REFIT

monitoRing &
rEconFiguraTion
SODALITE Stack 4

www.sodalite.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825480

SODALITE REFIT is solving

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The Problem

It is difficult to monitor data management coming from different sources, pinpoint the application that is causing the problem and provide an accurate selection of appropriate deployment options for a given context

The Solution

Appropriately collect, store and aggregate data to simplify access and use per-connection network metrics instead of just per network interface

The Value

Unified monitoring data collection and presentation to simplify the monitoring of heterogeneous infrastructures and can ease decision-making processes

Dynamic monitoring, runtime resource discovery and autonomous refactoring of application deployments will change the way we manage heterogeneous (multi-cloud and HPC) environments

SODALITE REFIT Benefits

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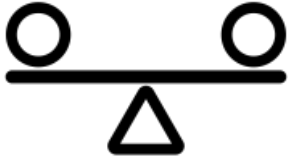
Vigilant

Can detect the violations in the application performance SLAs based on runtime monitoring data, and refactor the current deployment of an application to maintain or improve their performance



Flexible

Balancing different non-functional requirements such as performance, cost, thermal energy, security risks, and privacy risks

Adjustable

Dynamic discovery and use of deployment options as new options become available/ unavailable/ changed

Comprehensive

Allows for a coordinated management of CPU and GPU resources for multiple concurrent and containerized applications

Context on SODALITE solution

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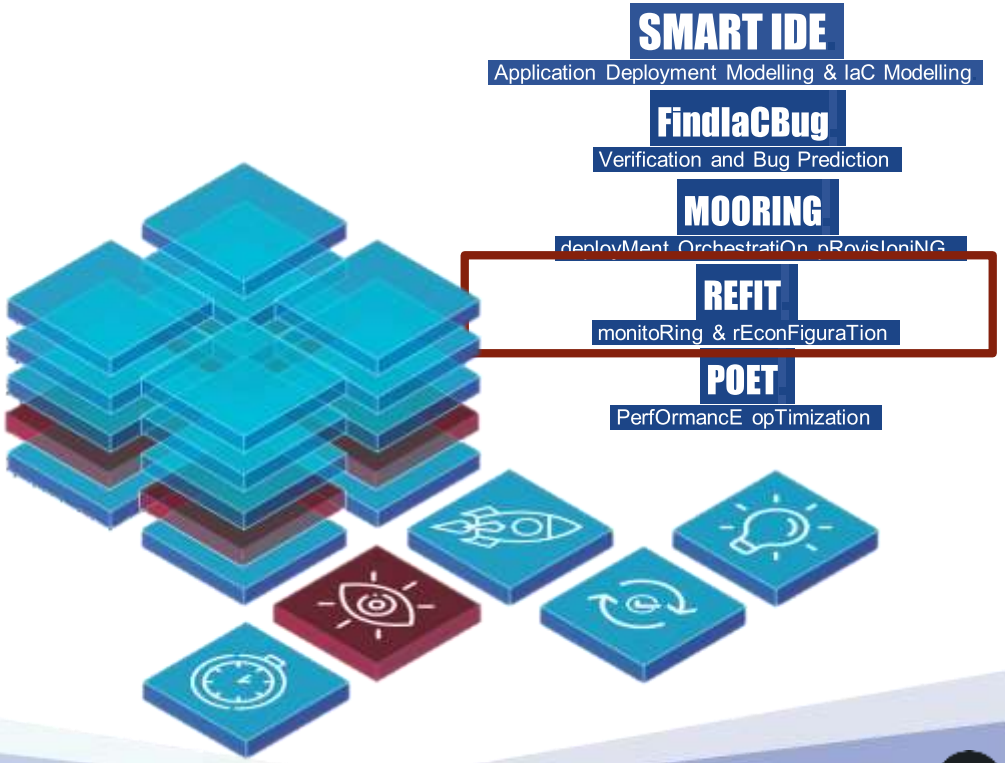
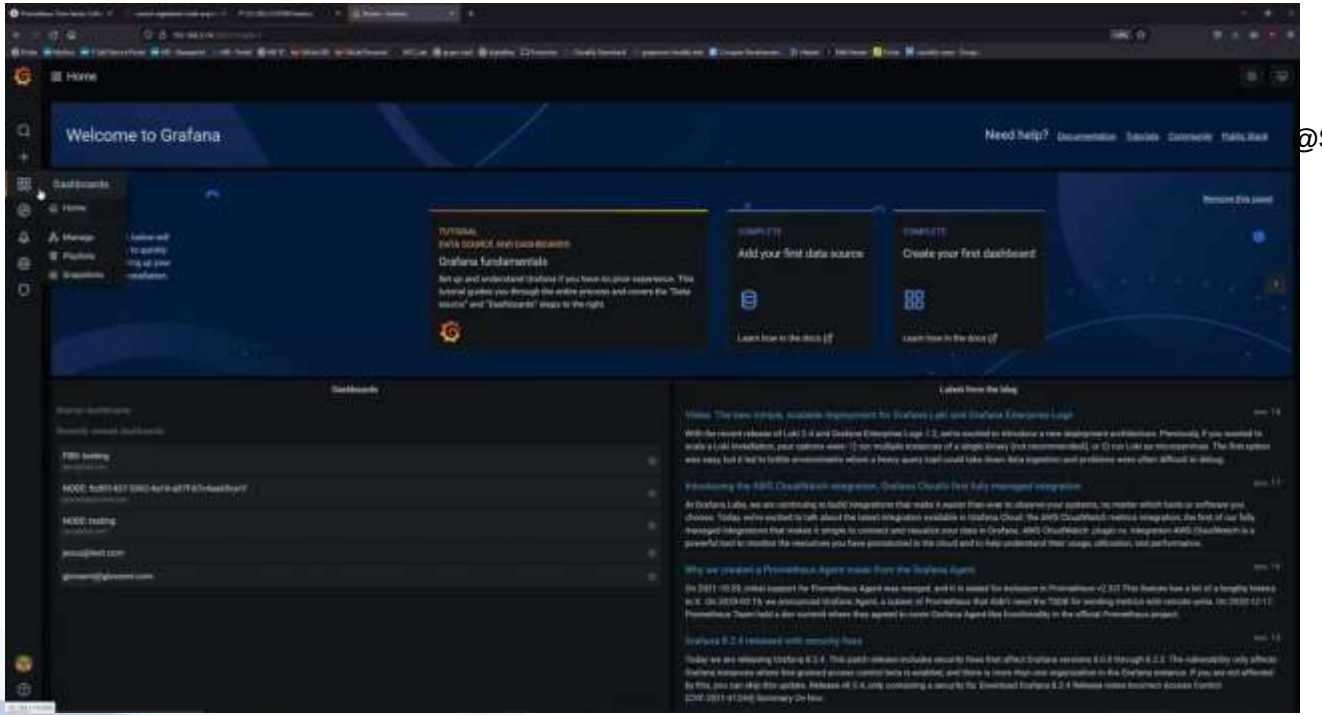
Innovation

- ★ General monitoring
- ★ Network monitoring
- ★ Node manager
- ★ K8s Node Toolset

MONITOR + RECONFIGURE YOUR SYSTEM AND NETWORK, FROM APPLICATION-LEVEL AND INFRASTRUCTURE-LEVEL METRICS AND EVENTS



REFIT Demonstration



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LIVE

See Full Demo at

@SODALITE_H2020

SODALITE Business Plan

	Trial	Basic	High-End
	Testbed Access	Light SODALITE	Advanced SODALITE
	FREE	€	€€
Optimisation & Reconfiguration	✓	✓	✓
Own Infrastructure Access	x	✓	✓
Configuration	✓	✓	✓
Maintenance	x	€	✓
Support & Training	x	€	✓
Customisation	x	€	✓
	Premium Services €		

REFIT Early Adopters

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Environmental

Problem: Data acquisition and processing pipelines may have hardware and connectivity requirements that vary over time which may induce the over/under-sizing of the runtime infrastructure.

Solution: Monitoring and reconfiguration enable the optimal allocation of resources based on static policies and on dynamic conditions.

Digital Health

Problem: When dealing with various infrastructure types, monitoring the workflow execution during runtime requires knowledge of multiple infrastructure-specific monitoring tools.

Solution: A tool or a service that can display relevant monitoring metrics of various infrastructure types centrally.

IoT Automotive

Problem: In the case where a vehicle participates as an edge node, monitoring and node-local reconfiguration must also be considered in order to respond to environmental and operational changes impacting that specific node.

Solution: Monitoring data and node-specific metrics/alerting criteria provide all the information required to support both cluster and node-local reconfiguration by the SODALITE stack.

The SODALITE Team

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SINTEF

SODALITE has the potential to deliver solid innovations, validated in large pilots, towards the deployment and operation of the next generation of applications that will run on heterogeneous HPC and Cloud resources.

Nicolas Ferry

The SODALITE outcomes are an impressive next step to facilitate efficiently deploying and operating complex, adaptive software across the whole compute continuum.

Andreas Metzger

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SODALITE-EU

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Shaping the Infrastructure Management and Application Deployment of Tomorrow!

TALK TO US

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