



# Sodalite

**SOFTWARE DEFINED APPLICATION  
INFRASTRUCTURES MANAGEMENT  
AND ENGINEERING**



## FindlaCBug

*Verification & Bug  
Prediction  
SODALITE Stack 2*

[www.sodalite.eu](http://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 IaC using data-driven techniques such as machine learning, deep learning, and natural language processing



## Complete

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



## Capable

It can verify IaC 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



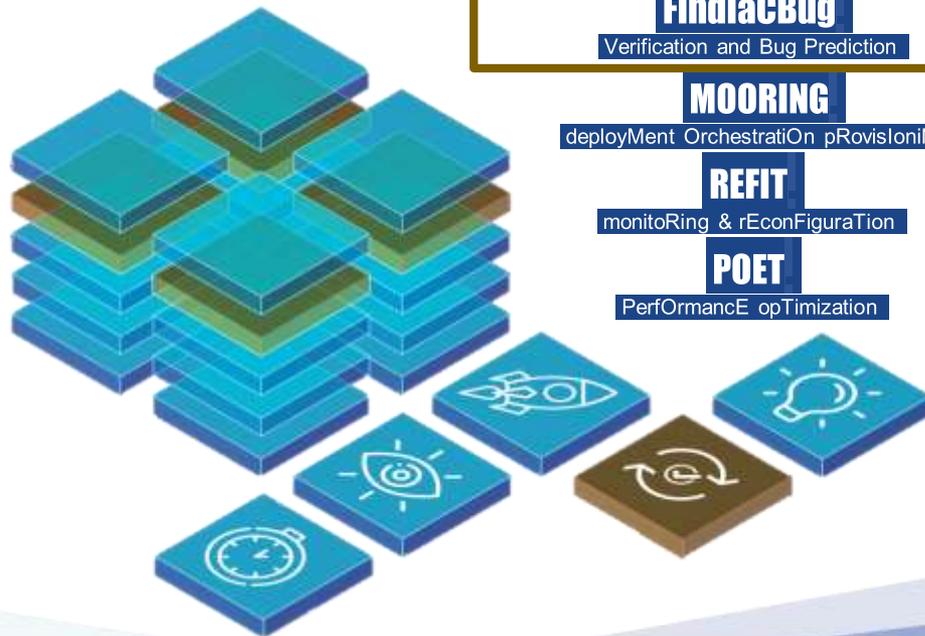
# Context on SODALITE solution



## 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*

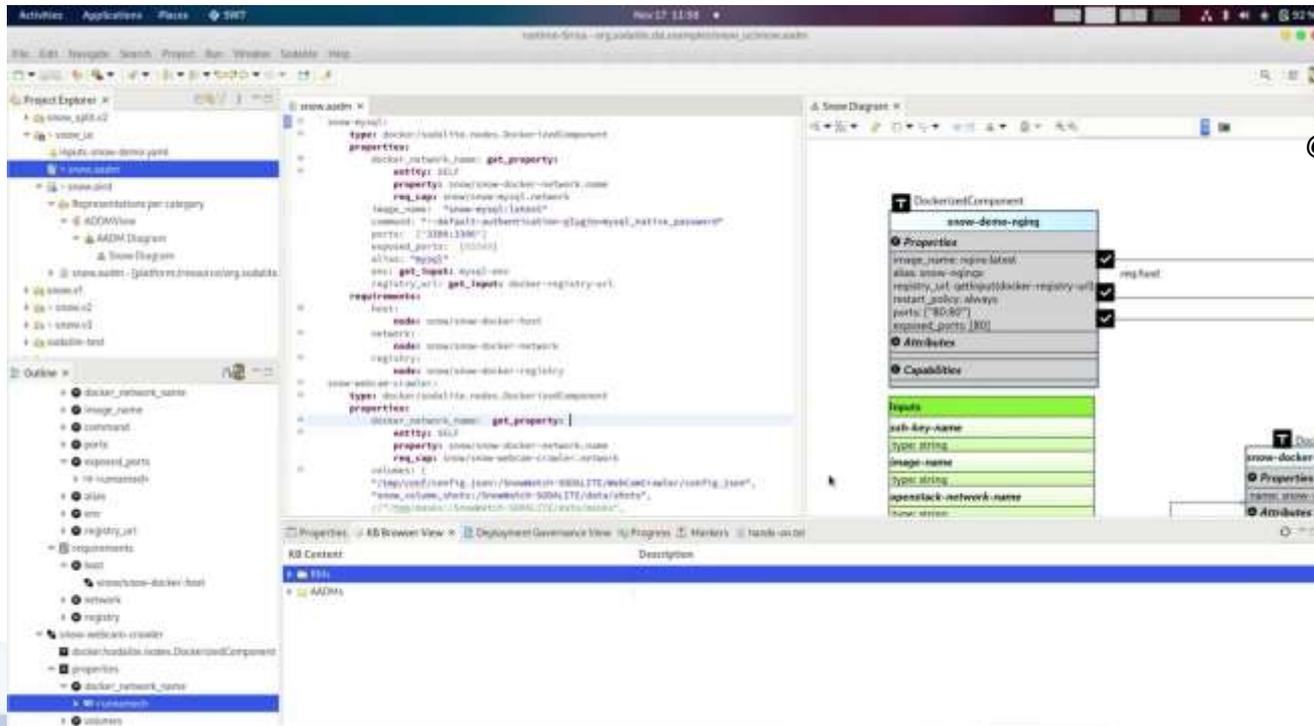


# FindlaC Bug Demonstration



LIVE

See Full Demo at  
@SODALITE\_H2020



@SODALITESW

SODALITE-EU



# 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.

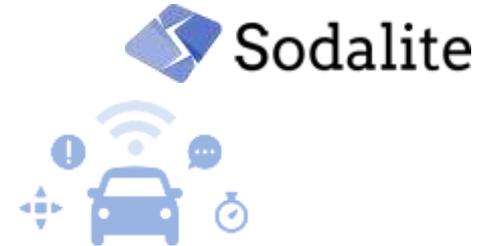
**Solution:** The proxy to expert assistance in the runtime architecture and deployment rules, saves time and cost and creates a durable repository of the best DevOps practices matured in time across multiple services.



## 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*

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

## TALK TO US

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