



Sodalite

**SOFTWARE DEFINED APPLICATION
INFRASTRUCTURES MANAGEMENT
AND ENGINEERING**



POET

*PerfOrmancE opTimization
SODALITE Stack 5*

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 POET is solving



The Problem

Application experts with limited hardware or optimisation knowledge using diverse targets in non optimal ways and in the absence of automation



The Solution

Autotune and improve application runtime parameters for better application performance, using the pre-built, optimised containers, modified to build an optimised container for the application deployment



The Value

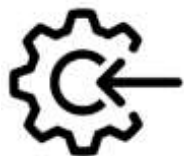
Automating experience of manual optimisation for an IaC environment, porting application optimisation to cloud and edge deployments based on HPC



A hand in a blue sleeve points towards a central computer monitor. The background is a dark blue gradient filled with various white line-art icons representing technology: server racks, a magnifying glass, a cloud with circuitry, a smartphone, a gear, a globe, another smartphone, a laptop, a shield, a padlock, a speech bubble, an envelope, a Wi-Fi symbol, and a network diagram. The overall theme is digital technology and optimization.

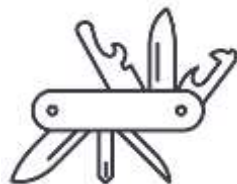
**Enabling application experts with limited hardware or
optimisation knowledge to use diverse targets in an optimal way**

SODALITE POET Benefits



Proactive

Can make performance decisions based on the available target's application inputs and configuration, and on the performance modelling



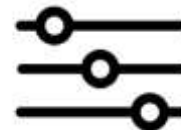
Resourceful

Provides the user with tools to optimise an application deployment during design (status) and runtime (runtime)



Prepared

Uses the pre-built, optimised containers from the Image Registry and modifies them to build an optimised container for the application deployment



Adjustable

The optimisation process is adjusted to cater for the wide diversity of usage patterns and requirements in HPC, Cloud and Edge



Context on SODALITE solution



Innovation

- ★ Dynamic Deployment Refactoring
- ★ Static Application Optimiser

PERFORM STATIC AND DYNAMIC APPLICATION OPTIMISATION, DURING DESIGN AND RUNTIME



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 €		



POET Early Adopters



Environmental

Problem: Large scale deep learning applications require intensive use of hardware resources for training complex models.

Solution: POET's static application optimizer enables a substantial reduction of model training time in deep learning computer vision and data analytics applications



Digital Health

Problem: Clinical use case components should be running efficiently on different platforms and hardware.

Solution: A tool or a service like POET ensures efficient execution of application components..



IoT Automotive

Problem: Resources change dynamically during the lifecycle of the application deployment, and (ii) the vehicle is a multiuser system and compliance needs to be ensured

Solution: Using POET the KnowGo platform can optimize application deployments within individual nodes based on changes in resource availability and deployment requirements



The SODALITE Team



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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*Shaping the Infrastructure Management and
Application Deployment of Tomorrow!*

TALK TO US

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[SODALITE.EU](https://www.sodalite.eu)



[SODALITE H2020](https://www.youtube.com/watch?v=SODALITE_H2020)



[SODALITE-EU](https://www.github.com/SODALITE-EU)



[sodaliteh2020](https://www.youtube.com/watch?v=sodaliteh2020)



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