.3.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	DORN, Amelie et al. Opening up traditional cultural knowledge by means of European infrastructures: the examples of exploreAT ! & EGI Engage. Revista de Humanidades Digitales, [S.l.], v. 3, mar. 2019. ISSN 2531-1786. Disponible en: http://revistas.uned.es/index.php/RHD/article/view/23188. Fecha de acceso: 31 jul. 2019 doi: https://doi.org/10.5944/rhd.vol.3.2019.23188

3.3.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	Collaboration in social sciences and humanities in a networked European research area [web]
Period 2	no activities	no activities	no trainings

3.4 EGI - Application store

Description	The EGI Applications Database (AppDB) is a central service that stores and provides to the public, information about: ● software solutions in the form of native software products and/or virtual appliances, ● the programmers and the scientists who are involved, and ● publications derived from the registered solutions ● enabling users to deploy and manage Virtual Machines to the EGI Cloud infrastructure through the VMOps Dashboard Reusing software products, registered in the AppDB, means that scientists and developers may find a solution that can be directly utilized on the European Grid & Cloud Infrastructures without reinventing the wheel. This way, scientists can spend less or even no time developing, porting or even using a software solution to the Distributed Computing Infrastructures (DCIs). AppDB, thus, aims to avoid duplication of effort across the DCI communities, and to inspire scientists less familiar with DCI programming and usage.
Task	T13.3.1
URL	https://appdb.egi.eu/
Service Category	Collaborative Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	IASA (Greece)
Duration	M01-M36
Modality of access	All the services are free at the point of use. The software repositories do not require any registration. The other services require authentication and in some cases registration, using either institutional credentials or personal certificates released by IGTF federation.
Support offered	Technical support is provided via the helpdesk central support team, and by the individual service providers. EGI Outreach activities include also webinars, trainings, and hands-on sessions during conferences and events.
Operational since	2008

3.4.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners

BE39	IASA	5,000 €	24.00	120,000.00	30,000.00	150,000	70%	105,000.0	45,000

3.4.2 Definitions

User: Three types of users have been identified, (a). Researchers (account owners), (b) typical visitors (anyone with or without account), (c) Cloud Resource Providers

3.4.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: Nb of researchers	988	Extracted from the database. Total number of person profiles at the end of the reporting period.	1,023	1,069
Users: Nb of Cloud Resource Providers	18	Extracted from the database. Total number of the cloud resource providers using AppDB for retrieving Virtual Appliances Measurements will be taken at the end of the reporting period.	19	32
Usage: Nb of visits	Not available	Results are extracted from a local instance of Matomo (Piwik), which is an open analytics platform. Count of the visits within the reporting period. If someone visits the service for the first time, or if someone visits a page or downloads a file more than 30 minutes after their last page view, this will be recorded as a new visit.	89,843	62,465
Usage: Nb of SW items updated (incl new registrations)	15	Extracted from the database. Count of the items that got updated within the reporting period. New registrations are also included.	16	5
Usage: Nb of SW releases submitted	40	Extracted from the database. Count of the new SW releases submitted to the AppDB system within the reporting period.	35	21
Usage: Nb of Virtual Appliances updated (incl. new registrations)	15	Extracted from the database. Count of the items that got updated. New registrations are also included.	28	37

Usage: Nb of Virtual Appliance versions submitted	45	Extracted from the database. Count of the new Virtual Appliance versions submitted to the AppDB system.	59	55
Usage: Nb of VMs instantiated using the AppDB VMOps dashboard	Not available	Extracted from the database. Count of the Virtual Machines instantiated at Cloud resource providers by the AppDB VMOps service within the reporting period.	535	600
Number and names of the countries reached	55	Results are extracted from a local instance of Matomo (Piwik), which is an open analytics platform Count and list of items within the reporting period.	56	84
Satisfaction	Not applicable	from WP4	Number of responses: 17 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 35.3% • Somewhat satisfied 41.2% • Neither satisfied nor dissatisfied 17.6% • Somewhat dissatisfied 5.9% • Very dissatisfied 0.0% How would you rate the quality of the service? • Very high quality 11.8% • High quality 64.7% • Neither high nor low quality 17.6% • Low quality 5.9% • Very low quality 0.0% How would you rate the quality of documentation and customer support? • Very high quality 0.0% • High quality 47.1% • Neither high nor low quality 52,9% • Low quality 0.0% • Very low quality 0.0%	Number of responses: 3 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 0.0% • Somewhat satisfied 66.6% • Neither satisfied nor dissatisfied 33.3% • Somewhat dissatisfied 0.0% • Very dissatisfied 0.0% How would you rate the quality of the service? • Very high quality 0.0% • High quality 33.3% • Neither high nor low quality 66.6% • Low quality 0.0% • Very low quality 0.0% How would you rate the quality of documentation and customer support? • Very high quality 0.0% • High quality 66.6% • Neither high nor low quality 33,3% • Low quality 0.0%
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.

Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace

3.4.4 Scientific publications

The installation does not directly produce scientific results; it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.4.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.5 EGI - Applications on-demand

Description	Applications on Demand gives you access to online applications and application-development and hosting frameworks to support compute-intensive data analysis. Features: • User-friendly access to online applications that can be executed on parallel architectures (EGI Cloud and High-Throughput Compute) • Application development and hosting frameworks where custom applications can be executed on EGI Cloud Compute and High-Throughput Compute services • User support is available by an international network of consultants.
Task	T13.3.2
URL	https://marketplace.egi.eu/42-applications-on-demand-beta
Service Category	Common services
Service Catalogue	Service is not published on EOSC-hub website yet.

Location	• Application development and hosting framework 1 (WS-PGRADE): MTA SZTAKI, Budapest • Application development and hosting framework 2 (EC3): UPV, Valencia • Application development and hosting framework 3 (Catania Science Gateway - CSG): INFN, Catania
Duration	M01-M36
Modality of access	All the elements of the service are free at the point of use. Access is controlled via the Marketplace (commercial or other form of inappropriate users are blocked).
Support offered	Technical support is provided via the helpdesk central support team, and by the individual service providers. EGI Outreach activities include also webinars, trainings, and hands-on sessions during conferences and events.
Operational since	January 2017 (Alpha) April 2017 (Beta)

3.5.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE03	INFN	5,800 €	9.00	52,200	13,050.00	65,250	70%	45,675.0	19,575
BE55	MTA-SZTAKI	5,200 €	9.00	46,800	11,700.00	58,500	70%	40,950.0	17,550
BE22.2	UPV	5,000 €	9.00	45,000	11,250.00	56,250	70%	39,375.0	16,875

3.5.2 Definitions

User: A person requesting access to any of the applications or application development environments that are part of the service.

3.5.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17

# of users	5 (between March 2017-Dec. 2017)	Number of users requested access to the service. Access requests are received and approved via the Marketplace. (EGI/EOSC)	26	65
Usage	3 0 2	Number of new users per Application development/hosting environment: • EC3 (UPV) • WS-PGRADE (MTA SZTAKI) • CSG with Chipster (INFN) Basis is the requests through Marketplace, but that is double checked by the providers.	10 1 12 (2 requests to use the Jupyter notebooks, 1 request to access the EGI VMOps dashboard)	14 (EC3) 1 (WS-PGRADE) 29 (CSG) 7 (VMOps dashboard) 14 (Notebooks)
Number and names of the countries reached	3		14	21
Satisfaction	not applicable	From WP4	Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 100% • High quality 0% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 100% • High quality 0% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0%	Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 7% • Somewhat satisfied 58% • Neither satisfied nor dissatisfied 14% • Somewhat dissatisfied 7% • Very dissatisfied 14% How would you rate the quality of the service? • Very high quality 15.4% • High quality 46.1% • Neither high nor low quality 30.8% • Low quality 7.7% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 21.4% • High quality 21.4% • Neither high nor low quality 42.9% • Low quality 14.2% • Very low quality 0%

EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.

3.5.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	• "The EGI Applications on Demand service" paper in Future Generation Computer Systems (FGCS) journal https://www.egi.eu/wp-content/uploads/2019/04/1-s2.0-S0167739X18314481-main.pdf • "Changes of dimension of EEG/ECoG nonlinear dynamics predict epileptogenesis and therapy outcomes", Neurobiology of Disease, Volume 124, April 2019, pp. 373-378, https://doi.org/10.1016/j.nbd.2018.12.014 • "Molecular modelling and biological studies show that some μ-opioid receptor agonists might elicit analgesia acting as MMP-9 inhibitors", Future Medical Chemistry, April 2019, DOI: 10.4155/fmc-2018-0535

3.5.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	The EC3 portal in the EGI Applications on Demand service: how to create virtual elastic clusters in the EGI Federation to deploy elastic and virtual clusters over multi-clouds" was organized on May 16th, 2019. Agenda: https://indico.egi.eu/indico/event/4537/ A total of 29 participants attended the webinar.

3.6 EGI - Check-In

Description	The EGI Check-in service is an Identity and Access Management solution that makes it easy to secure access to services and resources. Through Check-in, users are able to authenticate with the credentials provided by the IdP of their Home Organisation (e.g. via eduGAIN), as well as using social identity providers, or other selected external identity providers. Check-in provides an intuitive interface for communities to manage their users and their respective groups, roles and access rights. For communities operating their own group management system, Check-in has a comprehensive list of connectors that allows to integrate their systems as externally managed Attribute Authorities.
Task	T13.2.1
URL	aai.egi.eu
Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/catalogue/EGI%20Check-in https://marketplace.eosc-portal.eu/services/egi-check-in
Location	Athens, Greece
Duration	M01-M36
Modality of access	All the services are free at the point of use. The software repositories do not require any registration. The other services require authentication and in some cases registrati on, using either institutional credentials or personal certificates released by IGTF federation.
Support offered	Technical support is provided via the helpdesk central support team, and by the individual service providers. EGI Outreach activities include also webinars, trainings, and hands-on sessions during conferences and events.
Operational since	01/01/2018

3.6.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE13	CESNET	4,200 €	6.00	25,200	6,300.00	31,500	70%	22,050.0	9,450

BE36	GRNET	6,200 €	39.00	241,800	60,450.00	302,250	70%	211,575.0	90,675
BE67.3	Nikhef	8,000 €	11.50	92,000	23,000.00	115,000	70%	80,500.0	34,500

3.6.2 Definitions

User: Individual Users and Research communities willing to use EOSC-Hub Services and Service Providers

3.6.3 Metrics

Metric name	**Baseline**	**Define how measurement is done**	**Period 1 M1-M8**	**Period 2 M9-M17**
Number of registered users	92	Provided by Check-in User Registry	461	1,163
Number of user logins (per month)	200	Extracted from web server access logs	621	1,506
Number and names of integrated services providers	18	Provided by Check-in Service Provider admin UI	31	69
Number and names of user communities accessing resources via Check-in	2	Provided by Check-in User Registry	4	12
Number and names of the countries reached	15	Extracted from web server access logs	49	59

Satisfaction	Not applicable	from WP4	Number of responses: 4 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 33% • High quality 77% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 77% • Neither high nor low quality 33% • Low quality 0% • Very low quality 0%	Number of responses: 2 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 100% • High quality 0% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 50% • High quality 50% • Neither high nor low quality • Low quality 0% • Very low quality 0%
EOSC-hub website views	Not applicable	Google analytics (from WP3)	1	87
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	101
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	0

3.6.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.6.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	EOSC-hub tech-talk: AAI https://indico.egi.eu/indico/event/4086/	no activities	no trainings
Period 2	DI4R2018 - EOSC Service Architecture: AAI integration activities in the context of EOSC-Hub https://indico.egi.eu/indico/event/3973/session/34/?slotId=0#20181009 DI4R2018 - Towards the EOSC AAI service for research communities https://indico.egi.eu/indico/event/3973/session/14/?slotId=0	ESFRI Workshop on RIs and EOSC: AARC Blueprint Architecture and its evolution – towards the EOSC AAI for research communities https://www.esfri.eu/esfri-events/esfri-ris-eosc-liaison-workshop?qt-event=1#qt-event	EOSC-hub Week 2019 - Training on the EOSC-hub AAI: the service provider perspective https://www.eosc-hub.eu/events/eosc-hub-week-2019/programme/training-aai-service-provider-perspective

3.7 EGI - DIRAC

Description	The service is a workload management service used to distribute computing tasks among the available resources both HTC and cloud. EGI Workload manager (also known as DIRAC4EGI) is a service is provided to the EGI community as • A workload management service used to distribute the users' computing tasks among the available resources both HTC and cloud. • Service for managing massively distributed data. The service is a DIRAC instance on EGI federated resource. It is coordinated by the EGI Foundation and operated by IN2P3 on resources provided by CYFRONET. Workload Manager provides a Workload Management Service (WMS) for High Throughput Computing resources based on DIRAC, which improves the general job throughput compared with native management of grid computing resources. Cloud computing resources are managed as well in a uniform and transparent way for the users. • Workload Manager configuration allows to choose appropriately computing and storage resources maximising their usage efficiency for particular user requirements. • Workload Manager File Catalogue includes replica, metadata and provenance functionality simplifying the development of scientific application accessing data in distributed environments. • All the Workload Manager functionality is accessible through friendly user interfaces, including a Web Portal. It has an open architecture and allows easy extensions for the needs of particular applications. DIRAC data and job management systems ensure proven production scalability up to peaks of more than 100 thousand concurrently running jobs for the LHCb experiment. This is by far large enough for the computing requirements of environmental science in a sensible temporal horizon. This service platform eases scientific computing by overlaying distributed computing resources in a transparent manner to the end-user. For example, WeNMR, a structured biology community, uses DIRAC for a number of community services, and reported an improvement from previous 70% to 99% with DIRAC job submission. The benefits of using this service include but not limited to: • Maximize usage efficiency by choosing appropriately computing and storage resources on real-time • Large–scale distributed environment to manage and handle data storage, movement, accessing and processing • Handle job submission and workload distribution in a transparent way • Interoperable, handle different storage supporting both cloud and grid capacity • User-friendly interface that allows to choose among different DIRAC services, manage the complete lifecycle from search of data to processing analysis
Task	T13.3.4
URL	Workload Manager in EGI Wiki
Service Category	Common Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	IN2P3 and CYFRONET
Duration	M01-M36

Modality of access	All the services are free at the point of use. The software repositories do not require any registration. The other services require authentication and in some cases registration, using either institutional credentials or personal certificates released by IGTF federation.
Support offered	Technical support is provided via the helpdesk central support team, and by the individual service providers. EGI Outreach activities include also webinars, trainings, and hands-on sessions during conferences and events.
Operational since	2014

3.7.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE04	ACK CYFRONET	5,500 €	12.00	66,000	16,500.00	82,500	70%	57,750.0	24,750
BE21.3	IN2P3-CPPM	4,652 €	6.00	27,912	6,978.00	34,890	70%	24,423.0	10,467

3.7.2 Definitions

User: The service suits for the established Virtual Organization communities, long tail of users, SMEs and Industry

- EGI and EGI Federation participants
- Research communities

3.7.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	500	DIRAC Registry, DIRAC Accounting	524	577
Usage	4.5millon jobs	DIRAC Accounting	4.7 Million jobs	11.2 Million jobs

Number and names of the countries reached	10	DIRAC Accounting	12	12
Satisfaction	not applicable	From Wp4	Very satisfied 25% Somewhat satisfied 50% Neither satisfied nor dissatisfied 25%	Very satisfied 25% Somewhat satisfied 75%
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.

3.7.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.7.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings

Period 2	• Support EISCAT-3D CC • Enable VIRGO to setup the service and success with job submission • Complete integration with OpenCoastS • Enable job submission to Cloud for WeNMR • DIRAC user meeting, 14-17 May 2019, London	Engage new communities (LoFAR, ELI-NP) during Design your e-Infrastructure workshop, 9 May, Amsterdam	Virgo Winter School, 7-8 Nov 2018

3.8 EGI - GOCDB

Description	GOCDB (http://goc.egi.eu) is a central information repository consisting of two parts: a web portal interface for CRUD operations and a REST API for data queries. It is a key tool for the configuration management of the EGI Federation and WLCG. It is a definitive information source, with the emphasis on user communities to maintain their own data. It is intentionally designed to have no dependencies on other operational tools (other than the EGI CheckIn service to provide an alternative authentication mechanism).
Task	T13.2.2
URL	https://goc.egi.eu
Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/support-services/Configuration%20database%20(GOCDB)
Location	UK
Duration	M01-M36
Modality of access	GOCDB is accessed through a web portal by users and an API for automated processes. Some API queries do not require authentication, others require IGTF X509 certificates. Authentication for the web portal is by X509 user certificate or through the EGI Check-in service. Un-registered authenticated users can access basic data, to make changes users must register with the service and be given a role over the site or 'NGI' they wish to change. All the underlying codebase is published on GItHub under an Apache 2 license.
Support offered	Technical support is provided via the helpdesk. Extensive user documentation is also available. The service is supported during working hours.
Operational since	The first version of GOCDB went into production circa 2004.

3.8.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE65	STFC	6,600 €	10.00	66,000	16,500.00	82,500	70%	57,750.0	24,750

3.8.2 Definitions

User: GOCDB users are

- Service providers that are part of federation and publish information related to service provisioning. Information is necessa ry to manage the infrastructure.
- Individuals representing Service providers. Maintaining information related to services.
- Services that depend on information gathered by the installation and connect to it to retrieve information.

3.8.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Number and names of the countries reached	70 (August 2018)	Each site with an entry in GOCDB has a field defined for "country" which is selected from a pre-populated list by the site administrator. We count the number of unique countries appearing in site list PI output (https://goc.egi.eu/gocdbpi/public/?method=get_site).	70	70
Users: Number of production service providers registered in GOC DB	694 (August 2018)	Counting registered service providers (aka sites) registered in GOCDB.	695	699
Users: Number of unique individuals with role in GOCDB	1551 (August 2018)	Counting unique individuals with assigned role in GOCDB. This is measured by counting those users appearing in the relevant PI query (https://goc.egi.eu/gocdbpi/private/?method=get_user) that have a role over any site.	1,552	1,547

Users: Number unique IPs connected to GOCDB over rolling month	This metric was not readily available for the baseline (because of how we currently handle logs) but will be available for period 1.	This will be the number of unique IP addresses logged in our load balancers contacting GOCDB over the final 28 days of the reporting period.	1,959	2,607
Usage: Number of queries to the API over a 24-hour period.	79168 (August 2018)	This is the number of queries logged by GOCDB to the GOCDB PI over the day before the stat is collected.	98,743	86,581

Satisfaction	not applicable	From WP4	Number of responses: 6 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 50% • Somewhat satisfied 50% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 50% • High quality 50% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 50% • High quality 33% • Neither high nor low quality 17% • Low quality 0% • Very low quality 0%	Number of responses: 3 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 67% • High quality 33% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 67% • High quality 33% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0%
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	11
Marketplace views	not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.8.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.8.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.9 EGI - Operations portal

Description	The Operations Portal is the central portal for operations management of the EGI federated infrastructure. The Operations Portal offers a portfolio of management tools that includes: dashboards (Detect, track and follow-up problems and incident on the resource centers), tools to manage Virtual Organisation (Register, update, consult information about virtual communities) , communications tools (Contact and inform the different actors of the project for specific problems or global announcements), indicators and metrics (distribution of users , user numbers evolution, scientific discipline and VO distribution) .
Task	T13.2.9
URL	https://operations-portal.egi.eu
Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/support-services/Operations%20Portal
Location	IN2P3 Computing Center, Villeurbanne, France
Duration	M01-M36
Modality of access	All the services are free at the point of use. The software repositories do not require any registration. The other services require authentication and in some cases registration, using either institutional credentials or personal certificates released by IGTF federation.

Support offered	Technical support is provided via the helpdesk central support team, and by the individual service providers. EGI Outreach activities include also webinars, trainings, and hands-on sessions during conferences and events.
Operational since	October 2004

3.9.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE21.4	CC-IN2P3	4,652 €	36.00	167,472	41,868.00	209,340	70%	146,538.0	62,802

3.9.2 Definitions

User: unique IP without traffic generated by robots, worms, or replies with special HTTP status codes

3.9.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: Nb of users	1,000	Results are extracted from local instance of Matomo (Piwik) which is an open analytics platform. Number of unique IP visiting pages during the report period .	1,082	1,319
Usage: Nb of Pages	45,000	Results are extracted from local instance of Matomo (Piwik) which is an open analytics platform. Number of visited pages during the report period	73,000	74,324
Number and names of the countries reached	45	Results are extracted from local instance of Matomo (Piwik) which is an open analytics platform.	59	62

Satisfaction	Not applicable	from WP4	Number of responses: 6 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 83% • Somewhat satisfied 17% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 50% • High quality 50% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 17% • High quality 67% • Neither high nor low quality 17% • Low quality 0% • Very low quality 0%	Number of responses: 3 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 67% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 33% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 67% • High quality 33% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 67% • High quality 0% • Neither high nor low quality 33% • Low quality 0% • Very low quality 0%
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	6
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

Marketplace Orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.9.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.9.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.10 EGI - Software repositories

Description	The EGI Software Repository ecosystem is a collection of services for supporting the management and the provisioning of the software artefacts that compose the UMD (Unified Middleware Distribution) and the CMD (Cloud Middleware Distribution), the Community Repositories, and the operational tools developed by the consortium. The following sub-services are included: • Repository back-end • Repository front-end • Composer • UMD, CMD & Community repositories The Repository back-end and the Composer services are the units within the EGI Software Repository ecosystem that are responsible for the construction of UMD and CMD releases and their related repositories. The Repository front-end is for making the produced repositories and all the required information, available to the public. Finally, the EGI Software repository is strongly integrated with the Application Database (AppDB). In this case, the AppDB acts as the backend "engine" for creating and managing the Community repositories populated through the EGI Software Repository system.
Task	T13.3.3
URL	http://repository.egi.eu/
Service Category	Federation services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	IASA (Greece)
Duration	M01-M36
Modality of access	All services remain free at the point of use. Software repositories do not require any registration. Other services may require authentication and, in some cases, registration, using either institutional credentials or personal certificates released by the IGTF federation.
Support offered	Technical support is provided by the helpdesk central support team and by individual service providers. Moreover, webinars, training, and hands-on sessions may be provided by EGI Outreach activities during conferences and events.

Operational since	2011

3.10.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE39	IASA	5,000 €	18.00	90,000	22,500.00	112,500	70%	78,750.0	33,750

3.10.2 Definitions

User: Remote nodes/systems

3.10.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: Nb of users	320	At least, all the EGI Cloud & HTC resource providers	320	320
Usage: Nb of visits	not available	Results are extracted from a local instance of Matomo (Piwik), which is an open analytics platform. Count of visits within the reporting period. If a someone visits the service for the first time, or if someone visits a page or downloads a file more than 30 minutes after their last page view, this will be recorded as a new visit.	75,551	98,364
Usage: Nb of packages	14400	Extracted from the database. Total number of packages (RPMs & DEBs), at the end of the reporting period.	45,896	47,375
Usage: Nb of package downloads	not available	Results are extracted from a local instance of Matomo (Piwik), which is an open analytics platform. The total number of downloads made within the reporting period. Only downloads of registered packages (RPMs & DEBs) will be taken into account.	18,959,533	13,979,566
Number and names of the countries reached	not available	Results are extracted from a local instance of Matomo (Piwik), which is an open analytics platform Count and list of items within the reporting period	64	64

Satisfaction	Not applicable	From WP4	Number of responses: 5 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 80% • Somewhat satisfied 20% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 20% • High quality 80% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 40% • Neither high nor low quality 20% • Low quality 20% • Very low quality 20%	Number of responses: 2 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 50% • High quality 50% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 50% • High quality 0% • Neither high nor low quality 50% • Low quality 00% • Very low quality 20%
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.

Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.10.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.10.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.11 EOSC-hub - Accounting

Description	The Accounting system collects, aggregates, stores, and displays compute (serial and parallel jobs), storage, and cloud resource usage data collected from Resource Centres of the EOSC-hub infrastructure. Accounting information is gathered from distributed sensors into a central Accounting Repository where it is processed to generate summaries that are made available through the Accounting Portal. The Accounting Repository, based on the APEL software, has a MySQL database backend, and needs to ensure the exchange of accounting information with peer e-Infrastructures. The Accounting Portal receives and stores the site, user, and VO level aggregated summaries generated by the Accounting Repository and provides views via a web portal, for example, by grouping sites in a country on custom time intervals. The databases are organized into a CPU record database, a User record database, and a topology database. The Accounting repositories store compute (serial and parallel jobs), storage, and cloud resource accounting data collected from Resource Centres of the EGI Federation. Accounting information is gathered from distributed sensors into a central accounting repository where it is processed to generate summaries that are available through the EGI Accounting Portal. The Accounting Repository, based on the APEL software, has a MySQL database backend, and needs to ensure the exchange of accounting information with peer e-Infrastructures. The Accounting Portal receives and stores the site, user, and VO level aggregated summaries generated by the Accounting Repository and provides views via a web portal, for example, by grouping sites in a country on custom time intervals. The databases are organized into a CPU record database, a User record database, and a topology database.
Task	T13.2.5
URL	https://accounting.egi.eu/
Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/support-services/Accounting
Location	UK and Spain
Duration	M01-M36
Modality of access	Do not require user authentication for basic access, which is requested for advanced features.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	2004

3.11.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE22.1	CESGA	4,750 €	9.00	42,750	10,687.50	53,438	70%	37,406.3	16,031
BE65	STFC	6,600 €	18.00	118,800	29,700.00	148,500	70%	103,950.0	44,550

3.11.2 Definitions

User: Site administrators, service providers, managers of research communities, infrastructure managers, other installations

3.11.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: Number of users	8,997 (June 2018)	Distinct UserDNs contained on Accounting data, this covers the users that have accounted jobs in the last 18 months since earlier ones are anonymized. Pilot and Robot jobs group many users that cannot be known, so the real number will be bigger by a unknown factor.	9,092	9,534
Number and names of the countries reached	47	From https://accounting.egi.eu/egi/countries/ Countries with accounting in the last year, the Country names were copy pasted from the CSV output	47	46

Satisfaction	Not applicable	From WP4	Number of responses: 2 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 50% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 50% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 00% • High quality 50% • Neither high nor low quality 50% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 50% • Neither high nor low quality 0% • Low quality 50% • Very low quality 0%	Number of responses: 1 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 00% • High quality 100% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 100% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0%
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	6
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

Marketplace Orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.11.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.11.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	Presentation at the EOSC-hub week meeting	no activities	no trainings

3.12 EOSC-hub - ARGO Messaging Service

Description	The ARGO Messaging Service is a Publish/Subscribe Service, which implements the Google PubSub protocol. It provides an HTTP API that enables Users/Systems to implement message-oriented service using the Publish/Subscribe Model over plain HTTP. In the Publish/Subscribe paradigm, Publishers are users/systems that can send messages to named-channels called Topics. Subscribers are users/systems that create Subscriptions to specific topics and receive messages.
Task	T13.2.8
URL	https://argoeu.github.io/
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	Athens, Zagreb
Duration	M01-M36

Modality of access	require the users to be authenticated, either with institutional credentials or IGTF personal certificates or service tokens.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	2013

3.12.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE36	GRNET	6,200 €	10.25	63,550	15,887.50	79,438	70%	55,606.3	23,831
BE64	SRCE	4,200 €	3.75	15,750	3,937.50	19,688	70%	13,781.3	5,906

3.12.2 Definitions

User: Sites, Service Providers, Operation Centers, Central Operations teams.

3.12.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Usage: Number of messages send via the Argo Messaging Service (per day)	300,000	Count Messages sent via the logs	514,503	299,791
Users: Number and names of services using the AMS	2 (Operations Portal, Monitoring)	Count Services Authorised to use the Service.	2 (Operations Portal, Monitoring)	3 (Operations Portal, Monitoring, APPDB)
Number and names of the countries reached	3	Extracted from server access logs	3	3
Satisfaction	Not applicable	From WP4	No feedback received	No feedback received

EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	Not applicable	From Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.12.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.12.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.13 EOSC-hub - ARGO Monitoring

Description	ARGO Monitoring is a flexible and scalable framework for monitoring status, availability and reliability provided by infrastructures with medium to high complexity. It can generate multiple reports using customer defined profiles (e.g. for SLA management, operations etc) and has built-in multi-tenant support in the core framework.
Task	T13.2.10
URL	http://argo.egi.eu/

Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/support-services/Argo%20Service%20monitoring
Location	Athens, Lyon, Zagreb
Duration	M01-M36
Modality of access	The service does not require user authentication for basic access.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	2013

3.13.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE21.4	CC-IN2P3	4,652 €	6.50	30,238	7,559.50	37,798	70%	26,458.3	11,339
BE36	GRNET	6,200 €	50.00	310,000	77,500.00	387,500	70%	271,250.0	116,250
BE64	SRCE	4,200 €	15.00	63,000	15,750.00	78,750	70%	55,125.0	23,625

3.13.2 Definitions

User: Sites, Service Providers, Operation Centers, Central Operations teams.

3.13.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: ARGO Web UI statistics - Number of users (per month)	170	Extracted from web server access logs	310	322
Users: ARGO Web UI statistics - Number of sessions (per month)	580	Extracted from web server access logs	915	813
Usage: ARGO Web UI statistics - Number of visited pages (per month)	2,300	Extracted from web server access logs	3,212	4,700
Users: Number of NGIs monitored by ARGO	33	Count entries in Monitoring Engine(s)	33	31
Users: Number of Service providers (aka sites) monitored by ARGO	300	Count entries in Monitoring Engine(s)	277	300
Users: Number of Services monitored by ARGO	1,000	Count entries in Monitoring Engine(s)	1,581	1,108
Number of probes supported by ARGO	65	Count entries in Monitoring Engine(s)	78	80
Number and names of the countries reached	17	Google analytics for the portals	56	52
Satisfaction	Not applicable	From WP4	No feedback received	No feedback received
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	6
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.13.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.13.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.14 EOSC-hub - Marketplace

Description	EOSC-hub Marketplace (MP) is a user-facing platform where productional EOSC-hub services can be promoted, discovered, ordered and accessed. Interaction between the user and e-infrastructure involve numerous processes from a service management point of view which requires the Marketplace as a business tool which supports partial service catalogue management, order management, the management of service level agreements (SLAs, OLAs) and the service reporting. Functionalities offered by the Marketplace are: 1. Service catalogue management: Creation, publishing and updating the services in the MP backoffice. All services are classified and presented as part of a 3-level (service category, service, service option) hierarchy implemented to enhance user experience in the system. 2. Authentication: The login procedure including the user registration during the first access. 3. Discover and order services: Finding and ordering services within the Marketplace. The users can customise their orders selecting available service options and attributes. 4. Check-Out: Submitting a service order together with a set of information to profile it. 5. Order handling: basing on given information and procedures behind it a set of User Request is created, ready to be handled by the Operational Team. 6. SLA management: accepted user's order results in creating corporate or custom SLA for the user, available on the user dashboard.
Task	T13.2.6
URL	https://marketplace.eosc-hub.eu
Service Category	Collaborative Services
Service Portfolio url	Service is not published on EOSC-hub website yet.
Location	Poland

Duration	M11-M36
Modality of access	do not require user authentication for basic access, which is requested for advanced features.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	November 2018

3.14.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE04	ACK CYFRONET	5,500 €	9.00	49,500	12,375.00	61,875	70%	43,312.5	18,563

3.14.2 Definitions

User:

- EOSC - hub service providers and service owners to publish and manage service and service instances to users (in scope of order management)
- end users (researchers, SMMs, project representatives etc.) to search and find suitable services, asking and gaining access to them
- EOSC-hub operations - for additional operations around order management (categorisation management, accepting services to be published in the MP etc.)

3.14.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M11-M17
Users: Number of entries (services) in the MP	18 (EGI and EUDAT)	Retrieved from the MP back office - number of services available for the users	not applicable	75
Users: Number of views (unique IPs)	not applicable	Google analytics	not applicable	1,107

Number and names of the countries reached - based on unique views	Data not reported	Google analytics	not applicable	47
Usage: Number or orders issued	not applicable	Retrieved from the MP back office	not applicable	94
Satisfaction	not applicable	From WP4	not applicable	No results received
EOSC-hub website views	not applicable	Google analytics (from WP3)	not applicable	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace views	not applicable	Google analytics (from Marketplace)	not applicable	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	not applicable	from Marketplace	not applicable	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.14.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.14.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.15 EOSC-hub - RCAuth Online CA

Description	The RCauth.eu service is a token translation service (TTS) that can on-the-fly identify entities based on federated credentials and issue to them PKIX credentials in real-time, focusing on converting SAML-to-PKIX. It is based on the results of the AARC (AARC Consortium, 2015) Pilot to introduce CILogon (Basney, Fleury, & Gaynor, 2014) like capabilities for European Infrastructures. The AARC pilot system comprises several components, as discussed in its sustainability model study (Groep, 2016). The Delegation Service is identified in the model study as a single component that would particularly benefit from having just a single instance for Europe, serving all relying parties equally in an open, collaborative, and non-discriminatory fashion. It should be open to all Research Infrastructures (both pan-European and otherwise) and the generic e-Infrastructures that would be accepting and relying on the credentials emanating from the RCauth.eu token translation service.
Task	T13.2.3
URL	https://rcauth.eu/
Service Category	Federation Services
Service Portfolio url	Service is not published on EOSC-hub website yet.
Location	Athens, Chilton Oxfordshire England, Amsterdam,
Duration	M01-M36
Modality of access	require the users to be authenticated, either with institutional credentials or IGTF personal certificates.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	summer 2016

3.15.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE36	GRNET	6,200 €	7.50	46,500	11,625.00	58,125	70%	40,687.5	17,438
BE67.3	Nikhef	8,000 €	7.50	60,000	15,000.00	75,000	70%	52,500.0	22,500

BE65	STFC	6,600 €	6.00	39,600	9,900.00	49,500	70%	34,650.0	14,850

3.15.2 Definitions

User: Users authenticating via a Federated Identity Management System (FIMS) operated by an eligible Registration Authority – typically a FIMS Identity Provider (IdP) operated by an academic or research organisation.

3.15.3 Metrics

Metric name	**Baseline**	**Define how measurement is done**	**Period 1 M1-M8**	**Period 2 M9-M17**
Number and names of user communities using RCauth CA for obtaining certificates	3	extrapolated from web server logs	3	3
Number of certificates issued by the RCauth CA	195	extrapolated from server logs	297	231
# of users	46	extrapolated from server logs	51	37
Number and names of the countries reached	Not available	Note: By design RCAuth Online CA is accessed only indirectly via Identity Providers / Proxy Identity Providers thus it does not receive information about to the actual origin of the requests.	not applicable	not applicable

Satisfaction	Not available	From Wp4	Number of responses: 1 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 0% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 100% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 0% • High quality 0% • Neither high nor low quality 100% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 0% • Neither high nor low quality 100% • Low quality 0% • Very low quality 0%	Number of responses: 1 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 100% • High quality 0% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 0% • High quality 100% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0%
EOSC-hub website views	Not available	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	Not available	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	Not available	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.15.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.15.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.16 EOSC-hub - Security Monitoring

Description	Pakiti provides a monitoring mechanism to check the patching status of Linux systems. Pakiti uses the client/server model, with clients running on monitored machines and sending reports to the Pakiti server for evaluation. The report contains a list of packages installed on the client system, which is subject to analysis done by the server. The Pakiti server compares versions against other versions which are obtained from various distribution vendors. Detected vulnerabilities identified using CVE identifiers are reported as the outcome, together with affected packages that need to be updated. Secant is a security cloud assessment framework that is used to check security characteristics of virtual machines and their images. The framework instantiates the machine in a contained environment and runs a set of security probes against it. The probes combine external and internal checks and aim at typical configuration error or vulnerabilities commonly misused by Internet attackers. Both Pakiti and Secant are provided as backend services that are used primarily by other services not the end user.
Task	T13.2.10
URL	https://github.com/CESNET/pakiti-server https://github.com/CESNET/secant
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	CESNET (Czech Republic)
Duration	M01-M36

Modality of access	Pakiti is accessed through a web portal by users and an API for automated processes. Users need to authentication using their X.509 certificates and process is granted based on roles in GOC DB and EGI SSO systems. Secant communicates with other services (AppDB) via message bus and requires they are properly authorized to send/get messages. All the underlying codebase is available from GiHub as open source.
Support offered	Technical support is provided via the central helpdesk.
Operational since	Pakiti: 2010 Secant: 2018

3.16.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE13	CESNET	4,200 €	9.00	37,800	9,450.00	47,250	70%	33,075.0	14,175

3.16.2 Definitions

User: Sites, Service Providers, Operation Centers, Central Operations teams, Security teams of Operations Centers and Infrastructures

3.16.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Usage: Number of sites reporting to Pakiti	Not available (number of production sites)	Retrieved from service records	188	152
Users: Number and names of services using Secant	1	Count from authorized services	1 (Application Store)	1 (Application Store)
Usage: Number of analysed images reported by Secant	Not available (depends on number of VAs in AppDB)	Retrieved from service logs	15	10

Number and names of the countries reached via Pakiti	Not available (depends on production sites)	Retrieved from service records	43	40
Satisfaction	Not applicable	From WP4	Number of responses: 2 Overall, how satisfied or dissatisfied are you with the received service? • Very satisfied 100% • Somewhat satisfied 0% • Neither satisfied nor dissatisfied 0% • Somewhat dissatisfied 0% • Very dissatisfied 0% How would you rate the quality of the service? • Very high quality 50% • High quality 50% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0% How would you rate the quality of documentation and customer support? • Very high quality 50% • High quality 50% • Neither high nor low quality 0% • Low quality 0% • Very low quality 0%	No data received
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.16.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.16.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.17 EOSC-hub - Service Portfolio Management Tool

Description	The Service Portfolio/Catalogue Management Tool (SPMT). SPMT makes it possible to manage definitions of the different classes of services and service components and it is designed following the FitSM service portfolio management process. The SPMT provides a programmatic interface and a web-user interface to the service portfolio and catalogue database (API and GUI). The tool facilitates the management of service definitions during the full lifecycle, from the service definition (which is created and progressively specified as part of the service portfolio) and later as an information object of the service catalogue.
Task	T13.2.7
URL	https://eosc.agora.grnet.gr & https://eosc-hub-devel.agora.grnet.gr (used for the demonstration of new features in a staging environment)
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	Athens, Greece
Duration	M01-M36
Modality of access	require the users to be authenticated, either with institutional credentials via EGI Check-IN and then Classified by the tool to the following roles SuperAdmin (Administrator of the tool), Admin (Manages and Reviews Services and Service Admins) , Service Admin (allowed to modify its own services), Observers (read only)
Support offered	Technical support will be provided via the central helpdesk.

Operational since	1/3/21018

3.17.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE36	GRNET	6,200 €	6.00	37,200	9,300.00	46,500	70%	32,550.0	13,950

3.17.2 Definitions

User: Service Providers that are part of EOSC-hub, Service Portfolio Managers

3.17.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Number of Services in Catalogue	0	counting entries in internal DB	43	43
Number of Services in Portfolio	0	counting entries in internal DB	30	30
Number of Users of the Service	0	counting entries in internal DB	30	41
Number and names of the countries reached	3	Extracted from web server access logs	34	57
Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.

Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.17.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.17.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.18 EUDAT - B2FIND

Description	B2FIND provides a discovery service allowing users to find distributed research data collections based on metadata steadily harvested from research data collections from EUDAT data centres and other community repositories. The service offers faceted browsing and it allows in particular to discover data that is stored through the EUDAT and EOSC storage services. Research communities and data providers benefit from publishing and giving visibility to their metadata and individual researchers from searching research data from everywhere and seeing data in the context with an across community approach.
Task	T6.1. / T13.4.2
URL	http://b2find.eudat.eu
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2FIND https://marketplace.eosc-portal.eu/services/b2find

Location	DKRZ (German Climate Computing Center)
Duration	M01-M36
Modality of access	B2FIND doesn't need registration for usage of the discovery portal.
Support offered	Technical support is provided via guidelines for data providers, a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2014

3.18.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE24	DKRZ	8,600 €	3.00	25,800	6,450.00	32,250	100%	32,250.0	-

3.18.2 Definitions

There are two kinds of usage or 'users':

- Data provider: Scientific Community or Research Infrastructure, interested in publishing meta data in B2FIND, to make their research data visible and searchable
- End user: Single scientist searching for research data

3.18.3 Metrics

Metric name	Baseline	Measurement	Period 1 M1-M8	Period 2 M9-M17
# of integrated data providers communities	19	check http://b2find.eudat.eu/group	19	22
# of users	20	Estimated visitors of the website per week	30	100
Usage	50	Estimated search requests (maybe multiple or combined requests by same user) per week	100	200

Number and names of the countries reached	not available	Data providers come from different countries over Europe or are international data registries Users come from all of the world: The search portal is open, and the origin of the visitors are not detected	9 ~20	10 ~30
Satisfaction	Not applicable	From WP4	Data not provided	Data not provided
EOSC-hub website views	Not applicable	Google analytics (from WP3)	71	112
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	263
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	4

3.18.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.18.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	B2FIND training at LifeWatch & ENVRIplus International Summer School | Lecce, 9-13 July 2018
Period 2	clara working meeting at KIT EUDAT Hackathon EOSC-hub week NFDI4Earth Plenary RDA Plenary DI4Research	PaNOSC Kickoff meeting, January 2019, Grenoble ENVRIplus, March 2019, Helsinki GI Forum of ifgi, April 2019, Münster IVOA interop meeting, May 2019, Paris	no trainings

3.19 EUDAT - B2NOTE

Description	B2NOTE is a standalone service, it has been designed to be integrated with the existing EUDAT services. Currently, B2NOTE allows to annotate files located in B2SHARE. The service is called as a "widget" within the B2SHARE User Interface. B2NOTE allows the user to easily and intuitively create three types of annotations: a semantic tag coming from identified ontology repositories (only Bioportal at the moment but we are working toward integrating more vocabularies), a free-text keyword that can be used when the user do not find a semantic term in particular and a free-text comment.
Task	T13.4.4
URL	https://b2note.eudat.eu
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2NOTE https://marketplace.eosc-portal.eu/services/b2note
Location	BSC (General Provider)
Duration	M01-M36
Modality of access	open, using b2access authentication system.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2017

3.19.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE09	BSC	4,800 €	3.00	14,400	3,600.00	18,000	100%	18,000.0	-

3.19.2 Definitions

User: individual users registered in the B2ACCESS system.

3.19.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	10	number of users using the system, they are individual users registered in the B2ACCESS system. The information is extracted from the internal DDBB from B2NOTE, and it is the number of different users creating annotations.	8	15
Usage	15	number of semantic annotations included during this period. Extracted from the MONGO DB of the B2NOTE service.	15	28
Number and names of the countries reached	Not available	missing (this information is stored in B2ACCESS, so we don't have access to this information from the B2NOTE service).	Not available	Not available
Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	59	56
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	70
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	1

3.19.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.19.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings

Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.20 EUDAT - B2SAFE

Description	B2SAFE Data Policy Manager (DPM) is a service that simplifies the creation of data management policies that are executed primarily by B2SAFE services. The service provides a web-based form that is used by a community data manager to describe a data management policy in a simplified, abstract language. B2SAFE service managers can use client-side applications to download and transform the policy into an executable management process. Service managers can also create their own custom clients to transform an execute their management policies. The policies are kept in a central XML database that restricts access to communities of relevance. It is possible that the simplified abstract language may also support translation into management processes for services other than B2SAFE.
Task	T13.4.5
URL	https://dpmgr.eudat.eu
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2SAFE https://marketplace.eosc-portal.eu/services/b2safe
Location	NIRD (Norwegian Infrastructure for Research Data) in Tromso, Norway.
Duration	M01-M36
Modality of access	Authentication is required and there is role-based access (roles are community based).
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2017

3.20.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE61	SIGMA2	9,825 €	1.00	9,825	2,456.25	12,281	100%	12,281.3	-

3.20.2 Definitions

User: There are two types of users: community policy manager who is responsible for creating and managing the policy for a given community and the B2SAFE service manager who is responsible for transforming and executing the policy for the designated community.

3.20.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	1	counting the number of users defined in the db	1	1
# of policies	1	count the number of policies in the database	1	1
Number and names of the countries reached	1		1	3
Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	90	78
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	237
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	5

3.20.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	none

3.20.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings

Period 1	no activities	no activities	no trainings
Period 2	Have setup a simple demo page for compbiomed community for replicating data. Has been tested on demo sites.	Have contact a community interested in storing seismic waveforms in B2SAFE and replicating the data.	no trainings

3.21EUDAT - B2SHARE

Description	The EUDAT B2SHARE data publication service enables researchers to safely store and publish research data and to long-term preserve their data sets. The service provides a web interface that allows a user to create record by uploading files and annotating the record with metadata according to a default metadata schema. Records are always published as part of a community defined in the service. A community may mandate a user to add community-specific metadata upon creation of new records on top of the default metadata fields required by EUDAT. All records have EPIC PIDs provided by the B2HANDLE service and DOIs provided by the DataCite DOI service. All files have EPIC PIDs attached and can be annotated using EUDAT's B2NOTE annotation service. Users can update their existing records by changing the metadata of those records. In case files need to be changed or updated, the record can be versioned thereby creating a new record with updated files that is linked to the old version. A pseudo-record is created that contains references to all versioned records and upon request automatically links to the latest version. Metadata of public records are harvested by metadata aggregators such as B2FIND to allow other researchers to discover data sets published in B2SHARE. Any visitor can search through the published records in B2SHARE and download files attached to it. User can get access by registering through B2ACCESS. User-specific tokens are used to authenticate through the REST API to allow a user to update records in a non-web-based workflow. To search the site and to get record-specific information using the API no authentication is required.
Task	T13.4.6
URL	https://b2share.eudat.eu https://trng-b2share.eudat.eu (training instance)
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2SHARE https://marketplace.eosc-portal.eu/services/b2share
Location	CSC (General Provider)
Duration	M01-M36

Modality of access	B2SHARE is an open accessible service which requires a registration (e.g. B2ACCESS) to upload and publish data objects, to use the search functionality no registration is required.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions on-site on conferences. EUDAT offers a training instance of B2SHARE that allows users to practice data publication or the use of the REST API.
Operational since	2014

3.21.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE02	CSC	6,040 €	10.00	60,400	15,100.00	75,500	100%	75,500.0	-

3.21.2 Definitions

There are several types of users, these are controlled using roles defined by B2SHARE:

- Site administrator: has full control over the website and all its content, generally the owner of the service
- Community administrator: administers a community defined in B2SHARE, can review records created under a community by other users
- Community member: user that is part of a community, can publish records under this community if that community only allows members to publish in it
- User: user that is registered through B2ACCESS and can create new and administer its own existing records through the interface and REST API
- Visitor: any anonymous user, can search for records in the website that are marked as public

3.21.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	370	Counting the number of unique users logged in during a month period	469	220

Usage	788	Number of file downloads.	4.011	6.181 (due technical error downloads for 11/2018 and 02/2019 cannot be reported)
	792	Total number of records (open access, closed access, drafts)	10.118	10.425
	3882	Total number of files in records	13.574	14.791
	149,08 GiB	Total storage used	227,14 GiB	302,75 GiB
	11	Total number of communities	13	15
Number and names of the countries reached	not available	Using external software, like GoAccess or Matomo	48	52
Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	83	84
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	119
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	4

3.21.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.21.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings

Period 2	no activities	no activities	no trainings

3.22EUDAT - B2NOTE

Description	B2NOTE is a standalone service, it has been designed to be integrated with the existing EUDAT services. Currently, B2NOTE allows to annotate files located in B2SHARE. The service is called as a "widget" within the B2SHARE User Interface. B2NOTE allows the user to easily and intuitively create three types of annotations: a semantic tag coming from identified ontology repositories (only Bioportal at the moment but we are working toward integrating more vocabularies), a free-text keyword that can be used when the user do not find a semantic term in particular and a free-text comment.
Task	T13.4.4
URL	https://b2note.eudat.eu
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2NOTE https://marketplace.eosc-portal.eu/services/b2note
Location	BSC (General Provider)
Duration	M01-M36
Modality of access	open, using b2access authentication system.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2017

3.22.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE09	BSC	4,800 €	3.00	14,400	3,600.00	18,000	100%	18,000.0	-

3.22.2 Definitions

User: individual users registered in the B2ACCESS system.

3.22.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	10	number of users using the system, they are individual users registered in the B2ACCESS system. The information is extracted from the internal DDBB from B2NOTE, and it is the number of different users creating annotations.	8	15
Usage	15	number of semantic annotations included during this period. Extracted from the MONGO DB of the B2NOTE service.	15	28
Number and names of the countries reached	Not available	missing (this information is stored in B2ACCESS, so we don't have access to this information from the B2NOTE service).	Not available	Not available
Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	59	56
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	70
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	1

3.22.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.22.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings

Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.23EUDAT - Helpdesk

Description	The EUDAT Helpdesk system, is a ticketing system based on Request Tracker with interfaces to provide the 1st level support and dispatch incoming request to the adequate service expert teams and other downstream support teams. The system is designed to fulfill the helpdesk requirements according to OLAs related to EUDAT services.
Task	T13.2.12
URL	hepldesk.eudat.eu
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	BSC-CNS (Barcelona)
Duration	M01-M32
Modality of access	open, using B2ACCESS authentication.
Support offered	Technical support is provided via a central helpdesk system
Operational since	2009

3.23.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE09	BSC	4,800 €	9.00	43,200	10,800.00	54,000	100%	54,000.0	-

3.23.2 Definitions

User: Any potential user of the EOSC-hub services, the helpdesk will receive the request from any potential or current user of the infrastructures within the EOSC-hub.

3.23.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	500	number of individual users creating tickets or accessing the system. They are extracted from the mysql data base from the RT TTS system. The authentication is managed by the B2ACCESS service.	507	1,183
# of tickets per period	150	number of real tickets received by the system (no automatic notifications, only real user tickets), the information is extracted from the RT database and counting only real tickets, using the filtering done by 1st level support.	166	305
Number and names of the countries reached	Not Available	this information is not available, as it is not accessible from RT system, as it is stored in the B2ACCESS service.	Not Available	Not Available
Satisfaction	Not applicable	From Wp4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.23.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.23.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.24 EUDAT - Long-term preservation services

Description	eTDR (Europen certified Trusted Digital Repository) are services provided to ensure that digital information remains findable, accessible, interoperable and reusable. It includes capacity/resource planning and application of long-term preservation techniques/technologies. It also combines policies, processes and actions to ensure access to "born-digital" and reformatted data, regardless of the challenges of technological changes or failures (metadata, file format, media).
Task	T13.4.7
URL	Data not reported
Service Category	Common Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	CINES (Centre Informatique National de l'Enseignement Supérieur) in Montpellier, France DANS-KNAW (Data Archiving and Networked Services) in The Hague, Netherlands
Duration	M01-M36
Modality of access	eTDR services require assistance from digital preservation experts to validate users DMP (Data Management Plan) - which is a prerequisite to start uploading archives. Authentication is needed and access is role based.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2017

3.24.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE15	CINES	7,076 €	1.00	7,076	1,769.00	8,845	100%	8,845.0	-
BE67.4	DANS-KNAW	7,000 €	1.00	7,000	1,750.00	8,750	100%	8,750.0	-

3.24.2 Definitions

User: Research communities willing to use EUDAT and EOSC-Hub long-term preservation services.

3.24.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	1	Provided by B2TDR admin UI, number of accounts	1	1
Usage	4 Million	Provided by B2TDR admin UI. Files are all archives preserved in the system.	4 Million	4 Million
Number and names of the countries reached	Not available		6	6
Satisfaction	not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.
Marketplace orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	not available Service is not published on EOSC-hub marketplace yet.

3.24.4 Scientific publications

Reporting period	List of references
Period 1	Not available
Period 2	Not available

3.24.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	1 (EUDAT conference, Porto - 23-25/01/2018 - Poster)	no activities	no trainings
Period 2	None	no activities	PATC DMP training (4-6/02/2019)

3.25 EUDAT - Software repositories

Description	Web-based git repository service for source code management, as well as registry for Docker images, including issue tracking, wiki, task management and continuous integration functionality. Gitlab allows users to develop software code, work collaboratively on files and documents recording all changes by applying source control and revision control software. Each user using GItlab can organize the software in projects stored in repositories which allow seeing the entire evolution of the project, communicating and sharing it with other collaborators. Gitlab provides powerful web platform with user-friendly interface, with main functionality: • Manage and browse software projects. • Manage the access rights to the projects and groups of projects. • Prepare documentation pages attached to each project. • Report bugs and request features using issue tracking system. • Define workflows to incorporate the changes in source code in the production version using continuous integration. • Store large files and images in repository.
Task	T13.3.5
URL	https://gitlab.eudat.eu/
Service Category	Federation service

Service Catalogue	Service is not published on EOSC-hub website yet.
Location	KIT (General Provider)
Duration	M01-M36
Modality of access	Do not require authentication to access public area, requires AAI registration (B2ACCESS or Check-in) to access private areas depending on user profile and role for the given project with full read/write rights or in read-only mode.
Support offered	Technical support will be provided via the central helpdesk.
Operational since	5.2017

3.25.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE46	KIT	7,600 €	2.00	15,200	3,800.00	19,000	100%	19,000.0	-

3.25.2 Definitions

User: Scientists, software developers, service providers, researchers, who are working on software projects, documentation, virtual images or scientific material, which needs to be stored, updated and shared with others.

3.25.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	47	metric provided by administration dashboard	85	141
Usage: Number of projects	17	metric provided by administration dashboard	35	60
Usage: Number of merge requests	47	metric provided by administration dashboard	74	86
Number and names of the countries reached	8	metric provided by administration dashboard	12	15

Satisfaction	Not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	Not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	Not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	Not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.25.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.25.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.26 EUDAT - SVMON

Description	The software version monitoring framework SVMON collects the information on software versions of services and their components within EOSC-Hub. The software version monitoring framework consists of the web-based central portal which collects the information on software versions, stores it in the database and displays it in a compact overview table and the agent software, which runs on the service instances and reports the collected information to the central portal. The portal is integrated with EGI and EUDAT configuration databases, GOCDB and DPMT respectively and provides the joint view on the services. The information collected at SVMON is available for further usage via API, which provide the data in json format. The aim of SVMON is to facilitate the configuration management and change management processes, automate the service management tasks and ensure integrity of configuration data.
Task	T13.2.11
URL	http://svmon.eudat.eu/
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	KIT (general provider)
Duration	M01-M36
Modality of access	The access requires authentication using institutional credentials.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2016

3.26.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE46	KIT	7,600 €	1.00	7,600	1,900.00	9,500	100%	9,500.0	-

3.26.2 Definitions

User: Managers of configuration and change management processes, service providers, service users (interested in version of service they would like to use).

3.26.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users: number of production services connected to SVMON	20	SVMON web interface	25	25
Users: number of unique users accessed the SVMON	30	extraction from database	60	70
Usage: number of website visitors per month	not available	extraction from logs	40	150
Number and names of the countries reached	10	extraction from logs	8	8
Satisfaction	not applicable	from WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace Orders	not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.26.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.26.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings

Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.27EUDAT - B2DROP

Description	B2DROP is a secure and trusted data exchange service for researchers and scientists to keep their research data synchronized and up-to-date and to exchange with other researchers. B2DROP is an ideal solution to store and exchange data with colleagues and team members, synchronise multiple versions of data, ensure automatic desktop synchronisation of large files.
Task	T13.4.1
URL	https://b2drop.eudat.eu
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2DROP https://marketplace.eosc-portal.eu/services/b2drop
Location	Juelich (General Provider)
Duration	M01-M36
Modality of access	B2DROP is an open and accessible service, free of charge up to a quota of 20GB, which requires registration.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2014

3.27.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE45	JUELICH	7,200 €	9.00	64,800	16,200.00	81,000	100%	81,000.0	-

3.27.2 Definitions

User: Individual Researchers/Users and Research communities who wants to collaborate with other users or synchronise their data.

3.27.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	1,350	Provided by B2DROP admin UI, number of accounts	1,807	1,943
# of files	1.8 Mio.	Provided by B2DROP admin UI. Files are all files stored in the system.	3.0 Mio	3.0 Mio
# of shares	5,250	Provided by B2DROP admin UI	9,198	8,837
# of published files	27	Provided by B2DROP DB, published files are files which were published by the users	58	87
# of connected services	2	Provided by B2DROP admin UI, other services integrated with B2DROP.	2	2
Number and names of the countries reached	21	log-file analysis	48	88
Satisfaction	Not applicable	From WP4	Data not provided	Data not provided
EOSC-hub website views	Not applicable	Google analytics (from WP3)	62	74
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	387
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	8

3.27.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.27.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	no trainings

3.28 EUDAT - B2ACCESS

Description	The B2ACCESS service is a Identity and Authorisation Management (IAM) system which arbitrates authenticated access to registered services in the context of the EUDAT Collaborative Data Infrastructure (CDI). The role of the B2ACCESS service is to allow these services to make authentication and the authorisation decisions, and to perform any other processing required, when the end user accesses these services. When connecting to a CDI service that requires a login (eventually with further attributes) the access request is redirected to the B2ACCESS instance and the user can effectively login by using his/her primary credential (such as username and password). EUDAT identifiers provided by the B2ACCESS service are persistently bound to the user's primary identity. Primary identities can be provided by external identity providers, e.g. shibboleth IdPs of the users' home organisations or OpenID providers such as the Google IdP, or they can be provided by the B2ACCESS service itself, if the users registered genuinely on this service. B2ACCESS may use and store the Attributes provided by the IdP. The B2ACCESS Service Provider makes sure that the end user's attributes are only forwarded to lower-level Service Providers which the end user wants to access. Service Providers must have declared to the B2ACCESS SP that they comply with the GEANT Data Protection Code of Conduct. This implies that these lower-level Service Providers will only use personal information that is relevant to provide their service.
Task	T13.2.14
URL	https://b2access.eudat.eu
Service Category	Federation Services
Service Catalogue	https://eosc-hub.eu/catalogue/B2ACCESS https://marketplace.eosc-portal.eu/services/b2access

Location	Juelich (General Provider)
Duration	M01-M36
Modality of access	B2ACCESS is an open and accessible service, free of charge.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training sessions onsite on conferences.
Operational since	2015

3.28.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE45	JUELICH	7,200 €	6.00	43,200	10,800.00	54,000	100%	54,000.0	-
BE46	KIT	7,600 €	1.00	7,600	1,900.00	9,500	100%	9,500.0	-

3.28.2 Definitions

User: Individual Researchers/Users and Research communities willing to use EUDAT and EOSC-Hub Services/Service Providers.

3.28.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users	1,065	Provided by B2ACCESS DB	1,328	2,266
# of connected services	12	Provided by B2ACCESS admin UI/config	21	36
Number and names of the countries reached	Data not provided		48	88
Satisfaction	Not applicable	From WP4	Data not provided	Data not provided

EOSC-hub website views	Not applicable	Google analytics (from WP3)	70	78
Marketplace views	Not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	55
Marketplace Orders	Not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	1

3.28.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.28.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	EOSC-hub tech-talk: AAI https://indico.egi.eu/indico/event/4086/	no activity	no trainings
Period 2	no activity	no activity	no trainings

3.29 EUDAT - Data Project Management Tool (DPMT)

Description	The Data Project Management Tool (DPMT) is a service that a. allows to manage the information about the projects (business cases) being run by the e-Infrastructure, b. allows to record the project enabling activities on the implementation of data management plans, c. allows managing the configuration information using a data base that records the setup and changes of configuration items in the federated environment with multiple providers, d. manages information about service and resource providers as well as about their service and resource offers, e. manages information about customers The DPMT is EUDATs e-Infrastructure registry for information about service providers, their service and resource offer, about the actual provided service instances and their multi-tenant service components. It registers the EUDAT customers, business cases (data projects) and linked (billable) resources with identifiers used for service and resource provisioning orders as well as for the accounting.
Task	T13.2.13
URL	https://dp.eudat.eu
Service Category	Federation Services
Service Catalogue	Service is not published on EOSC-hub website yet.
Location	MPCDF (General Provider)
Duration	M01-M36
Modality of access	Authentication required. Role based access rights. Role assignment by the DPMT admins on request and after initial login to the DPMT.
Support offered	Technical support is provided via a central helpdesk system and support organisation. EUDAT offers an online training program for community decision-makers and data managers, researchers and end-users. EUDAT also provides training session's onsite on conferences.
Operational since	2016

3.29.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE54	MPG	8,200 €	7.00	57,400	14,350.00	71,750	100%	71,750.0	-

3.29.2 Definitions

User: Service Providers (managers, staff members), Customers (PIs, managers), federation coordinators (e.g. operations coordinator, user engagement coordinator).

3.29.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M9	Period 2 M9-M17
# of users	130	Number of registered accounts	170	226
Usage	70/20/60/100/50	Number of {projects/providers/services instances/service component installations/storage resources} registered	80/25/63/114/51	143/35/87/125/57
Number and names of the countries reached	18	Countries of the providers and the customers	18	18
Satisfaction	not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet.	not available Service is not published on EOSC-hub website yet.
Marketplace views	not applicable	Google analytics (from Marketplace)	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.
Marketplace orders	not applicable	from Marketplace	Not applicable Service cannot be ordered, so is not part of Marketplace.	Not applicable Service cannot be ordered, so is not part of Marketplace.

3.29.4 Scientific publications

The installation does not directly produce scientific results, it enables large scale systems that do to work effectively. As such, it does not directly produce scientific publications.

3.29.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	no activities	no activities	no trainings
Period 2	no activities	no activities	several trainings for individual CDI providers; one 1 CDI secretariat training and 1 CDI (member) training

3.30 EUDAT – Sensitive data services

Description	The TSD - Service for Sensitive Data, is a platform to collect, store analyse and share sensitive data in compliance with the Norwegian regulation regarding individual's privacy. TSD is used by researchers working at universities and in other public research institutions (UH-sector, university hospitals etc.). TSD is primarily an IT-platform for research even if in some case it is used for clinical research and commercial research. TSD is developed and operated by UiO in collaboration with Uninett/Sigma2 and is a part of the national infrastructure for research data (NIRD). CSC ePouta, operated by CSC in Finland, provides an infrastructure as a-service for running analysis on sensitive data. The ePouta Virtual Private Cloud service allows customers to provision virtual machines and storage resources directly to their own internal networks. It provides an easy to use admin web interface and a programmable API for managing virtual machines, networks and storage. CSC ePouta meets elevated information security level regulations and is targeted for sensitive data processing.
Task	T13.4.8
URL	ePouta: https://research.csc.fi/epouta TSD: https://www.uio.no/english/services/it/research/sensitive-data/
Service Category	Common Services
Service Catalogue	https://eosc-hub.eu/catalogue/Services%20for%20sensitive%20data https://marketplace.eosc-portal.eu/services/csc-epouta
Location	TSD: Norway ePouta: Finland

Duration	M01-M36
Modality of access	Access to the TSD is given via an account issued by the local operators. An installation of the ePouta cloud can be obtained by contacting the local operators. The service for the customer includes support in opening the network connection, setting up user accounts and other administrative steps. Further support on usage or scientific applications is normally agreed case-by-case.
Support offered	Technical support is provided for both TSD and ePouta trough the local helpdesk and support system. Training material will be available in the EOSC-hub.
Operational since	TSD: 2014; ePouta: 2016

3.30.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE02	CSC	6,040 €	1.00	6,040	1,510.00	7,550	100%	7,550.0	-
BE61	SIGMA	2 9,825 €	1.00	9,825	2,456.25	12,281	100%	12,281.3	-

3.30.2 Definitions

User:

TSD: the minimal unit to offer the TSD resource is the “project”, intended as a basic installation, with 1TB disk, 2 virtual machines and a virtually infinite number of users.
ePouta:
The ePouta is an IaaS providing private virtual cluster for the customer. Customers are organisations or groups that can provide their own secure system / network endpoint to connect to ePouta. End users are accessing the ePouta through customer organisations interface.
The resources to be allocated for users through this route will be limited to allow piloting type of usage (in the range of 20,000 core-hours and 1 TB of storage per user) due to the large user demand on the installation. The access is for limited time, 3-9 months, and exact amounts will be decided with the users. The access being of a special type – due to the network requirements – the experts at the service provider will evaluate the feasibility of setting up the connection before access can be granted. For the same reason we foresee capacity to support about 4-5 access projects during the lifetime of the EOSC-hub project.
CSC is in process of developing a secure remote desktop access method to the ePouta, which will open a second alternative access method to the service, as end users can then use the service directly from their browsers. In other words, this will provide a PaaS access point to ePouta. The secure remote desktop is estimated to be available during 2019.

3.30.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17

# of users	TSD: 450 ePouta: 28,3 (Average daily users)	TSD: Amount of projects ePouta: Number of users. Note: for most ePouta use cases a single user represents a whole organization. Nbr of end users is not known to the service provider as they are managed by the customer admin.	TSD: 507 ePouta: 36,9 (average daily users)	TSD: 755 ePouta: 47,6
Usage	ePouta: 11,1 TiB	ePouta: total used memory by VMs on the platform	ePouta: 22,2 TiB	ePouta: 28,1 TiB
Number and names of the countries reached	ePouta: 1	ePouta: nbr of countries with organizations securely connected to the ePouta	ePouta: 2	ePouta: 2
Satisfaction	not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	128	216
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	ePouta: 162
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	ePouta: 2

3.30.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.30.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	EOSC-hub Open day – presentation of the two services.	no activities	no trainings
Period 2	EOSC-hub week - presentation of the two services.	no activities	no trainings

3.31INCD - The On-demand Operational Coastal Circulation Forecast Service (OPENCoastS)

Description	Forecast systems are fundamental assets for emergency response and everyday management of coastal regions The OPENCoastS service assembles on-demand circulation forecast systems for selected areas in the north Atlantic coast and keeps them running operationally for a period defined by the user. This service generates daily forecasts of water circulation (water levels, vertically averaged velocities and wave parameters) over the region of interest for 48 or 72 hours, based on numerical simulations of the relevant physical processes.
Task	T13.1.8
URL	https://opencoasts.ncg.ingrid.pt/
Service Category	Thematic Services
Service Catalogue	https://eosc-hub.eu/catalogue/OPENCoastS https://marketplace.eosc-portal.eu/services/opencoasts-portal
Location	Portugal
Duration	M09-M36
Modality of access	It is aimed to open the OPENCoastS service free of charge.
Support offered	Several training activities are planned
Operational since	June 2018

3.31.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE21.1	CNRS-UR	4,652 €	3.00	13,956	3,489.00	17,445	100%	17,445.0	
BE48	LIP	4,800 €	7.00	33,600	8,400.00	42,000	100%	42,000.0	
BE49	LNEC	5,250 €	10.00	52,500	13,125.00	65,625	100%	65,625.0	
BE72	UNICAN	4,800 €	3.00	14,400	3,600.00	18,000.0	100%	18,000.0	

3.31.2 Definitions

Deployment: a numerical-model-based forecast for circulation in a coastal region created by someone in the opencoasts platform via its web portal interface. To produce the actual forecasts, numerical model simulations are scheduled and executed daily for each deployment.
User: can be individual researchers or organizations. Users can setup deployment for their individual use or for shared purposes (some users will setup deployments while others may just access them).

3.31.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
# of users: Number of service registered users	not available	Number of users registered in the platform. OPENCoastS portal requires user registration which allows to monitor their number.	20	157
Usage metric 1: Number of international deployments (forecast systems) of the service	not available	Cumulative number of deployments created in the platform. The platform keeps logs of submissions.	14	46
Usage metric 2: Number of requested extensions for operational deployments	not available	Number of operational forecasts extension requests. The platform keeps logs of requests of extensions.	1	17
Number of the countries reached	1	Users affiliation or users country of origin. This information is collected from the user profile in the platform	8	24
Satisfaction	not applicable	Positive user feedback from user satisfaction questionnaire. This information is collected in the platform configuration assistant in the forecast submission step (on a scale of 1 to 5).	100% (from questionnaires at hands-on training)	100% (from questionnaires at hands-on training)
EOSC-hub website views	not applicable	Google analytics (from WP3)	71	171
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	41
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	1

3.31.4 Scientific publications

Reporting period	List of references

Period 1	1- Alberto Azevedo, André Fortunato, Joana Teixeira, João Rogeiro, Anabela Oliveira, Marta Rodrigues, Jorge Gomes, Mário David, João Pina, 2018. OPENCoastS.pt - Serviço de previsão em tempo real a pedido para a circulação na ZEE portuguesa. 5.as Jornadas de Engenharia Hidrográfica Book of Abstracts, http://www.hidrografico.pt/images/contents/Documentacao/jornadas_2018/Actas_5JEH.pdf 2- A.B. Fortunato, A. Oliveira, J. Rogeiro, J. Teixeira, A. Azevedo, J. Gomes, M. David, J. Pina, 2018. Generation of operational forecasts on demand: the OPENCoastS platform, 17thIMUM Book of Abstracts, http://imum2018.mpimet.mpg.de/fileadmin/user_upload/imum2018/template/img/Book_of_Abstracts_revised.pdf
Period 2	1- João Rogeiro, Anabela Oliveira, Jorge Gomes, João Pina, João Martins, Mário David, Joana Teixeira, Alberto Azevedo, André Fortunato, 2018. OPENCoastS On-demand Operational Coastal Circulation Forecast Service. Digital Infrastructures for Research 2018, https://indico.egi.eu/indico/event/3973/session/26/contribution/85 2- Anabela Oliveira, João Rogeiro, Alberto Azevedo, André Fortunato, marta Rodrigues, Joana Teixeira, Jorge Gomes, Mário David, João Pina, João Paulo Martins, 2018. High-resolution coastal modeling and forecasting using HPC lessons learned from a decade-long experience, IBERGRID 2018, https://indico.lip.pt/event/437/contributions/1383/ 3- André B. FORTUNATO, João ROGEIRO, Joana TEIXEIRA, Anabela OLIVEIRA, Alberto AZEVEDO, Xavier BERTIN, Laura LAVAUD, Mário DAVID, João PINA, Jorge GOMES, Sonia CASTANEDO, Fernando MENDEZ, Pedro LOPES, Marta RODRIGUES; GERAÇÃO AUTOMÁTICA DE SISTEMAS DE PREVISÃO COSTEIRA: A PLATAFORMA OPENCOASTS; IX Congresso sobre Planeamento e Gestão de das Zonas Costeiras, Lisboa 2019 http://www.aprh.pt/ZonasCosteiras2019/docs/REV_IXzonasCosteiras_88.pdf 4 - Anabela Oliveira, Marta Rodrigues, João Rogeiro, AndréB. Fortunato,Joana Teixeira, Alberto Azevedo, and Pedro Lopes 2019. OPENCoastS: An Open-Access App for Sharing Coastal Prediction Information for Management and Recreation, Lecture Notes in Computer Science book series (LNCS, volume 11540), João M. F. Rodrigues•Pedro J. S. Cardoso•Jânio Monteiro•Roberto Lam•Valeria V. Krzhizhanovskaya•Michael H. Lees•Jack J. Dongarra•Peter M. A. Sloot (Eds.), 794-807.

3.31.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	1- Promotional video 2 - Flyer 3 - two presentations at International conferences (Jornadas de Hidrografia, IMUM2018)	1-Publicizing of service in the SCHISM modelling community (provided by Joseph Zhang, SCHISM lead developer) 2-Publizing of talk+hands-on training at IMUM2018 (through IMUM organizers) 3-Development of OPENCoastS manual available online at https://opencoasts.ncg.ingrid.pt/ 4- sample grid for testing the service at https://opencoasts.ncg.ingrid.pt/	0 (training developed at IMUM from 11-14 of September 2018)
Period 2	1 - three presentations at international conferences (DI4R 2018, IBERGRID 2018, ICCS2019) 2- two presentations at national conference	1 - Production of OPENCoastS videos available on YouTube https://www.youtube.com/results?search_query=opencoasts 2 - Online classes from the OPENcoastS e-Tutorial: from processes knowledge to on-demand circulation forecasts - 13th of December 2018 course: http://opencoasts.lnec.pt/index_en.php#eventos	1- hands-on tutorial on OPENCoastS during the IMUM 2018 workshop: http://imum2018.mpimet.mpg.de/fileadmin/user_upload/imum2018/template/img/OPENCoastS_training_2018_v2.pdf 2- OPENcoastS e-Tutorial: from processes knowledge to on-demand circulation forecasts - 13th of December 2018 https://www.eosc-hub.eu/training-event/opencoasts-e-tutorial-processes-knowledge-demand-circulation-forecasts-13th-december

3.32WeNMR VA

Description	The WeNMR thematic services are providing access to a variety of tools for structural biology and computational modelling covering NMR, cryo-electron microscopy, and integrative modelling. AMBER - The AMBER-based Portal Server for NMR structures is a web interface to set up and run calculations with the AMBER package. The interface allows the refinement of NMR structures of biological macromolecules through restrained Molecular Dynamics (rMD). The AMBER portal can handle various restraint types. As an ancillary service, it provides access to a web interface to AnteChamber, enabling the calculation of force field parameters for organic molecules such as ligands in protein–ligand adducts. CS-ROSETTA3 - CS-Rosetta is a protocol which generates 3D models of proteins, using only the 13CA, 13CB, 13C', 15N, 1HA and 1HN NMR chemical shifts as input. Based on these parameters, CS ROSETTA uses a SPARTA-based selection procedure to select a set of fragments from a fragment-library (where the chemical shifts and the 3D structure of the fragments are known). The fragments are assembled using the Rosetta protocol. The generated models are rescored based on the difference between the back-calculated chemical shifts of the generated models and the input chemical shifts, and when available, with a post-scoring procedure based on unassigned NOE lists. DISVIS - allows to visualize and quantify the information content of distance restraints (e.g. from cross-linking MS experiments) between macromolecular complexes. It performs a full and systematic 6-dimensional search of the three translational and rotational degrees of freedom to determine the number of complexes consistent with the restraints. In addition, it outputs the percentage of restraints being violated and a density that represents the center-of-mass position of the scanning chain corresponding to the highest number of consistent restraints at every position in space. FANTEN - a user-friendly web tool for the determination of the anisotropy tensors related to NMR Pseudo Contact Shifts (PCSs) and Residual Dipolar Couplings (RDCs). GROMACS - GROMACS (www.gromacs.org) is a versatile package to perform molecular dynamics, i.e. simulate the Newtonian equations of motion for systems with hundreds to millions of particles. GROMACS is able to work with many biochemical molecules like proteins, lipids and nucleic acids. The server is aimed to provide a user friendly and efficient MD experience by performing many preparation and optimization steps automatically. HADDOCK - (High Ambiguity Driven protein-protein DOCKing) is an integrative, information-driven flexible docking approach for the modelling of biomolecular complexes. HADDOCK distinguishes itself from ab-initio docking methods in the fact that it encodes information from identified or predicted protein interfaces in ambiguous interaction restraints (AIRs) to drive the docking process. HADDOCK can deal with a large class of modelling problems including protein-protein, protein-nucleic acids and protein-ligand complexes. POWERFIT - automatically fits high-resolution atomic structures into cryo-EM densities. To this end it performs a full-exhaustive 6-dimensionalcross-correlation search between the atomic structure and the density. It takes as input an atomic structure in PDB- or mmCIF-format and a cryo-EM density with its resolution and outputs positions and rotations of the atomic structure corresponding to high correlation values. SPOTON - is a robust algorithm developed to identify and classify the interfacial residues as Hot-Spots (HS) and Null-Spots (NS) with a final accuracy of 0.95 and a sensitivity of 0.95 on an independent test set. The predictor was developed using an ensemble learning algorithm with up-sampling of the minor class and was trained on a large number of complexes and on a high number of different structural- and evolutionary sequence-based features.
Task	T13.1.10
URL	http://www.eosc-hub.eu/catalogue/WeNMR%20suite%20for%20Structural%20Biology
Service Category	Thematic Services

Service Catalogue	https://eosc-hub.eu/catalogue/WeNMR%20suite%20for%20Structural%20Biology https://marketplace.eosc-portal.eu/services/disvis https://marketplace.eosc-portal.eu/services/powerfit https://marketplace.eosc-portal.eu/services/haddock https://marketplace.eosc-portal.eu/services/amber https://marketplace.eosc-portal.eu/services/cs-rosetta https://marketplace.eosc-portal.eu/services/fanten https://marketplace.eosc-portal.eu/services/spoton
Location	Utrecht (NL), Florence (IT)
Duration	M01-M36
Modality of access	Access provided to non-profit users for free upon registration.
Support offered	The planned activities would encompass user support, training, and continuous operation of the various grid- and cloud-enabled web portals.
Operational since	Some of the services have been operational since June 2008.

3.32.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE16	CIRMMP	5,000 €	13.00	65,000	16,250.00	81,250	100%	81,250.0	-
BE03	INFN	5,800 €	13.00	75,400	18,850.00	94,250.0	100%	94,250.0	-
BE67.1	UU	5,800 €	24.00	141,600	35,400.00	177,000.0	100%	177,000.0	-

3.32.2 Definitions

User: A user is a person making use of at least one of our thematic services. All portals except one (FANTEN) do require user registration. For FANTEN, users are identified by their IP address for collecting the various metrics.

3.32.3 Metrics

Metric name	Baseline	Define how measurement is done	Period 1	Period 2

			M1-M8	M9-M17
# of users: Number of newly registered users per period	1,750	Number of new registered users to the various services over the measurement's period. All portals except FANTEN do require user registration which allows monitoring their number; The baseline is based on the 3/4 of the 2017 registrations.	2,273	3,844
Usage: number of user runs submitted to portals	13,800	Number of submissions to the portal over the measurement's period. The various portals are keeping log files of submissions. The baseline is based on the 3/4 of the 2017 submissions.	36,179	24,702
Usage: number of jobs submitted to grid/cloud resources	6,750,000	Number of grid/cloud job submissions over the measurement's period. The various portals are keeping log files of submissions. The baseline is based on the 3/4 of the 2017 submissions. Note that not all portals are submitting to grid/cloud resources. Also, the number of jobs reported here consists of either direct submissions via UI or through the DIRAC4EGI service. The number of jobs for the enmr.eu VO in the EGI accounting portal will therefore be smaller since multiple submissions to DIRAC will translate into one pilot job on the grid.	5,034,534	10,343,738
Usage: HS06 CPU Time/Wall Time hours consumed by job submitted to grid/cloud resources	15,168,258/0	The metrics are collected from the EGI accounting portal for the enmr.eu VO. The baseline is based on the 3/4 of the 2017 submissions. No jobs were submitted to the cloud in 2017.	15,685,748 / 0	20,684,686 (grid) / 21,241 (Cloud)
Number and names of the countries reached	96 countries	Metrics based on the aggregated users of all portals requiring registration and IP locations for FANTEN	96 countries	108 countries
Satisfaction	not applicable	Continuous satisfaction feedback on a scale of 1 to 5 (best) on the result pages. An example of satisfaction feedback request can be found on the following example output page of DISVIS: http://milou.science.uu.nl/cgi/enmr/services/DISVIS/disvis/example Online continuous stats for the Utrecht portals available at: https://milou.science.uu.nl/stats.php	• AMPS-NMR: 4.2 (from 10 respondents) • CS-ROSETTA2: 0 respondents • DISVIS: 4.5 (from 13 respondents) • HADDOCK: 4.9 (from 729 respondents) • POWERFIT: 4.8 (from 8 respondents) • SPOTON: 5.0 (from 26 respondents)	• AMPS-NMR: 0 respondents • CS-ROSETTA3: 5.0 (from 4 respondents) • DISVIS: 4.9 (from 15 respondents) • HADDOCK: 4.9 (from 1310 respondents) • HADDOCK2.4: 5.0 (from 23 respondents) • POWERFIT: 5.0 (from 2 respondents) • SPOTON: 4.9 (from 27 respondents)

EOSC-hub website views	not applicable	Google analytics (from WP3)	EOSC-hub Service Catalogue Internal Page: 187	EOSC-hub Service Catalogue Internal Page: 234
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	disvis 28 powerfit 20 haddock 40 Amber 97 CS-rosetta 20 Fanten 37 Spoton 12
Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	disvis 2 powerfit 1 haddock 6 Amber 5 CS-rosetta 0 Fanten 1 Spoton 0

3.32.4 Scientific publications

Reporting period	List of references

Period 1	2018 citations of the **AMBER** web portal publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=0,5&sciodt=0,5&cites=6696812766870837905&scipsc= (3 citations in 2018 to date) 2018 citations of the **FANTEN** web portal publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=0,5&sciodt=0,5&cites=10578718345045994565&scipsc= (8 citations in 2018 to date) 2018 citations of the two main papers about the **HADDOCK** web portal: https://scholar.google.nl/scholar?oi=bibs&hl=en&cites=10355645612647046441&as_sdt=5&as_ylo=2018&as_yhi=2018 (67 citations in 2018 to date) https://scholar.google.nl/scholar?oi=bibs&hl=en&cites=8781684426256885720&as_sdt=5&as_ylo=2018&as_yhi=2018 (91 citations in 2018 to date) 2018 citations of the **DISVIS/POWERFIT** web portals publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=6482114501244947208&scipsc= (5 citations in 2018 to date) 2018 citations of the **SpotON** web portal: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=13166412172304337833&scipsc= (5 citations in 2018 to date) 2018 citations of the **WeNMR** J Grid Comp publications: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=17298994020306084446&scipsc= (11 citations in 2018 to date)
Period 2	2018 - 05/2019 citations of the AMBER web portal publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=0,5&sciodt=0,5&cites=6696812766870837905&scipsc= (6 citations since 2018, 3 new citations in P2) 2018 - 05/2019 citations of the FANTEN web portal publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=0,5&sciodt=0,5&cites=10578718345045994565&scipsc= (12 citations since 2018, 4 new citations in P2) 2018 citations of the two main papers about the HADDOCK web portal: https://scholar.google.nl/scholar?oi=bibs&hl=en&cites=10355645612647046441&as_sdt=5&as_ylo=2018&as_yhi=2018 (89 citations since 2018, 22 new citations in P2) https://scholar.google.nl/scholar?oi=bibs&hl=en&cites=8781684426256885720&as_sdt=5&as_ylo=2018&as_yhi=2018 (133 citations since 2018, 42 citations in P2) 2018 citations of the DISVIS/POWERFIT web portals publication: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=6482114501244947208&scipsc= (9 citations since 2018, 4 new citations in P2) 2018 citations of the SpotON web portal: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=13166412172304337833&scipsc= (15 citations since 2018, 10 new citations in P2) 2018 citations of the WeNMR J Grid Comp publications: https://scholar.google.com/scholar?as_ylo=2018&hl=en&as_sdt=2005&cites=17298994020306084446&scipsc= (30 citations since 2018, 19 new citations in P2)

3.32.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	**Lectures at international conferences and workshops:** • "Structure, affinity and specificity riddles in biomolecular interactions". MeetU symposium, University Pierre et Marie Curie, Paris, France, January 10th, 2018. • Keynote: "Structural Biology in the Clouds: A Success Story of 10 Years". It Transformation And Cloud Content Management For Life Sciences. Berlin, Germany, March 8-9, 2018. • "HADDOCK goes small molecules. Integrative modelling of biomolecular interactions from fuzzy data". Frontiers in Computational Drug Discovery. Taipei, Taiwan ROC March 16-20, 2018. • "Building bridges between services and e-infrastructure in structural biology". International Symposium on Grids and Clouds. Taipei, Taiwan ROC, March 20-23, 2018. • "Computational aspects of structure determination by NMR". Multidimensional NMR in Structural Biology. Joachimsthal, Germany, August 13-17, 2018. • "High resolution integrative modelling of biomolecular complexes from fuzzy data". 27thICMRBS, Dublin, Ireland, August 19-24, 2018	• Several HADDOCK workshops (NMRFAM+NMRBOX+BioExcel summerschool+Pasteur course+EMBL-EBI course) - see training	• Advanced methods for the integration of diverse structural data, Florence IT (18-23/02/2018) • "Integrative modelling of biomolecular complexes". One day workshop for PhD students at BOKU University, Vienna, Austria, May 9th, 2018 • HADDOCK workshop, NMRFAM Madison Wisconsin, USA (08/06/2018) • HADDOCK workshop, NMRBOX summerschool, UConn medical center, Farmington, CT, USA (12/06/2018) • HADDOCK lecture and tutorial at the BioExcel summerschool in Pula, Sardinia IT, June 18-22, 2018. • EMBO practical course on "Integrative modelling of biomolecular complexes", Barcelona, Spain, July 2-6, 2018. • "Integrative modelling of biomolecular interactions". 3rd Pasteur course on integrative structural biology, Paris, France, July 16-21, 2018 • "Exploring protein docking with HADDOCK", Structural Bioinformatics course, EMBL-EBI, Hinxton UK, September 3-7, 2018.

Period 2	**Lectures at international conferences and workshops:** • "Integrative modelling of protein-peptide complexes". CECAM workshop on Protein-peptide interactions: peptide identification, binding prediction and design, Paris France, October 16-19, 2018. • "Integrative modeling of biomolecular complexes: Moving into membranes". Modeling of Protein Interaction meeting, Lawrence KS, USA, November 8-10, 2018. • "Structural biology in the clouds: A success story of 10 years". Online lecture. Int. Conference on artificial intelligence and robotics & HPC, grid, cloud and identify summit, Putrajaya, Malaysia, November 28, 2018. • **Keynote:**"Adding the structural dimension to the Facebook of life by integrative modelling". Molecular & Computational Biology Symposium, UCD, Dublin, Ireland, November 29-30, 2018. • "HADDOCK: An integrative modeling platform". Biophysical Society satellite workshop: working towards federating structural models and data. Baltimore MD, USA March 1st, 2019. • "Integrative modeling of biomolecular complexes". 63rdBiophysical Society Meeting. Baltimore MD, USA March 2-6, 2019. • "Data-driven HADDOCK strategies in CAPRI rounds 38-45". 7th CAPRI evaluation meeting, EBI, Hinxton UK, April 3-5, 2019. • **Keynote:** "Juggling Research and Services in Bioinformatics". EMBO practical course: From Research to Service - setting up and running a bioinformatics core facility. Izmir, Turkey, May 8-11, 2019. • "Structural Biology in the Clouds: Past, Present and Future". EGI Conference. Amsterdam Science Park, the Netherlands, May 6-7, 2019. • "Integrative modeling of biomolecular complexes". CECAM workshop: "Challenges In Large Scale Biomolecular Simulations 2019: Bridging Theory And Experiments". Cargèse, Corsica, France, May13-17, 2019. • "Integrative modeling of biomolecular complexes: from small molecules to membrane systems". iNext workshop on Integrated methodologies and approaches for structural biology. Brno, Czeck Republic, May 29-31, 2019.	• Three training events (see training) and various lecture at large international meeting with a broad audience (Biophysical Society meeting, iNext workshop) (see lectures).	• "Exploring protein docking with HADDOCK", Structural Bioinformatics course. EMBL-EBI, Hinxton UK, September 3-7, 2018. • "How to apply bioinformatics to metalloproteins" Italian School on Bioinorganic Chemistry, Rome, IT, February 12-15, 2019. • Instruct-ERIC/CAPRI Workshop on Integrated Modelling of Protein-Protein Interactions, EBI Hinxton UK, April 1-2, 2019.

	• "Bioinformatics and molecular dynamics of metalloproteins", National Conference of the Division of Inorganic Chemistry of the Italian Chemical Society, Bologna, IT, September 10-13, 2018. • "WeNMR activities in the EOSC-Hub" DIGITAL INFRASTRUCTURES for RESEARCH 2018, Lisbona, PT, 10 October 2018. • "Bioinformatics of metalloproteins" Workshop of the Winners of the Nasini Prize, Italian Chemical Society, Rome, IT, February 11-12, 2019.		

3.33 EO Pillar

Description	The EO-Pillar service within the EOSC provides access to different services in the field of Earth Observation (EO). The services are categorised into three main classes: data access and computing services, data exploitation services, general user services. The following list provides the individual service components.
	The currently active EO-Pillar services are:
	• EODC JupyterHub for global Copernicus data
	• EODC Data Catalogue Service
	• Sentinel Hub
	• rasdaman EO Datacube
	• CloudFerro Data Collections Catalog
	• CloudFerro Infrastructure
	• CloudFerro Data Related Services - EO Finder
	• CloudFerro Data Related Services - EO Browser
	• GEP - High-Resolution Change Monitoring for the Alpine Region
	• GEP - EO Services for Earthquake Response and Landslides Analysis
	The following services are in development within the EO-Pillar:
	• EPOSAR service
	• MEA Platform (Data access and exploitation service)
	In the following further details of the services are provided
	• rasdaman EO Datacube: Datacube Analytics Service for multi-dimensional sensor, image (timeseries), simulation, and statistics data, based on the European Datacube, rasdaman. The service features
	  ○ access through the open OGC geo standards WMS, WCS, WCPS;
	  ○ support for many clients, such as Leaflet, WorldWind, Cesium, QGIS, ArcGIS, R, python, and more;
	  ○ ad-hoc analysis a la "any query, any time, on any size";
	  ○ federation between data centers including, e.g., CODE-DE.

Task	T13.1.5

URL	• GEP:
	  ○ https://geohazards-tep.eo.esa.int/
	  ○ https://geohazards-tep.eo.esa.int/geobrowser/?id=eoschub-alpsmonitoring-app
	  https://geohazards-tep.eo.esa.int/geobrowser/?id=eoschub-landslide-app
	• EODC:
	  ○ https://jupyterhub.eodc.eu
	  ○ https://csw.eodc.eu/
	• EPOSAR:
	  ○ https://www.epos-ip.org
	• Sentinel Hub
	  ○ http://sentinel-hub.com/
	• MEA
	  ○ https://eodataservice.org
	• rasdaman EO Datacube
	  ○ http://eoschub.rasdaman.com:8080/rasdaman/ows
	• CloudFerro
	  ○ https://creodias.eu/servers
	  ○ https://creodias.eu/storage
	  ○ https://creodias.eu/networking-and-security
	  ○ https://discovery.creodias.eu/dataset
	  ○ https://creodias.eu
	  ○ https://finder.creodias.eu/www
	  ○ https://browser.creodias.eu
	• GRNET OSS-X Sentinel Service
	  ○ https://sentinel.eosc.grnet.gr/

Service Category	Thematic Services

Service Catalogue	https://marketplace.eosc-portal.eu/services/eodc-data-catalogue-service https://marketplace.eosc-portal.eu/services/eodc-jupyterhub-for-global-copernicus-data https://marketplace.eosc-portal.eu/services/sentinel-hub https://marketplace.eosc-portal.eu/services/cloudferro-data-collections-catalog https://marketplace.eosc-portal.eu/services/cloudferro-infrastructure https://marketplace.eosc-portal.eu/services/cloudferro-data-related-services-eo-finder https://marketplace.eosc-portal.eu/services/cloudferro-data-related-services-eo-browser https://marketplace.eosc-portal.eu/services/rasdaman-eo-datacube https://marketplace.eosc-portal.eu/services/mea-platform-data-access-and-exploitation-service https://marketplace.eosc-portal.eu/services/gep-eo-services-for-earthquake-response-and-landslides-analysis https://marketplace.eosc-portal.eu/services/gep-high-resolution-change-monitoring-for-the-alpine-region
Location	Services offered on different locations (e.g. Vienna, Warsaw, Athens, etc.)
Duration	M07-M36
Modality of access	Datacube Data Analytics Service will be provided to the project partners to support the EO Pillar use case. The European Datacube engine, rasdaman, will implement the datacube query service, depending on data availability with 3D x/y/t image timeseries and D x/y/z/t weather data. Access will be provided via the OGC standards WMS, WCS, and WCPS. Point of installation tbd. EO Cloud is a cloud processing platform based on open source OpenStack technology. EODC SDIP The infrastructure can be accessed via individual contracts. Some test accounts are available on a free basis. EPOSAR service products will be provided accessible for free in wide access mode Geohazards Exploitation Platform (GEP): basic services can be accessed freely upon registration. Access to advanced (processing) services is provided to requester upon approval of the GEP Governance Board. MEA It includes activities on training on the usage of EO data and EO data services. The EO pillar will include outreach activities to widen the exploitation of EO satellite data to non-EO communities. OSS-X Sentinel Service will require free registration. Sentinel Playground will be provided for free in wide access mode over web browser. In addition, Sentinel Hub services will be provided to project partners to support EO Pillar use case.
Support offered	It includes activities on training on the usage of EO data and EO data services. The EO pillar will include outreach activities to widen the exploitation of EO satellite data to non-EO communities.
Operational since	Different for the services, some services are available already in 07/2018, others are in operation since 09/2018, further services will follow

3.33.1 Cost

BEN Nr	Beneficiary	Avg. PM Rate	Efforts	Direct PC	IPC	Total eligible	Rate funding	Funding	Funding EGI/Partners
BE18	CloudFerro	6,400 €	12.00	76,800	19,200.00	96,000	100%	96,000.0	-
BE20	CNR	4,500 €	12.00	54,000	13,500.00	67,500	100%	67,500	-
BE30	EODC	5,590 €	12.00	67,080	16,770.00	83,850.0	100%	83,850.0	-
BE36	GRNET	6,200 €	12.00	74,400	18,600.00	93,000	100%	93,000	-
BE52	MEEO	4,850 €	6.00	29,100	7,275.00	36,375	100%	36,375	-
BE59	RASDAMAN	5,500 €	6.00	33,000	8,250.00	41,250	100%	41,250	-
BE62	Sinergise	4,900 €	6.00	29,400	7,350.00	36,750	100%	36,750	-
BE68	Terradue	6,900 €	12.00	82,800	20,700.00	103,500	100%	103,500	-

3.33.2 Definitions

User: Individual users or research communities that need access to sentinel data.

3.33.3 Metrics

In the initial phase (Period 1) of the project the different EO-Pillar services collected the user metrics in a different individual manner, or the metrics have not been established yet. In the following reporting periods the user metrics will be harmonized.
We aim to provide the following metrics per Period:

- Users per month
- EO Data available (TB)
- EO Data used (TB)
- Number of the countries reached

Metric name	Baseline	Define how measurement is done	Period 1 M1-M8	Period 2 M9-M17
Users per month	Not applicable	Extract from the internal database	See metrics below	31.198
EO Data available (TB)	Not applicable	Extract from the internal database	See metrics below	23.860
EO Data used (number of requests)	Not applicable	Extract from the internal database	See metrics below	> 200.000
Number of the countries reached	Not applicable	Extract from the internal database	Not applicable	173
Satisfaction	not applicable	From WP4	Data not reported	Data not reported
EOSC-hub website views	not applicable	Google analytics (from WP3)	not available Service is not published on EOSC-hub website yet	not available Service is not published on EOSC-hub website yet
Marketplace views	not applicable	Google analytics (from Marketplace)	Data not reported. Marketplace is not operational yet.	• EODC data catalogue service 61 • EODC jupyterhub for global Copernicus data 63 • Sentinel hub 67 • Cloudferro data collections catalog 29 • Cloudferro infrastructure 279 • Cloudferro data related services eo finder 16 • Cloudferro data related services eo browser 28 • Rasdaman eo datacube 62 • Mea platform data access and exploitation service 13 • Gep eo services for earthquake response and landslides analysis 16 • Gep high resolution change monitoring for the alpine region 11

Marketplace Orders	not applicable	from Marketplace	Data not reported. Marketplace is not operational yet.	• EODC data catalogue service 0 • EODC jupyterhub for global Copernicus data 1 • Sentinel hub 0 • Cloudferro data collections catalog 0 • Cloudferro infrastructure 4 • Cloudferro data related services eo finder 0 • Cloudferro data related services eo browser 0 • Rasdaman eo datacube 0 • Mea platform data access and exploitation service 0 • Gep eo services for earthquake response and landslides analysis 0 • Gep high resolution change monitoring for the alpine region 0
CloudFerro: EO data available	not available	Extract from the internal database	> 9 PB	deprecated
CloudFerro: Number of Users	not available	Extract from the internal database	200	deprecated
CloudFerro: EOBrowser Collections	not available	https://browser.creodias.eu/	9	deprecated
Sentinel Hub: number of EOSC-hub users	0	Extract from user management	Data not reported. Marketplace is not operational yet.	deprecated
Sentinel Hub: number of requests done by EOSC-hub users	0	Extract from monitoring system	Data not reported. Marketplace is not operational yet.	deprecated

CloudFerro: EOFinder Products	not available	http://www.cloudferro.com/eostats/	> 10 M	deprecated
EODC: EO data available	1	Extract from the internal database	> 3 PB	deprecated
OSS-X Sentinel: Number of Users	1	Extract from the internal database	2	deprecated
OSS-X Sentinel: Number of published products (datasets)	10	Extract from the internal database	10	deprecated
OSS-X Sentinel: Number of Downloads	10	Extract from the internal database	10	deprecated
OSS-X Sentinel: Number of Page Visits (per year)	1000	Extract form WebServer Logs	1000	deprecated

3.33.4 Scientific publications

Reporting period	List of references
Period 1	not available
Period 2	not available

3.33.5 Dissemination

Reporting period	Communication activities	Outreach to new users	Trainings
Period 1	Sinergise: Analysis Ready Data & STAC workshop, August 2018, USA EPOS TCS-ICS Implementation Workshop, October 2018 EPOS Implementation and Validation Workshop, March 2018 EODC Forum 2018, May 2018	EODC Forum 2018	EODC: hands-on training within the EODC Forum 2018 EODC: individual trainings
Period 2	EODC Forum 2019, May 2019	EODC Forum 2018, May 2019	EODC: hands-on training within the EODC Forum 2019