WP8 – Governance of standards and development of common services

Set-up of monitoring services for upgraded SeaDataNet infrastructure

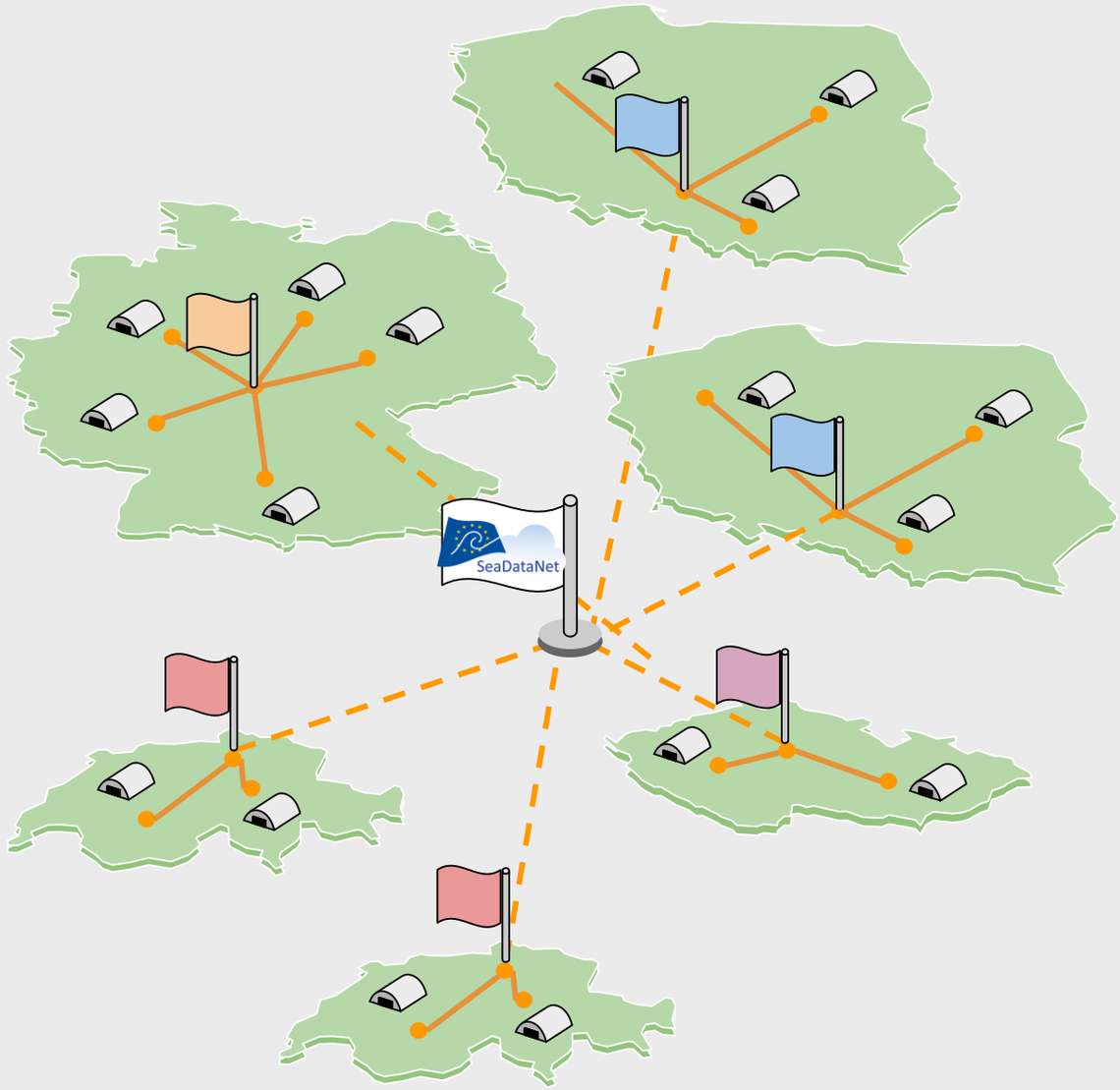
Themis Zamani, GRNET
Kostas Kagkelidis, GRNET
Angelos Lykiardopoulos, HCMR

Monitoring SDC

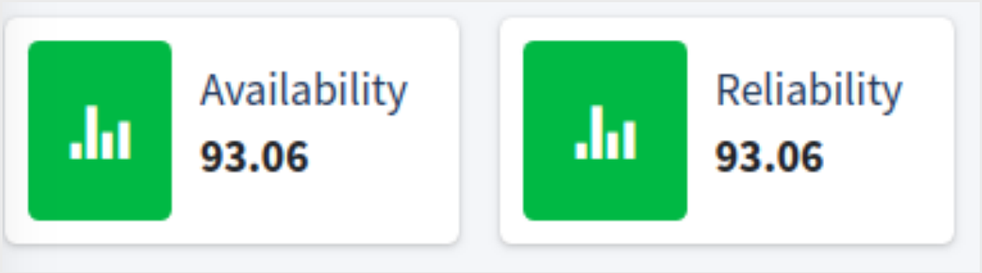
a pan-European infrastructure to ease the access to marine data

Monitoring based on User experience so as to compute

- Status
- Availability
- Reliability



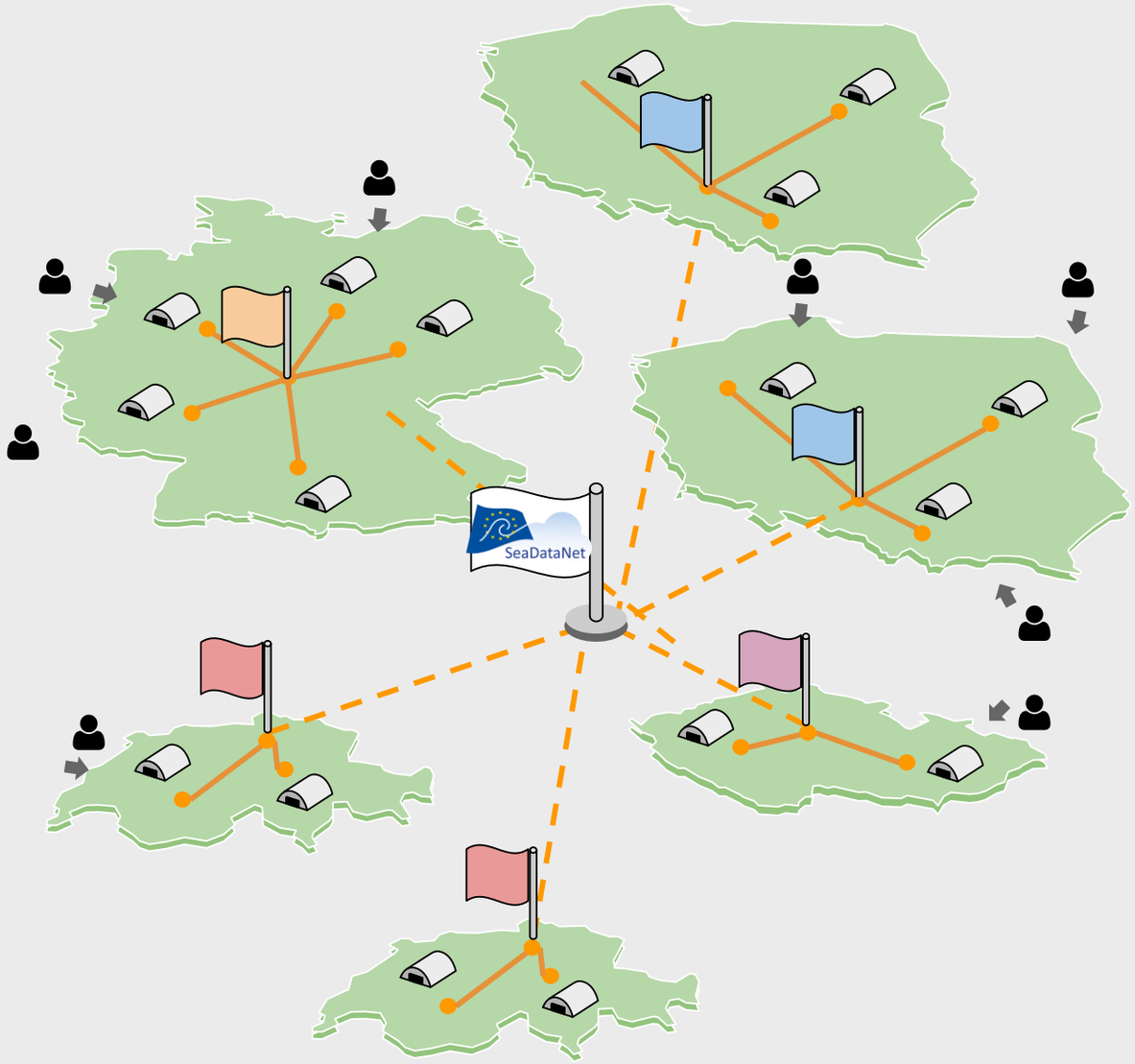
SDC A/R results from 11th of October



Monitoring SDC

a pan-European infrastructure to ease the access to marine data

Users / Researchers all around the world have access to SDC services.



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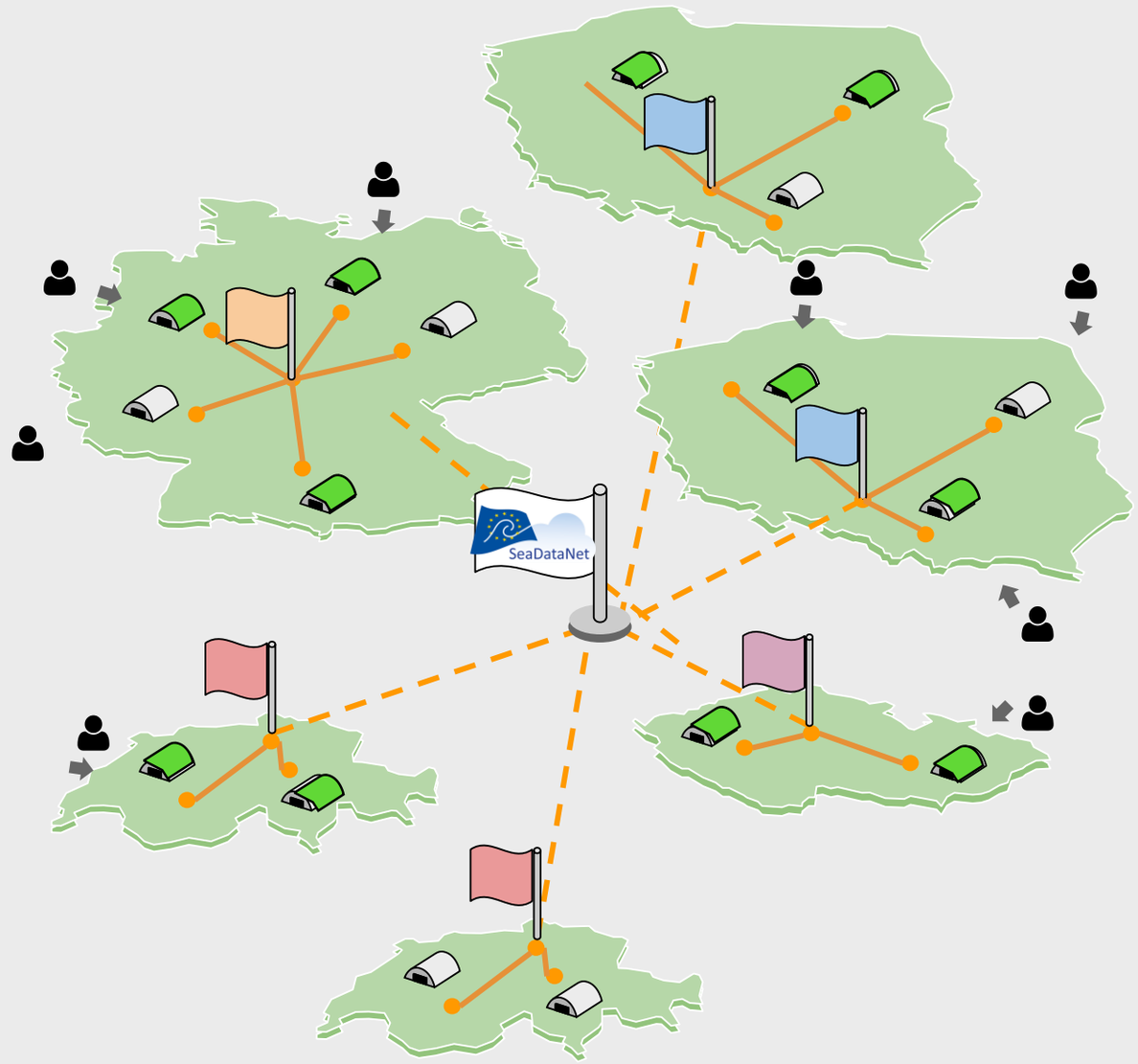

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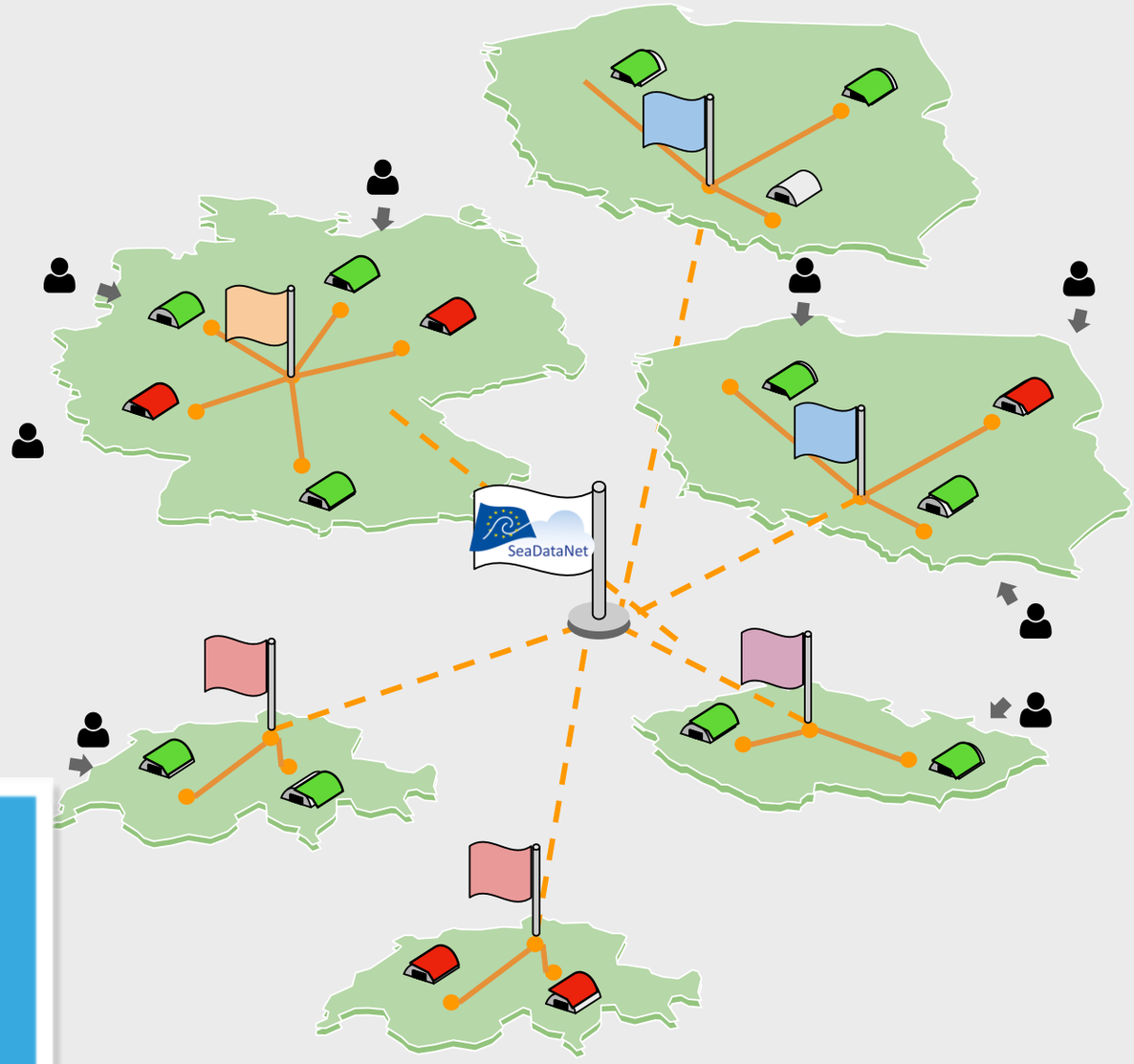

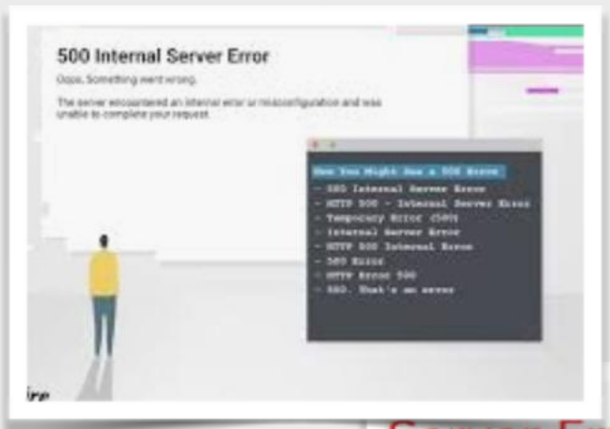

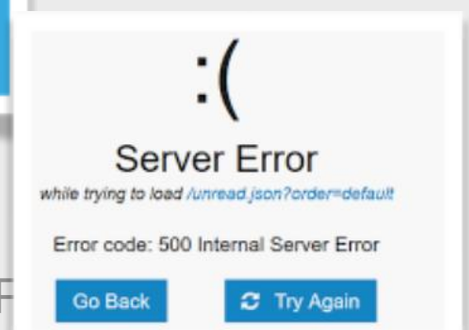

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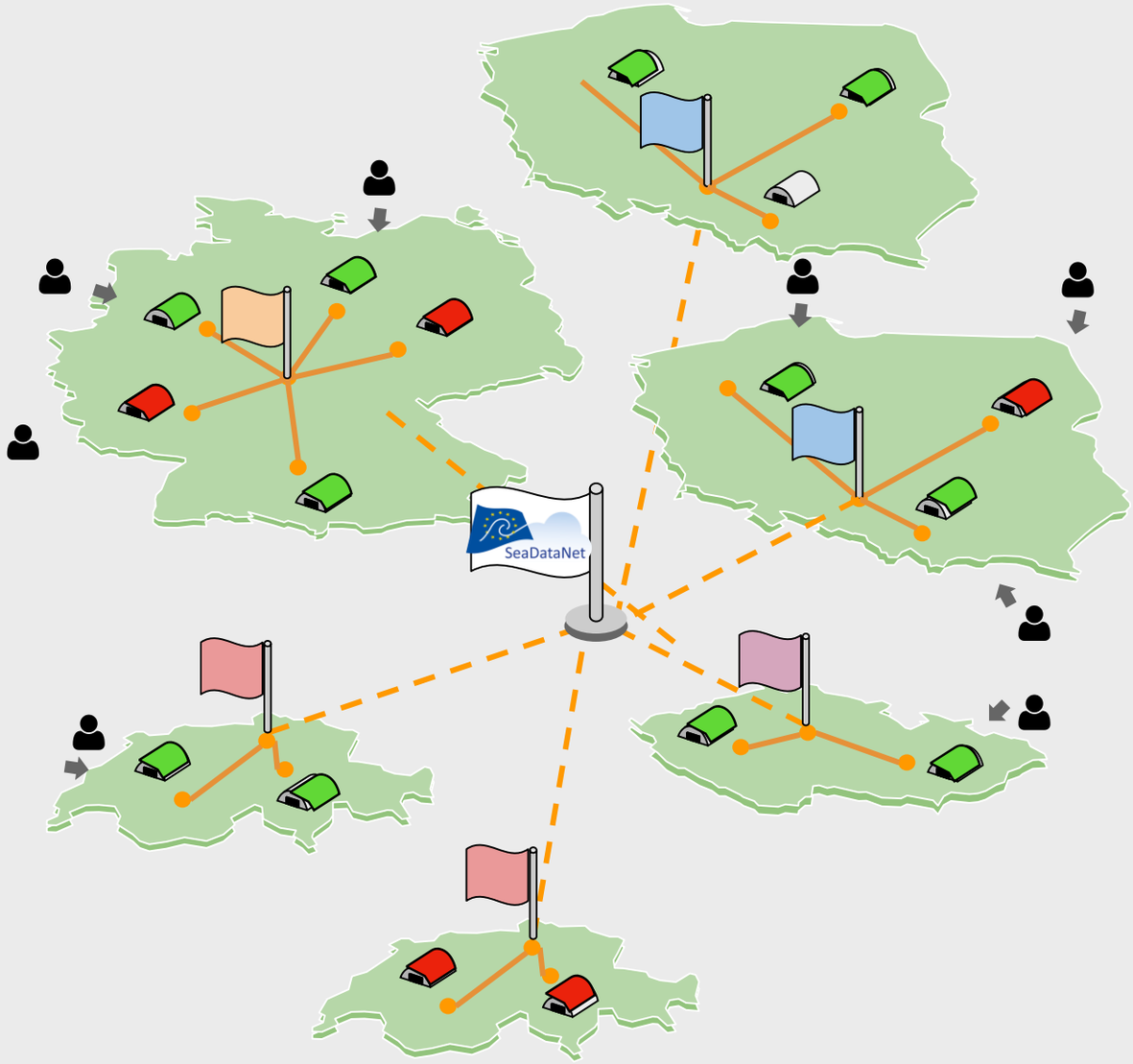

The problem

Service remains unavailable longer than expected.

Monitoring SDC

a pan-European infrastructure to ease the access to marine data

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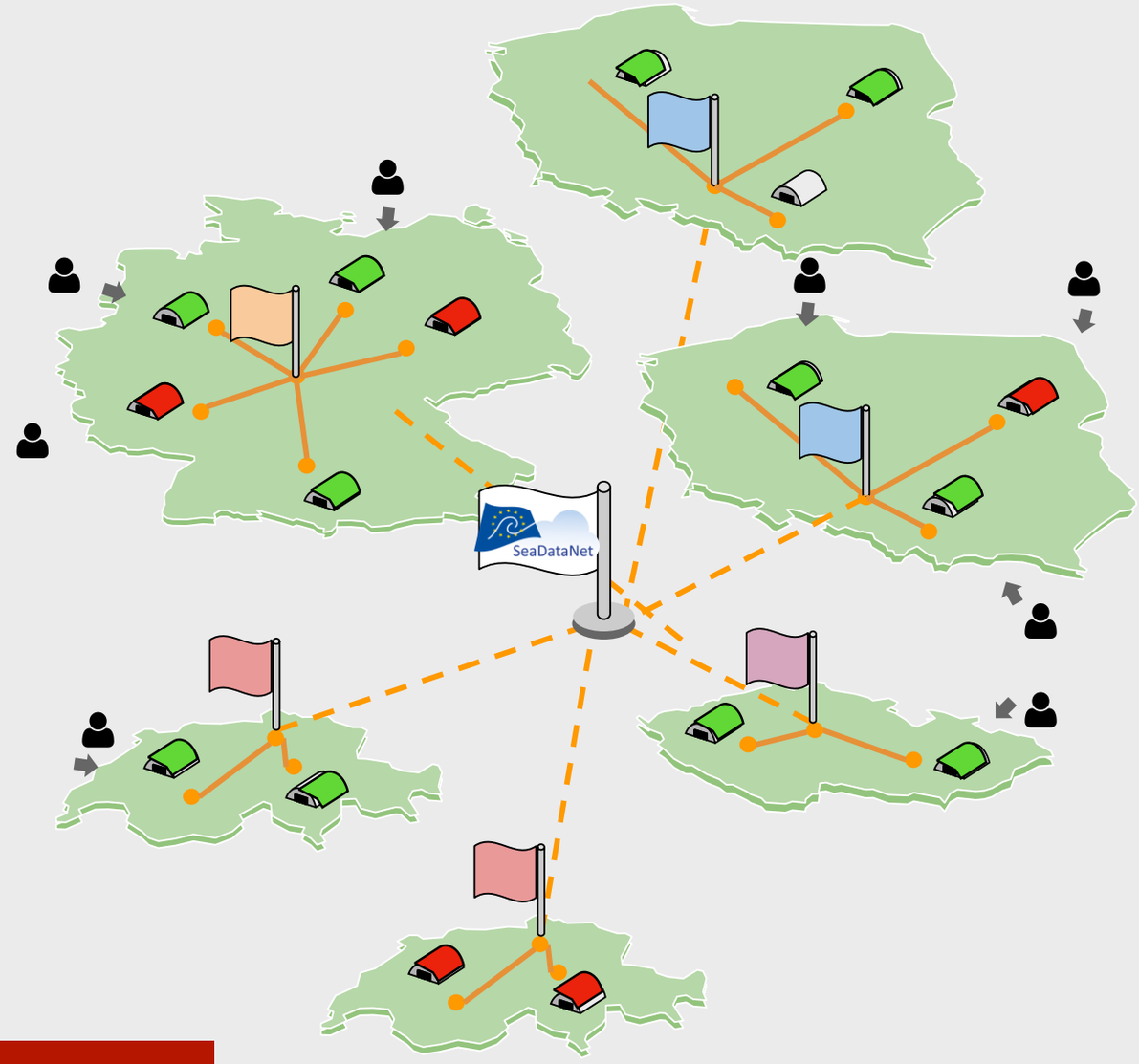


The solution

Monitor | Analyse | Report | Alert

Monitoring SDC

a pan-European infrastructure to ease the access to marine data

ARGO Monitoring

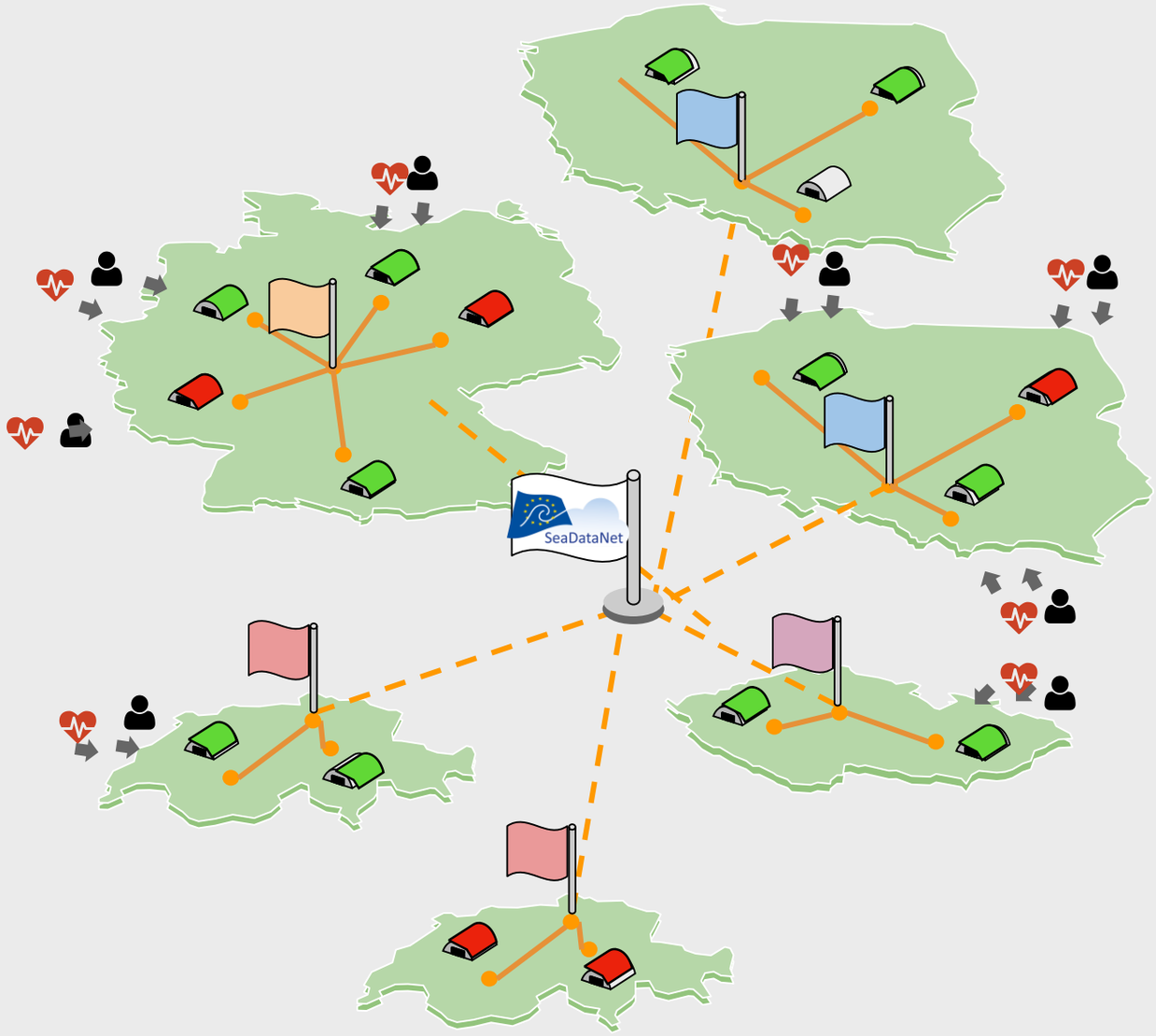
Monitor	Analyse
Alert	Report

- What ARGO is trying to do is to emulate the user behaviour and constantly monitor the Services to provide:

  - Real time status reports

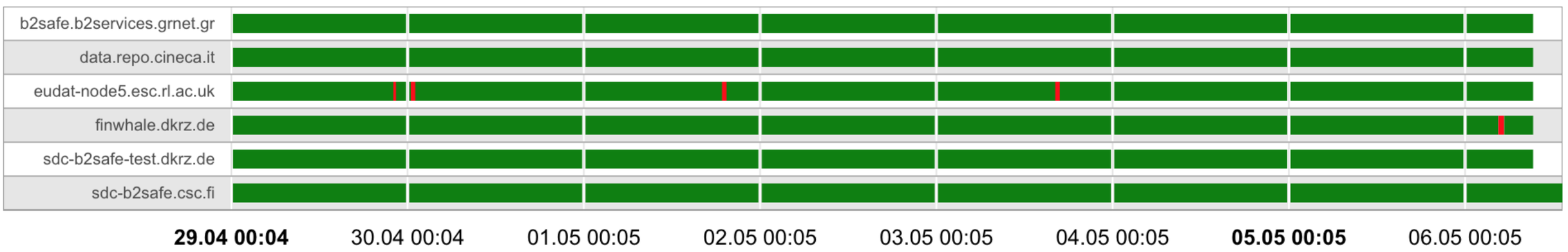
  - Availability and reliability reports

  - Real time alerts



Real Time Status Report

Status for sdc tenant - Critical Report



Last Status Checks

Show 10 entries

	Endpoint (Gro
CRITICAL	62.65.38.19 (GEC
CRITICAL	95.183.158.50 (U

Last Status Checks

Show 10 entries Search:

	Endpoint (Group)	Metric
CRITICAL	62.65.38.19 (GEO_SEAS_DOWNLOAD_MANAGER)	eu.seadatanet.org.do check
CRITICAL	95.183.158.50 (UBSS_DOWNLOAD_MANAGER)	eu.seadatanet.org.do check
OK	seadata.bsh.de (EMODNET_BATHYMETRY_DOWNLOAD_MANAGER)	eu.seadatanet.org.do check
OK	seadata.bsh.de (EMODNET_CHEMISTRY_DOWNLOAD_MANAGER)	eu.seadatanet.org.do check

A/R Reports

1st version online

Availability/Reliability Table | Availability/Reliability Charts

Copy | Excel | CSV | PDF

Search: Show 50 entries

Month	2019-06		2019-07		2019-08		2019-09		2019-10	
	Av	Re	Av	Re	Av	Re	Av	Re	Av	Re
B2ACCESS	100	100	100	100	100	100	99.98	99.98	100	100
B2SAFE									100	100
B2STAGE									100	100
B2STAGE_CINECA									100	100
CAS									100	100
CSR_SEARCH									99.57	99.57

Timestamp	Availability	Reliability
2019-10-01	100	100
2019-10-02	100	100
2019-10-03	100	100
2019-10-04	100	100
2019-10-05	100	100
2019-10-06	100	100
2019-10-07	100	100
2019-10-08	100	100

Real Time Alerts

SeaDataNet

● SERVICEGROUP B2SAFE is **Critical**

SERVICEGROUP B2SAFE became Critical **at** 2019-04-26T15:13:59Z

The ENDPOINT affected is

● eudat-node5.esc.rl.ac.uk (b2safe.irods)

due to **METRIC** eu.eudat.b2safe.irods-crud

Summary:

CRITICAL: timed out after 50 seconds

Status of endpoints in B2SAFE:

- ● b2safe.b2services.grnet.gr (b2safe.irods)
- ● sdc-b2safe.csc.fi (b2safe.irods)
- ● eudat-node5.esc.rl.ac.uk (b2safe.irods)
- ● data.repo.cineca.it (b2safe.irods)
- ● finwhale.dkrz.de (b2safe.irods)
- ● sdc-b2safe-test.dkrz.de (b2safe.irods)

Questions? Email SeaDataCloud Monitoring Team

SeaDataNet

1st version ready

The ENDPOINT affected is

● eudat-node5.esc.rl.ac.uk (b2safe.irods)

It became Critical **at** 2019-04-26T15:13:59Z due to **METRIC** eu.eudat.b2safe.irods-crud

Summary:

CRITICAL: timed out after 50 seconds

Questions? Email SeaDataCloud M

the monitoring team

SeaDataNet

The ENDPOINT affected is

● eudat-node5.esc.rl.ac.uk (b2safe.irods)

It became OK **at** 2019-04-26T07:24:31Z due to **METRIC** eu.eudat.b2safe.irods-crud

Summary:

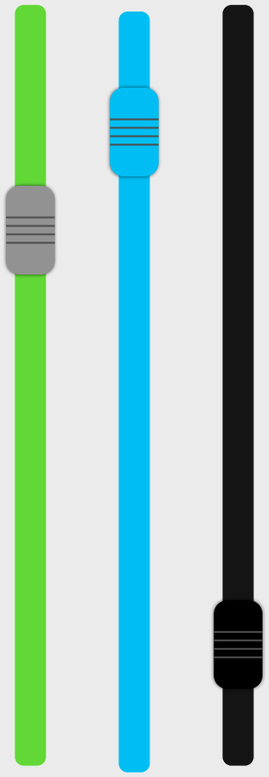
OK: writestatus = 0, liststatus = 0, getstatus = 0, removestatus = 0, removetrashstatus = 0

Questions? Email SeaDataCloud Monitoring Team

the monitoring team

WP8.5 Time Plan

where do we actually stand ….



- By M6: Requirements gathering
- By M9: Architecture details defined and development plan in place
- M12 - M18: Further developments and development of initial probes
- M18 - M24: Testing and preparation for production use of the ARGO monitoring service
- M24- SDC ARGO Monitoring in production including initial set of services being monitored
- M34: SDC ARGO Monitoring for the full set of the SDC services and deployment of the new ARGO Portal

Services Monitored

Monitoring SDC

a pan-European infrastructure to ease the access to marine data

facts

> 93 sites participating

> 121 services running

multiple communities

Reports A/R Status Alerts

SDC Monitoring Suvey

Scope of the Survey

To collect the basic information about the SDC Services. The information is used:

- to construct custom probes for the new SDC Services
- to upgrade existing probes in order to achieve more efficient monitoring
- to have a better (more detailed) picture of the SDC architecture and service dependencies. This will facilitate a more accurate way to calculate reliability and availability analytics

After completion of the survey, SDC monitoring team will be in contact with the service administrator(s) to fine tune the design and development process of the monitoring probes.

SDC Monitoring Survey

Statistics

facts

16 answers participants

14 new services monitored

4 work in progress

Updated Reports A/R Status Alerts

Services from Survey

Status

1. SPARQL (NVS)
2. XML(NVS)
3. SEADATANET.org
4. CDI HTTP-API
5. MARINEiD
6. EDMO Search
7. EDMERP Search

Extensive checks

8. CDI Import Manager
9. CDI Import Manager Dashboard
10. EDMO Sparql
11. EDIOS GUI
12. CDI GUI
13. EDMO CMS
14. EDMERP CMS

Basic functionality check (WIP)

SPARQL (NVS)

SPARQL query search

1. Reads a SPARQL query in string format
2. Converts it in URL
3. Performs the query
4. Expects a predefined string to be returned.

Arc minutes

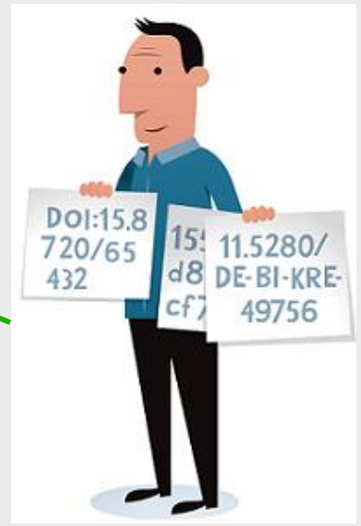
```
prefix
skos:<http://www.w3.org/2004/02/skos/core#
>
 select * where {
<http://vocab.nerc.ac.uk/collection/P06/cu
rrent/UAMN/> skos:prefLabel ?b .}
```

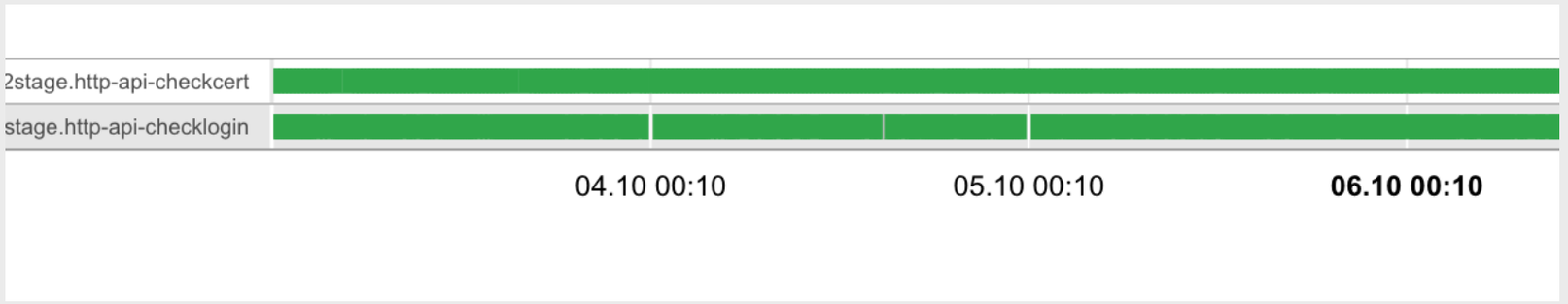
CDI HTTP-API

UNRESTRICTED ORDER WORKFLOW

1. create an order request
2. Check if it is completed
3. Download the zip from URL
4. Delete the order

List of PIDs





Marine ID

check liveness

User
Credentials

Use dummy username and password 1

Authenticate 2

Check result 3

Success .
Authentication is successful

What is actually monitored

Monitoring a service

a single service

B2ACCESS

B2ACCESS is an easy-to-use and secure Authentication and Authorization platform.

It supports:

a) authentication via certificate

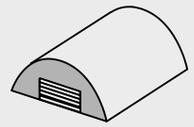
b) authentication via login/pass

How do we monitor?

What do we report

Monitored item:

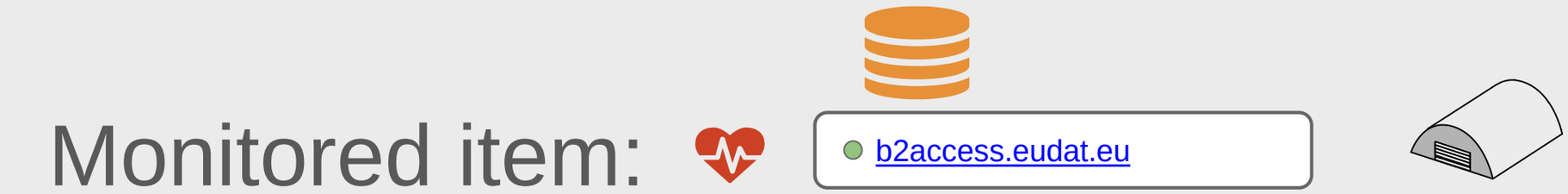
b2access.eudat.eu



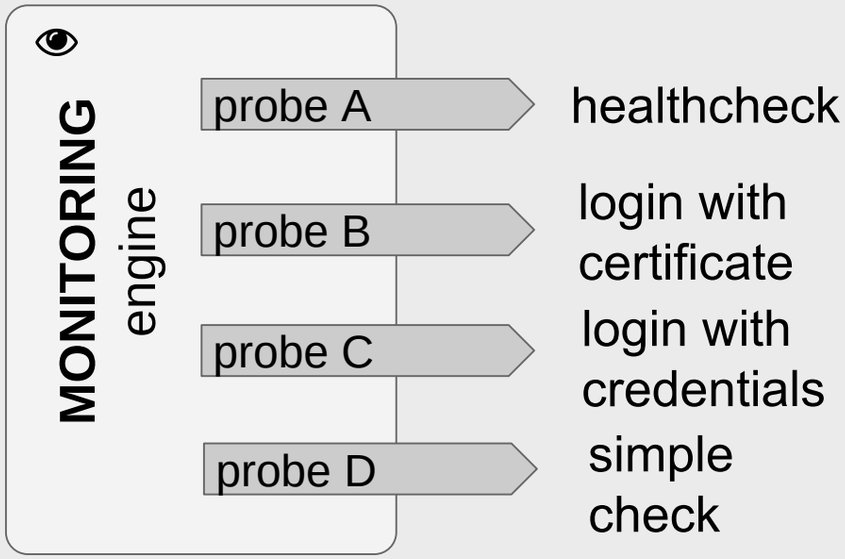
What to monitor

What to report

Monitored item:



CHECKS



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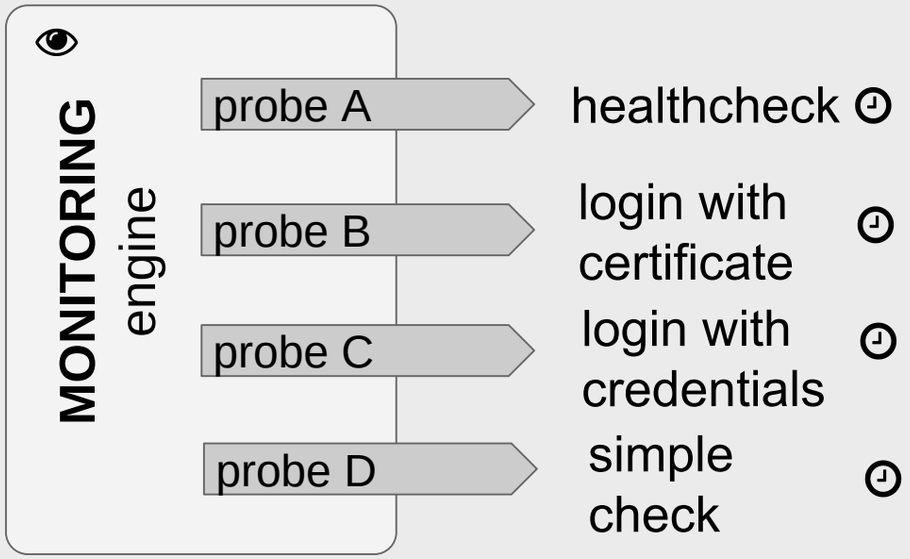

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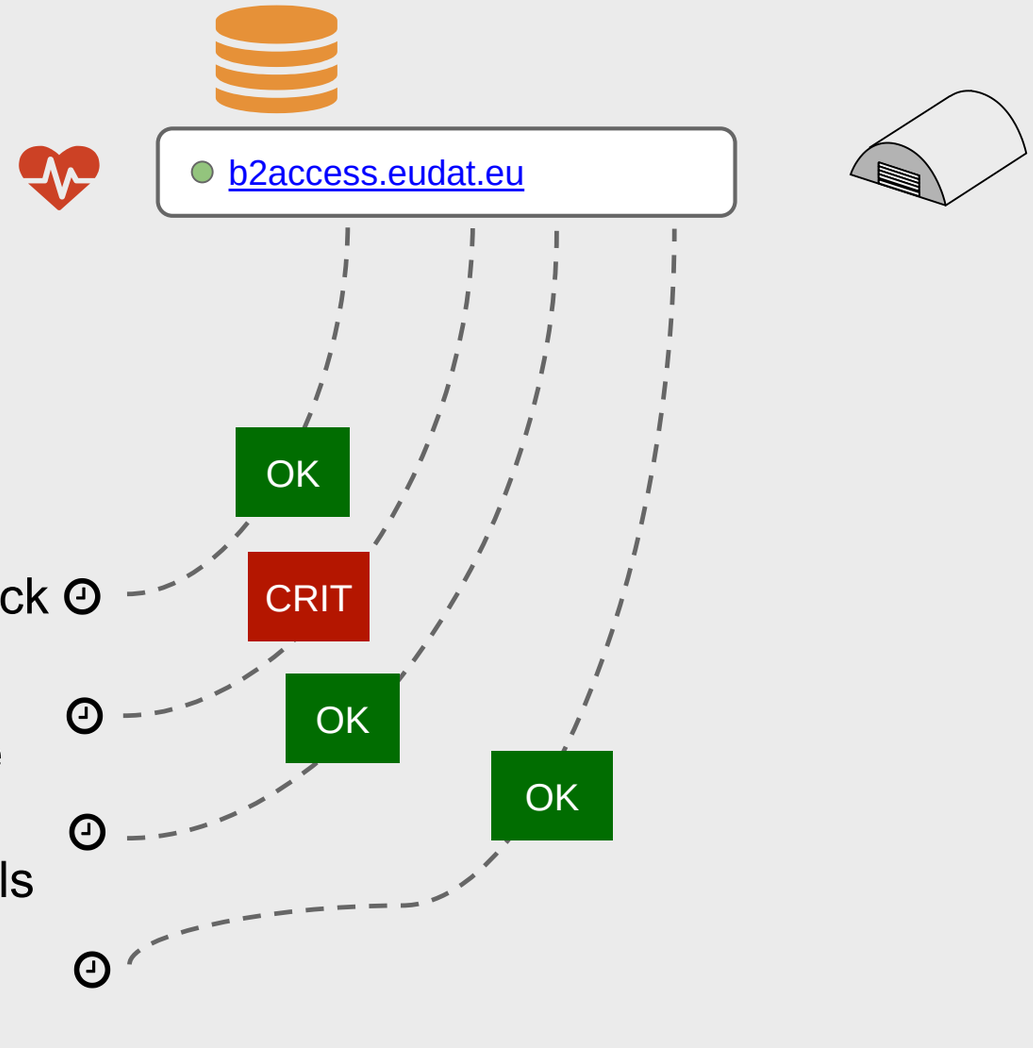

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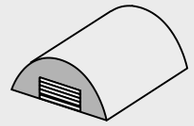

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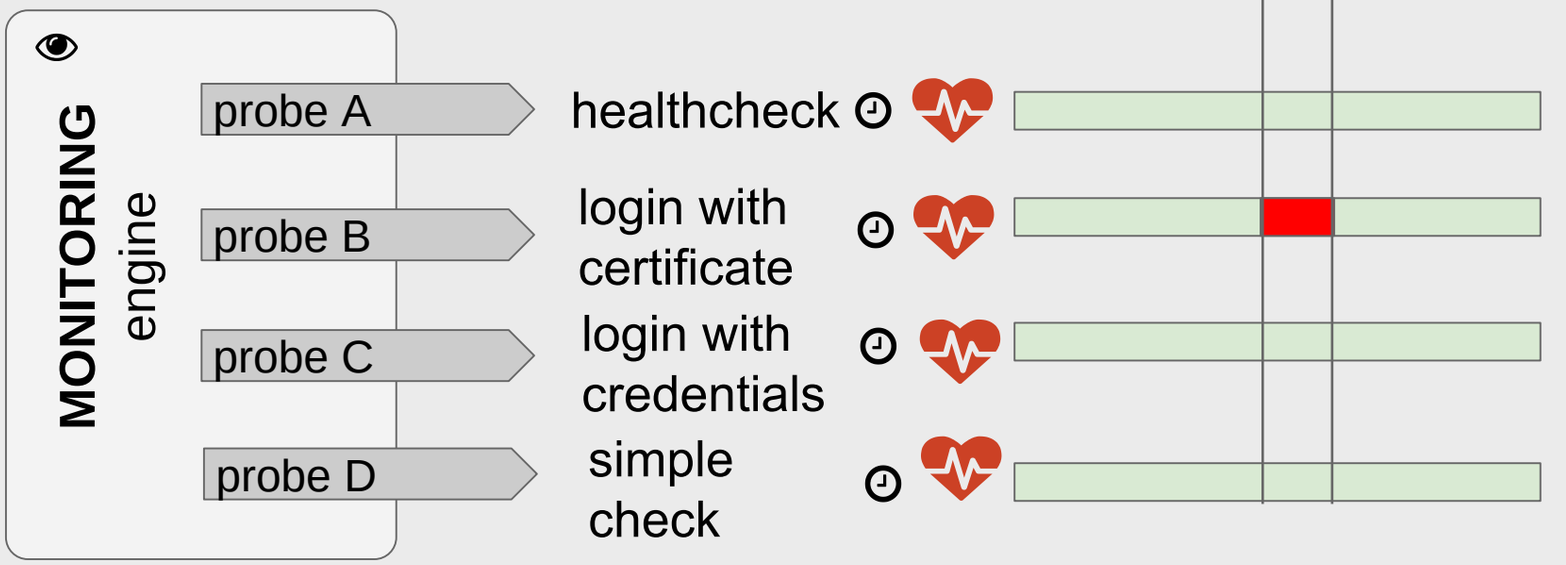

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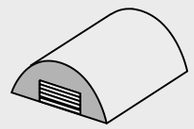
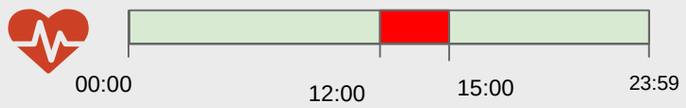


Status



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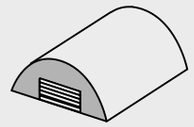

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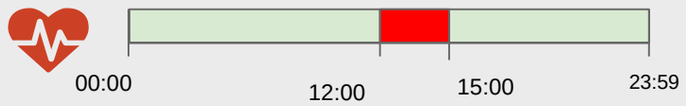


Availability

UP period / KNOWN period

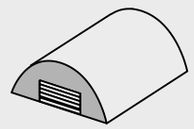
21h / 24h = 87,5%

What to monitor

What to report

Monitored item:

b2access.eudat.eu



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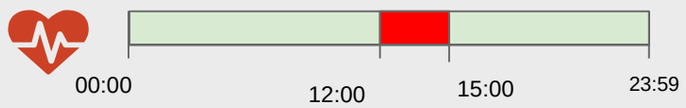

Availability UP period / KNOWN period

21h / 24h = 87,5%

Reliability UP period / (KNOWN period - Scheduled Downtime)

21h / 24h = 87,5%

What to monitor

What to report

Monitored item:

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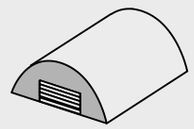
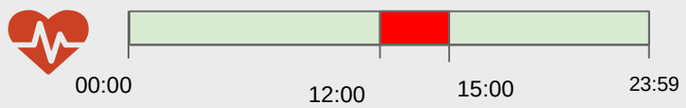


Status



If a downtime was defined for 12:00 - 15:00

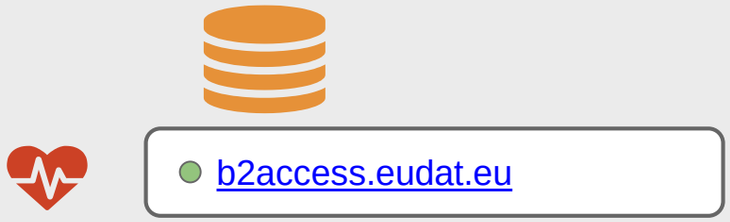
Availability UP period / KNOWN period

21h / 24h = 87,5%

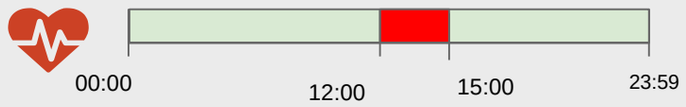
What to monitor

What to report

Monitored item:



Status



If a downtime was defined for 12:00 - 15:00

Availability — UP period / KNOWN period

21h / 24h = 87,5%

Reliability — UP period / (KNOWN period - Scheduled Downtime)

21h / 24h - 3h = 100%

Next Steps

What is next

M23
Monitoring is up

M24
High Availability

M24
Production

M27
Notifications

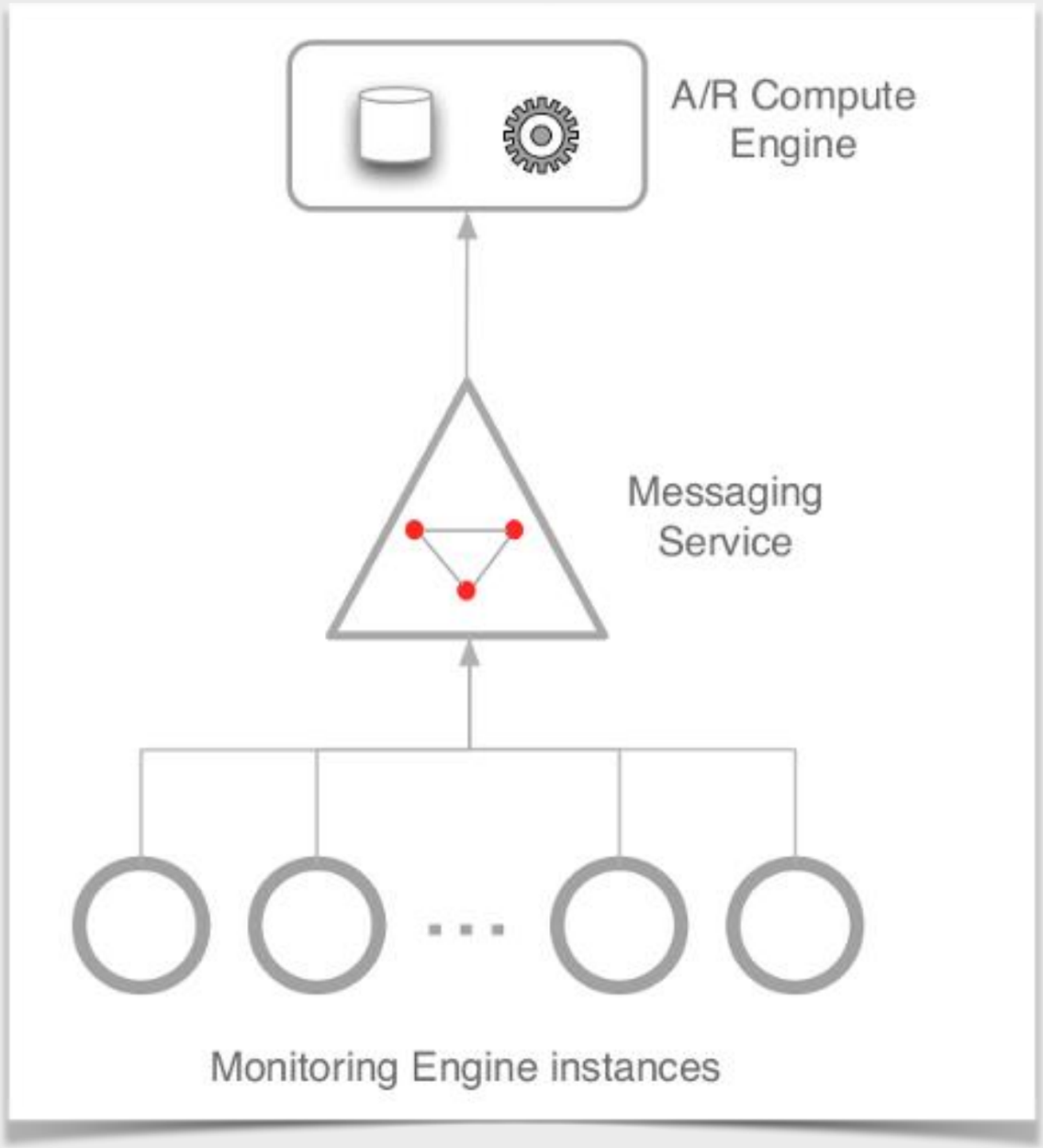
M29
New Probes

M30
New Probes

M34
Final Version

High Availability

Multiple Instances



A second instance of monitoring engine will be deployed in OGS.

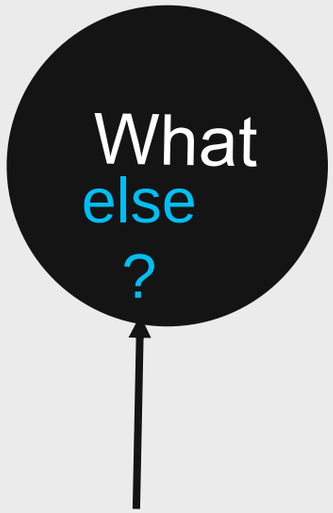
Monitoring result collectors can listen on the message broker service, retrieve the results and forward them to the compute engine.

work in progress

Probe Development

Remaining

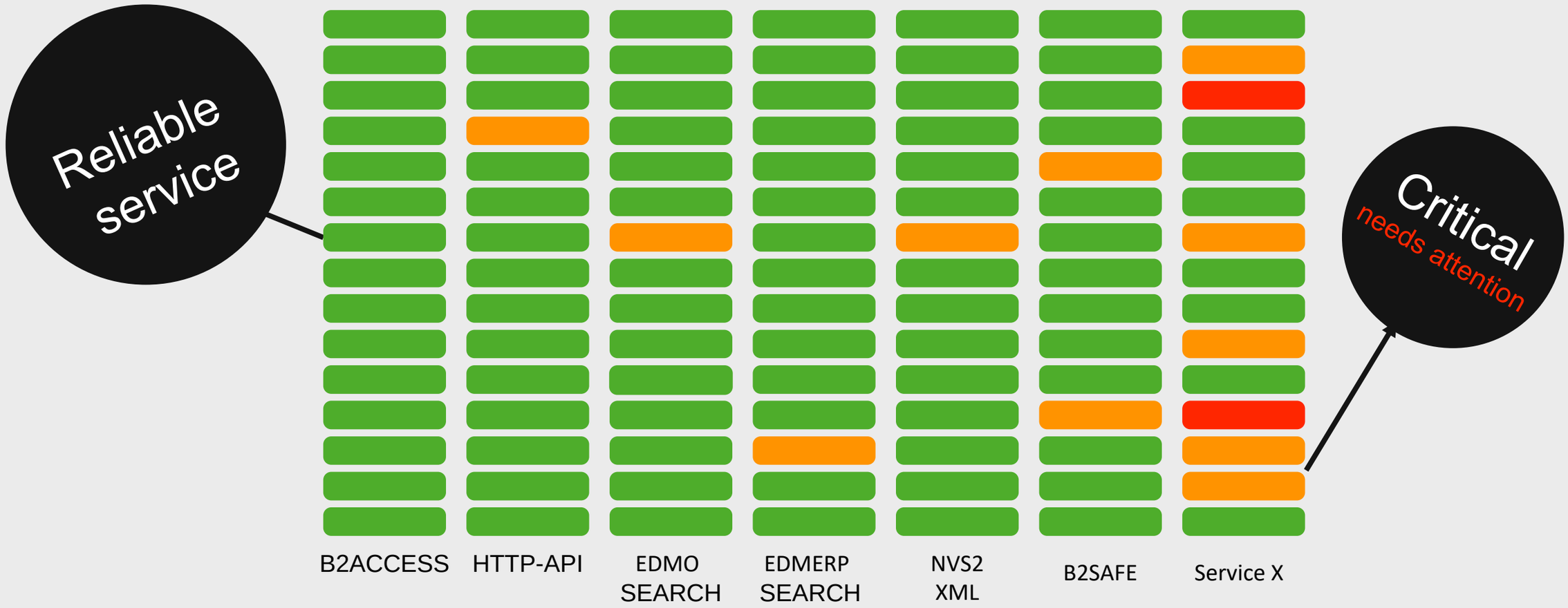
- Homepage
- Basket Operations
- RSM
- RSM / Download
- Replication Manager
- VOCAB Search
- EDMED Search
- EDMOD Search
- EDMERP Search
- CSR Search



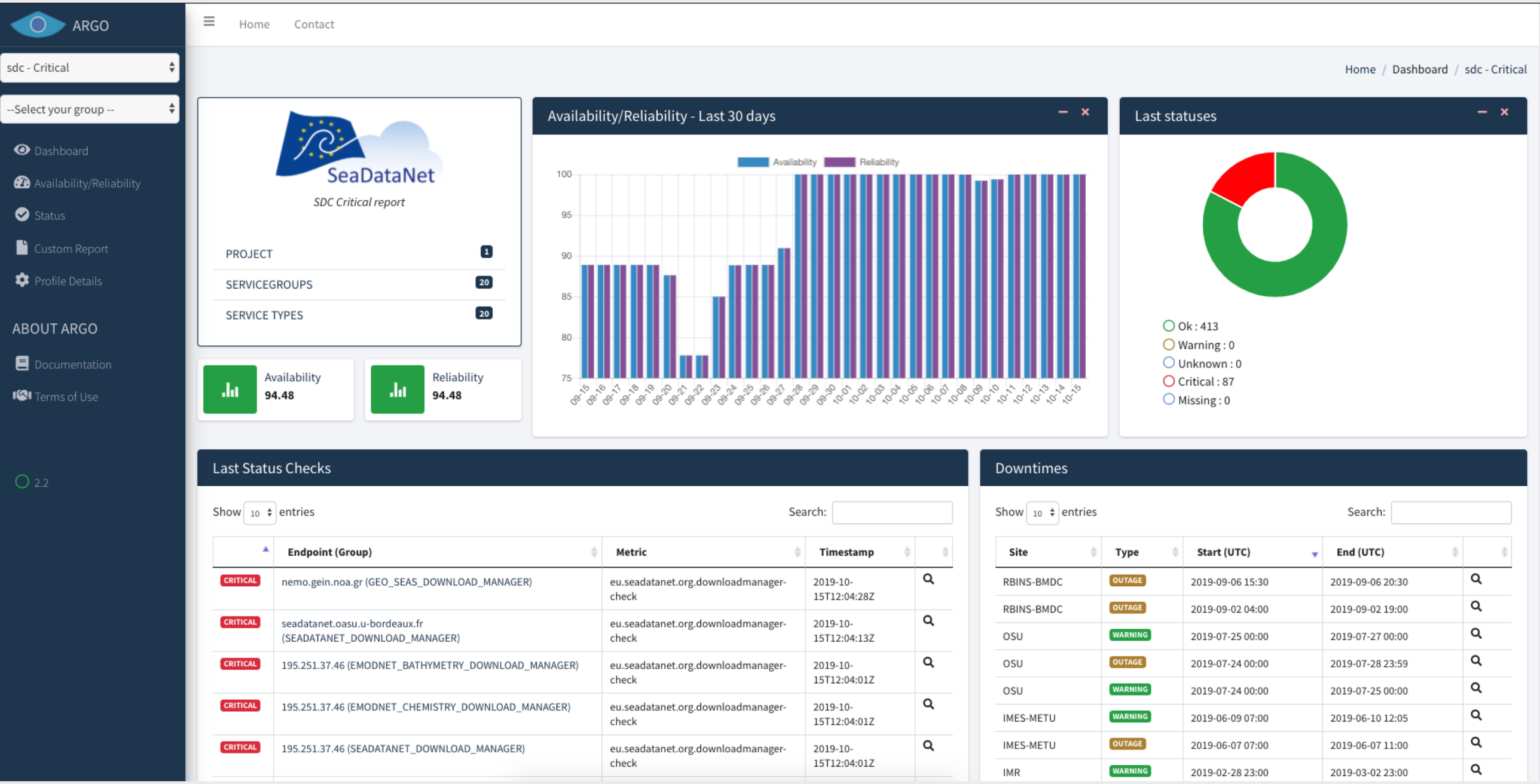
Observe the results..

Observe the data

Now that we have all these data what can i do?



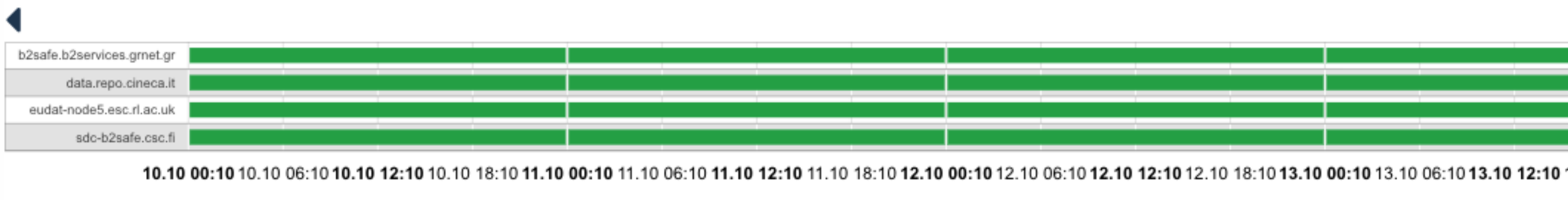
The Dashboard



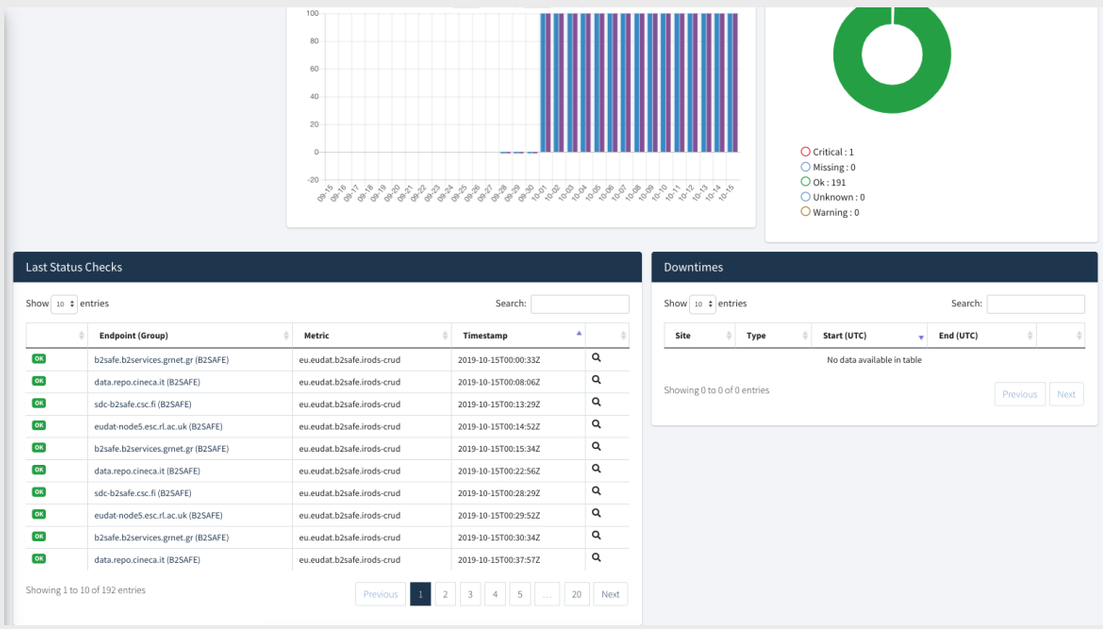
Are you a Service Owner

I am a Service X Owner

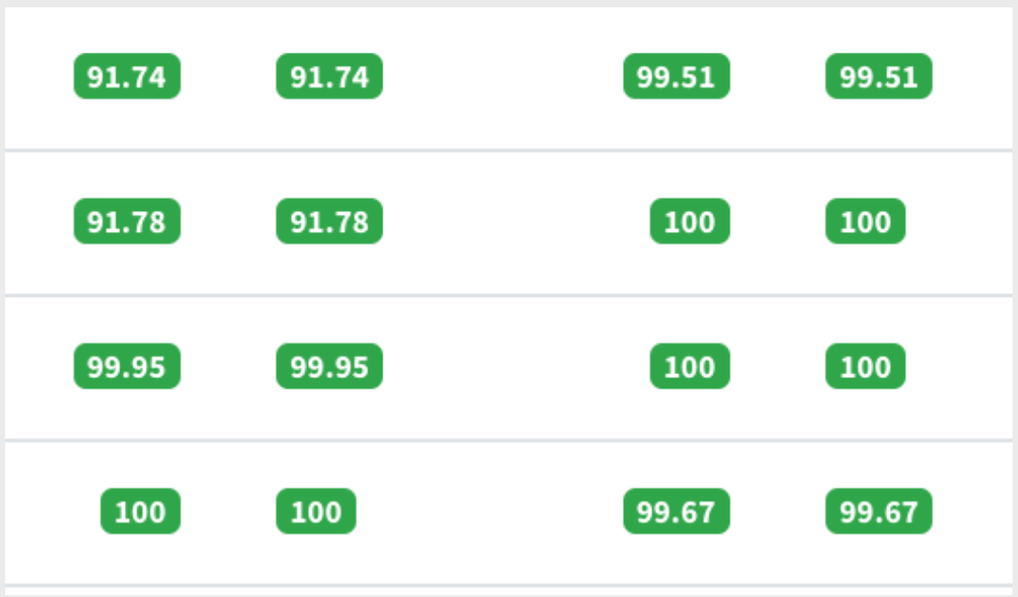
Service Status



Service Dashboard



Service A/R



Are you a Service Owner

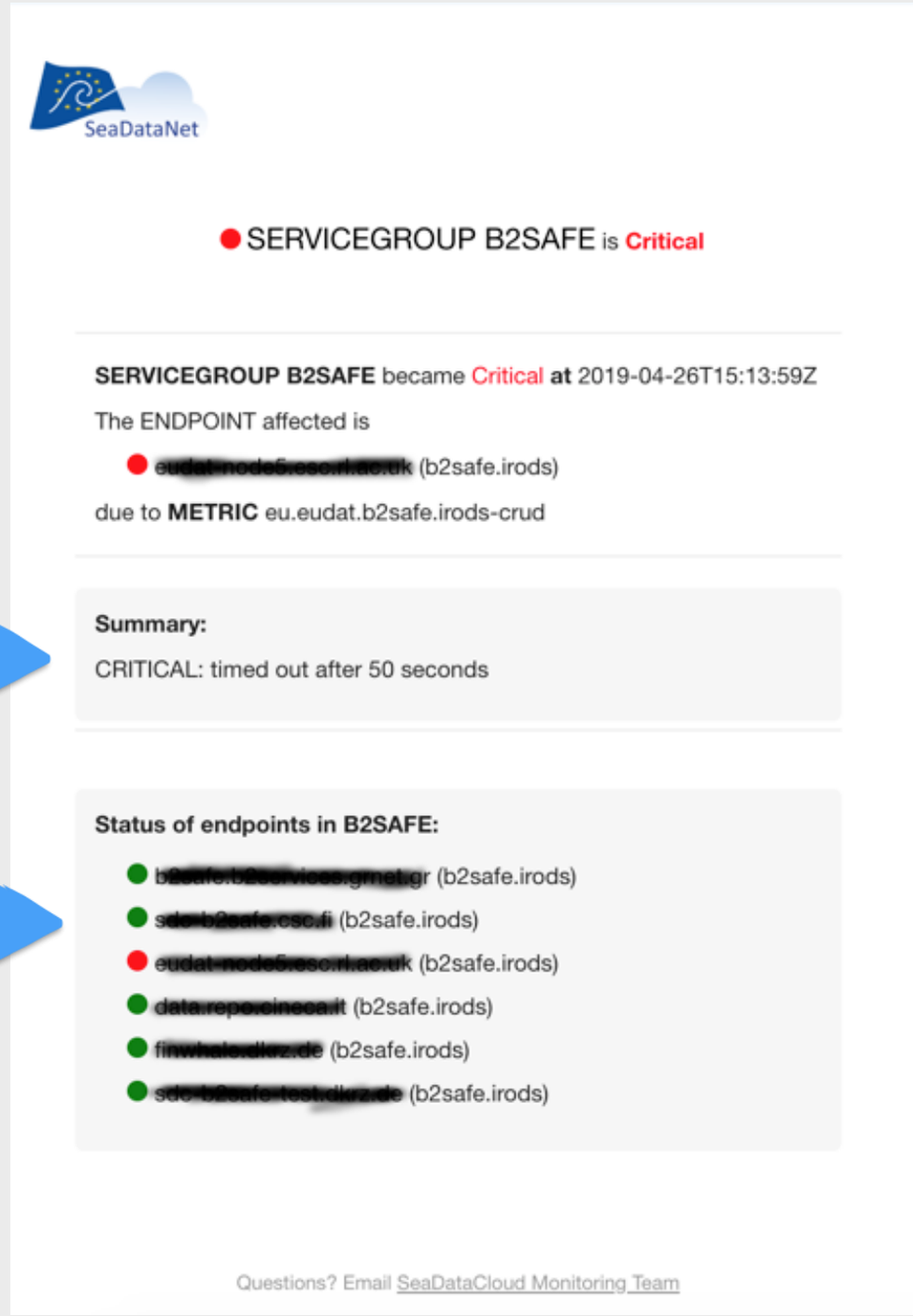
I am a Service X Owner

If you are a Service Owner

When Something is wrong
you will get an email

with information about the problem

and information about all endpoints

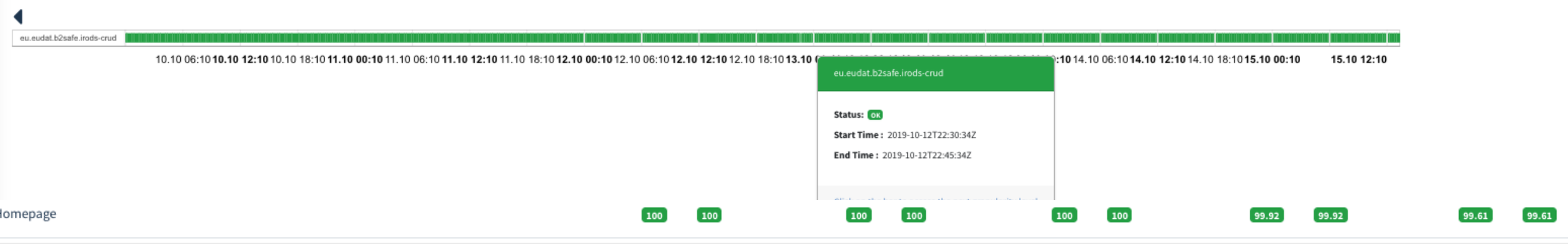


Are you just an operator

I run a node of a service

Status

Status for sdc tenant - Critical Report



A/R

Month	2019-06		2019-07	
	Av	Re	Av	Re
b2safe.b2services.grnet.gr	95.3	95.3	100	100

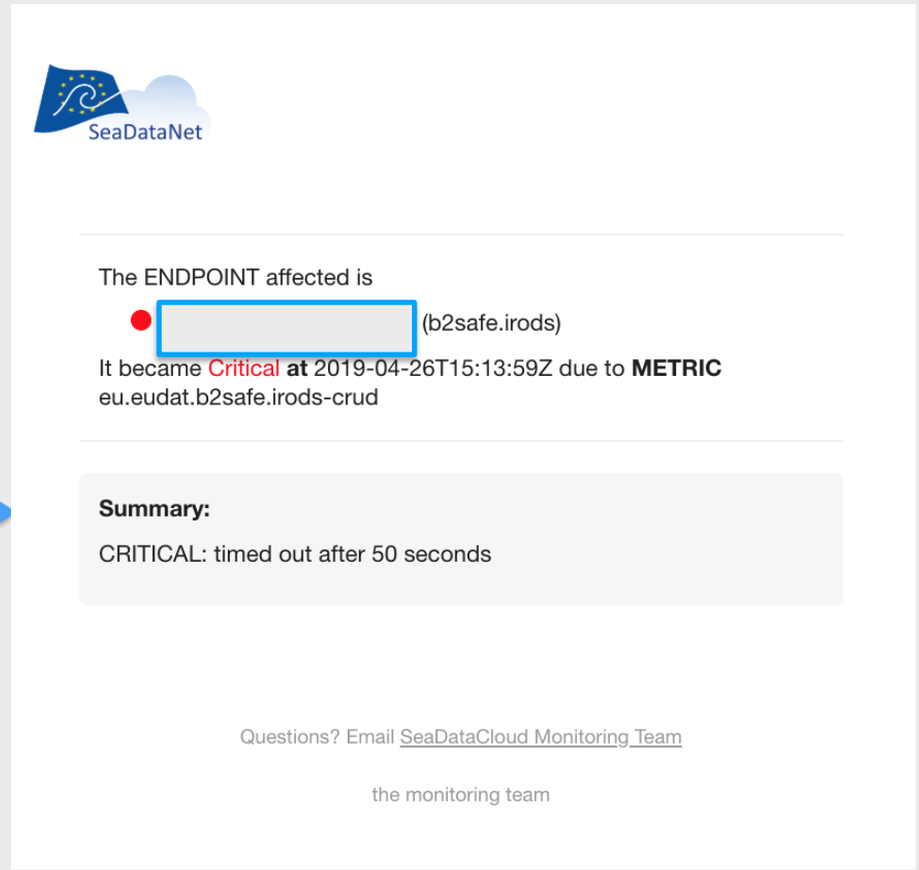
Are you an operator

I operate a service

If you are an Operator

When Something is wrong
you will get an email

with information about the problem


SeaDataNet

The ENDPOINT affected is

[redacted] (b2safe.irods)

It became Critical **at** 2019-04-26T15:13:59Z due to **METRIC**
eu.eudat.b2safe.irods-crud

Summary:

CRITICAL: timed out after 50 seconds

Questions? Email SeaDataCloud Monitoring Team

the monitoring team

A short introduction to Web UI

QuestionTI

Thank you

ME


Watching
You