



WP6 – Core and Advanced services: **Monitoring Plan**

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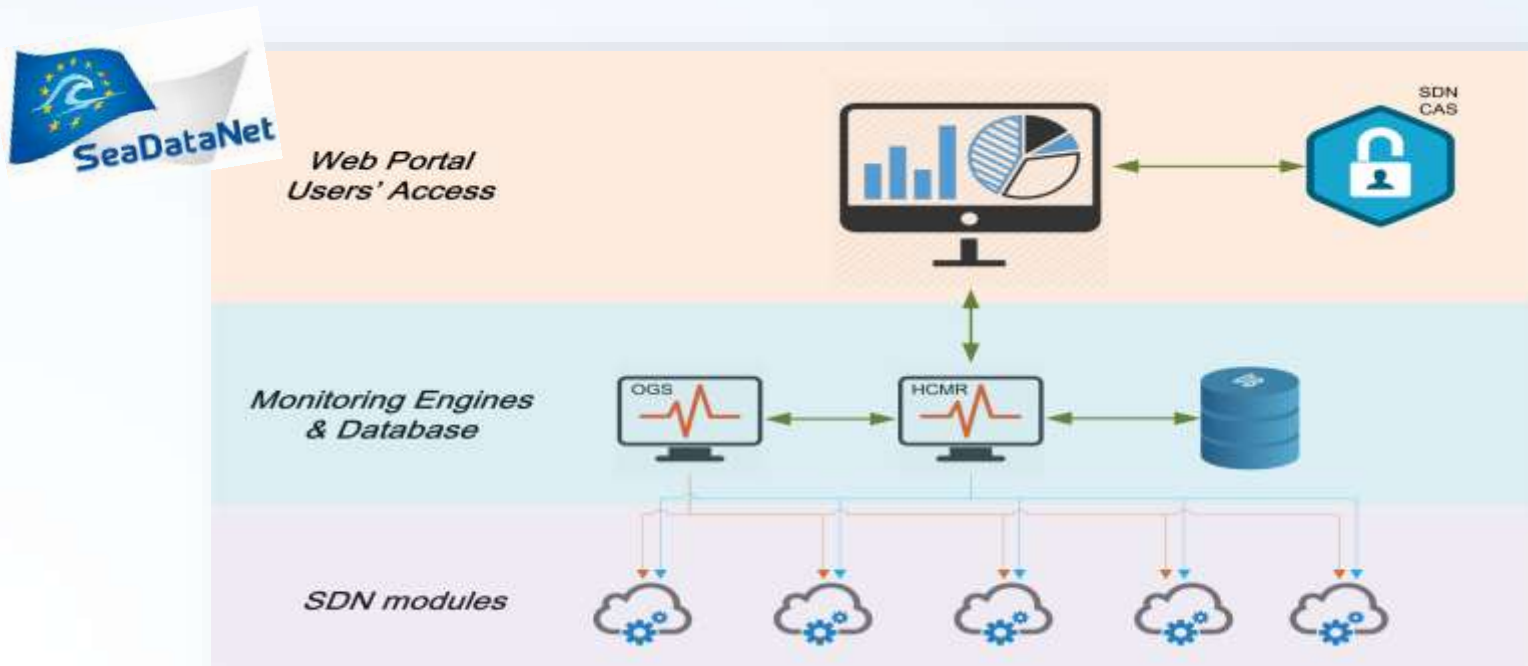


Brief History

- The concluded SeaDataNet II project already includes a monitoring system, monitoring portal and the production of annual metrics analysis reports.
- **Nagios Core** (monitoring software) monitors both core services and local services. Local services are the Download Managers installed at data centres

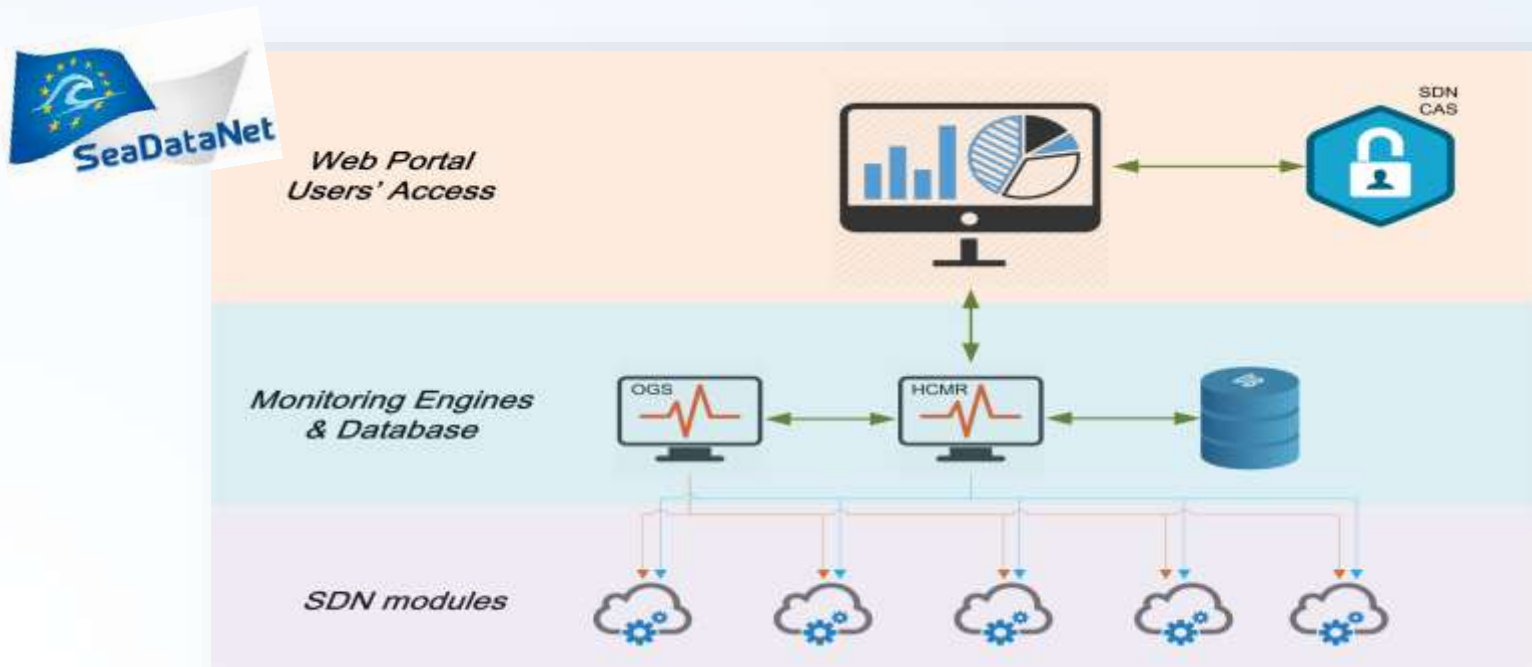
Brief History (SDN Monitoring System Architecture)

- Nagios is installed at two separate Data Centres, **HCMR (Greece)** and **OGS (Italy)**. The monitoring outcomes are double checked in order to avoid false alarms of services breakdown.



Brief History (SDN Monitoring System Architecture)

- In addition, MARIS operates a robot shopper service in order to test daily the well-functioning of the full CDI shopping process.



Brief History (monitoring portal)

On-line map visualization



The screenshot displays the SeaDataNet monitoring network visualization interface. On the left, a sidebar menu includes sections for 'Monitoring Network', 'Current State', 'State Reports', 'Alerts Reports', and 'Account'. The main area features a map of Europe with numerous green checkmark icons indicating service status across various locations. The interface is titled 'NagVis' and includes navigation options like 'Home', 'Choose Language', and 'Send Help'.

Introduction

- SeaDataCloud monitoring plan includes details of **infrastructure monitoring** and **services' usage metrics** (accounting)
- Infrastructure monitoring refers to the practice of overseeing the **availability** of IT infrastructure using specialized software tools.

Introduction

- Monitoring system sends frequent requests over the network to each service to **verify a correct on-time response**.
- Both **monitoring** and **system metrics** will be collated and analyzed in annual metrics reports, which include Key Performance Indicators (KPI). Some of this metrics will be also available online at any given moment.

Objectives

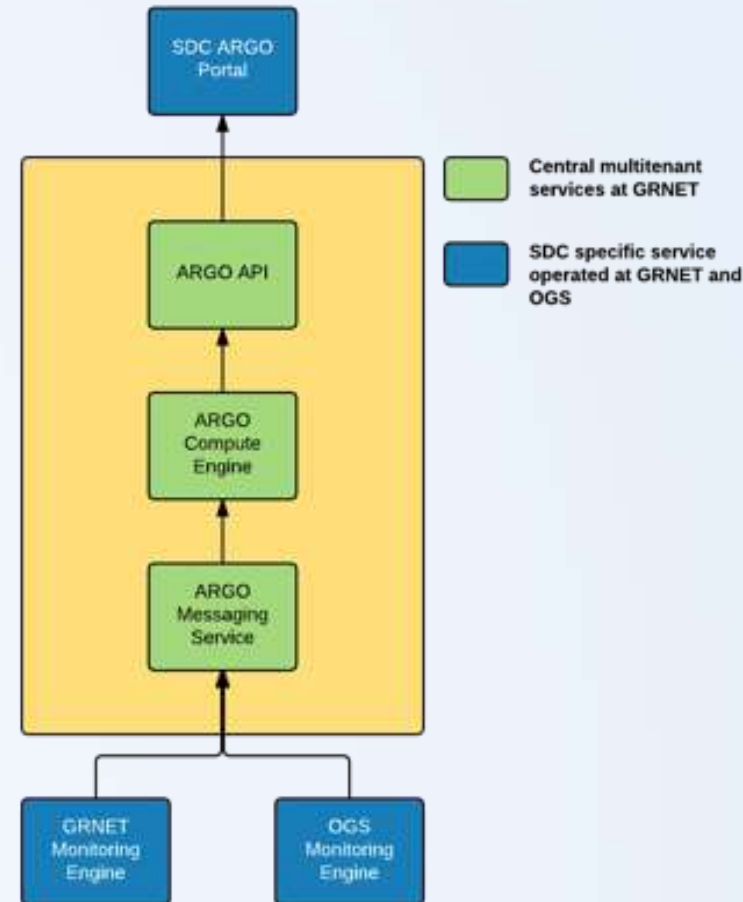
- The main objective is to **adapt** the existing SDN monitoring & accounting to the new SDC components, while updating and optimizing it.

New Software

- Two new open-source software tools will be installed (and mirrored by OGS):
 - **Monitoring: ARGO**, the monitoring framework of EUDAT.
 - **System metrics: APEL**, that collects accounting data from distributed sites and is used within the European Grid Infrastructure (EGI)

Description of work (**Monitoring**)

- Upgrading the operational Monitoring system
 - New ARGO configuration
 - Definition of metric, availability and reliability profiles
 - Implementation and deployment of custom connectors for the automatic configuration of the monitoring
 - Deployment of Monitoring Engines
 - Development of new probes
 - Deployment of monitoring probes
 - Adaptation and deployment of the ARGO Visualization Portal for the SDC needs



Description of work (**Monitoring**)

- Upgrading the operational Monitoring system

GRNET and HCMR started working on monitoring engine setup hosted on GRNET infrastructures

Includes the basic software installation and configuration (nagios engine, connectors, basic probes, security and access policies etc)

Description of work (**Monitoring**)

- Upgrading the operational Monitoring system

Initial list of services to start monitoring decided

B2* related

B2safe

B2host

B2stage

B2access

SDC related

Download Managers

Replication Manager

CDI import manager

RSM

Central User Register

User Interface

Description of work (**Monitoring**)

- Upgrading the operational Monitoring system

Preparation of questioner in order to finalize:

- * the complete set of services to be monitored
- * the monitoring metrics (probe specification)
- * the definition of availability profiles (logical operation on probe results to determine the final status of the service)
- * etc....

Questionnaires to be send in coming weeks (**service admins**)

Description of work (**Accounting**)

- **Accounting** will continue to be supplied based on the KPI. The team will evaluate the possibility to **add accounting of new components** even before M24.
- By M24, **APEL** will make it easier getting metrics from partners. STFC (UK) will run the central database, along with a mirror at OGS in Italy.

Time Plan

- M12 - M18 - Developments and deployment of initial probes developed by SDC service providers (including EUDAT specific probes)
- M18- 24 - Testing and preparation for production use the ARGO monitoring service in SDC
- 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 new ARGO Portal