



Sodalite

**SOFTWARE DEFINED APPLICATION
INFRASTRUCTURES MANAGEMENT
AND ENGINEERING**



FindlaCBug

Verification & Bug

Prediction

SODALITE Stack 2

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 FindlaC Bug is solving



The Problem

To build high-quality IaC artifacts, the users need to follow the recommended best practices of developing IaC scripts, and avoid applying the bad practices. Still, they can inadvertently introduce errors, smells and bugs to the IaC code



The Solution

The users need a tool that can help them to easily and interactively check the quality of the IaC code they develop, and to get recommendations on how to fix any detected quality issue



The Value

The ability to develop high-quality defect-free error-free IaC code, based on the most advanced machine learning methods, semantic reasoning and rule-based models





ERROR

DevOps experts can find and fix the syntactical/structural and semantic errors in IaC artifacts prior to deploying and executing them

SODALITE FindlaCbug Benefits



Progressive

Detection of linguistic anti-patterns and misconfigurations in laC using data-driven techniques such as machine learning, deep learning, and natural language processing



Complete

It has the sufficiently complete taxonomies of laC best/bad practices, smells, and bugs



Capable

It can verify laC codes for some errors, can find some smells, and can find linguistic anti-patterns



Scalable

In time it will support more verification cases, detect more smells and misconfiguration errors, and recommend fixes for some detected smells



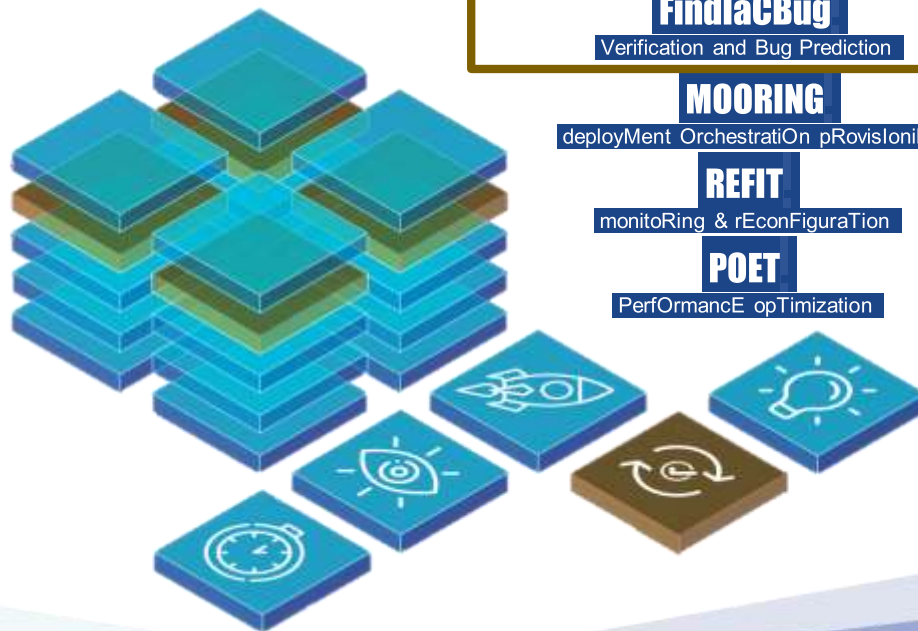
Context on SODALITE solution



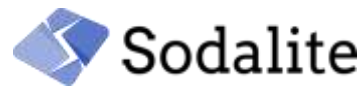
Innovation

- ★ IaC Verification
- ★ IaC Bug Prediction and Correction

ENSURE THE QUALITY OF YOUR IAC CODE WITH THE AUTOMATED DETECTION OF VARIOUS QUALITY ISSUES SUCH AS ERRORS, SMELLS, ANTIPATTERNS, AND BUGS



FindlaC Bug Demonstration



LIVE

See Full Demo at
[@SODALITE_H2020](#)



The screenshot displays the FindlaC IDE interface. On the left, the Project Explorer shows a project structure with folders like 'snow-deno-nginx' and 'snow-docker-host'. The central editor shows a Dockerfile with instructions for building and running a container. On the right, a class diagram for 'DockerizedComponent' is visible, showing its properties (e.g., 'image_name', 'ports'), attributes, and capabilities. The bottom status bar indicates the current view is 'AB Browser View'.



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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 €		



FindIaC Bug Early Adopters



Environmental

Problem: No specific culture in PA tech support personnel about IaC artifact development for complex infrastructures makes the deployment a costly and inefficient trial and error process.

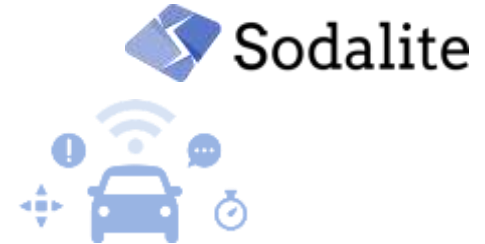
Solution: The proxy to expert assistance in the runtime architecture and deployment rules, saves time and cost and creates a durable repository of the best DevOps practices matured in time across multiple services.



Digital Health

Problem: The deployment code for Clinical UC workflow might contain bugs that misconfigure application components or resource provisioning, leading to vulnerabilities and leak of sensitive information of patients..

Solution: A tool or a service that ensures no such bugs in the deployment code will be existing.



IoT Automotive

Problem: Vehicles can involve apps where the cross-border free-flow of data is not possible, subjecting the system to fixed deployment restrictions that can change depending on the physical location of the vehicle throughout the application deployment lifecycle.

Solution: Rule-based compliance checking of proposed IaC deployment blueprint combined with knowledge of the current deployment allows deployments to be incrementally revised to remain within compliance..



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

UNIVERSITÄT
DUISBURG
ESSEN



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

TALK TO US

Daniel Vladušič

Project Coordinator

daniel.vladusic@xlab.si

Elisabetta Di Nitto

Technical Coordinator

elisabetta.dinitto@polimi.it

Paul Mundt

Innovation Manager

paul.mundt@adaptant.io

Ana Maria Morales

Communication Manager

ana.morales@atos.net

info@sodalite.eu



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