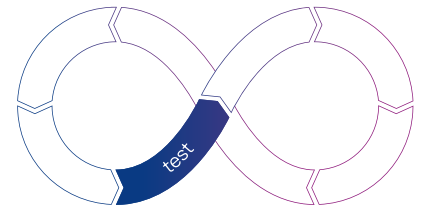# Solutions for SiL Testing in the Cloud
Tools and Services

Continuous virtual testing, debugging, and pre-calibration

ETAS supports and facilitates the development of Software-defined Vehicles (SDV). The ETAS Solutions for Software-in-the-Loop (SiL) testing in the cloud comes with the following features:

Areas of application

– Creation, debugging and pre-calibration of virtual ECUs

– Automated fuzz testing to fulfill automotive cybersecurity regulations and standards like UN R 155 and ISO 21434

– Automated component testing on vehicle level

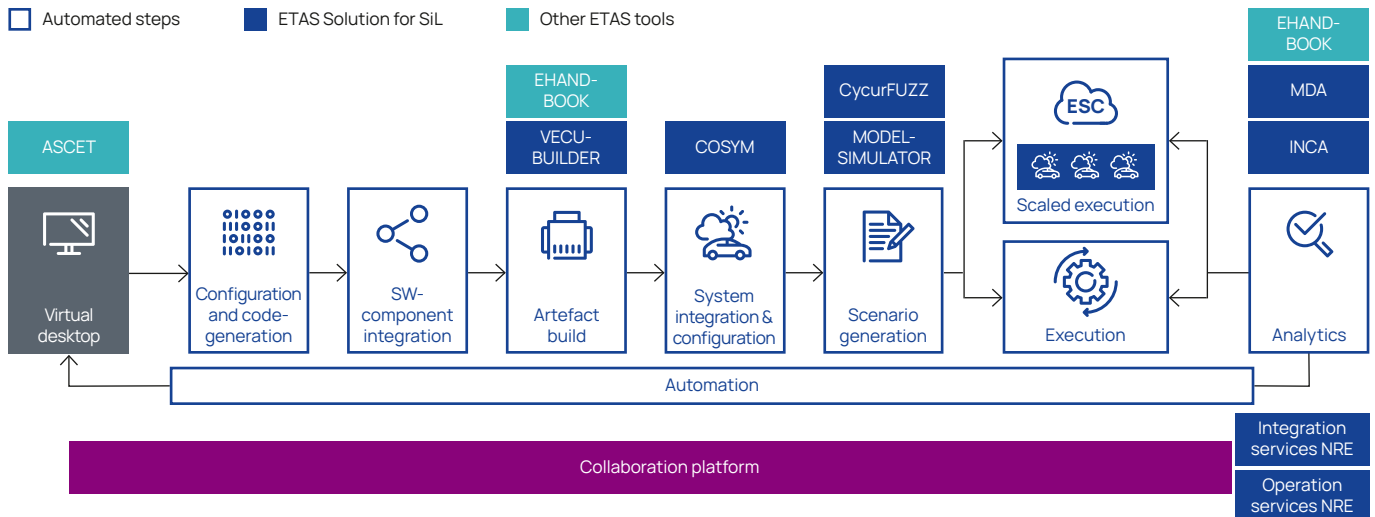– Parallel simulation execution in the cloud, ready for CI/CD pipeline integration

Features

– Integration of virtual artifacts, including ECUs and models from different sources

– Effortless setup of a complete virtual network with CAN, CAN FD, Automotive Ethernet, LIN and FlexRay

– Simulation, analytics and reporting capabilities

– Integration with 3rd party tools and automation pipelines

– High degree of automation and parallel execution in the cloud

– Compliance with current standards

Benefits

– Efficient solutions for virtual testing

– Dramatic increase in simulation speed. In customer applications, increases of up to 150 times and more could be realized

– Customer specific adaption tailored to your exact needs

– Benefit from the extensive know how of the ECU software stack from the Bosch Group

– Local support available worldwide

– Flexible vendor selection

ETAS portfolio for SiL testing

Overview of the ETAS solutions for automated SiL testing in the cloud

VECU-BUILDER

Tool for building Type-1, -2 or -3 virtual ECUs for microcontroller ECUs independent from BSW suppliers

MODEL-SIMULATOR including Drive Cycle Generator and Virtual Networks

Simulation platform for SaaS*-based parallelized simulation

Virtual Networks: Automotive networks simulation package for CAN, CAN FD, AETH, LIN and FlexRay virtual busses

COSYM

Powerful simulation and integration platform which enables testing and validation of software at system level early on in the development

*SaaS = Software as a Service

ESCRYPT CycurFUZZ

Protocol fuzz testing tool to detect unexpected behaviors and testing of cybersecurity

INCA

Powerfull and flexible tools for the calibration, diagnostics and validation of automotive electronic systems

MDA

Reporting tool for interactive searching, analyzing, and graphically visualizing large amounts of measurement data in a very short time

Engineering services

Worldwide engineering support to fulfill customer specific requirements

Consulting services

Worldwide consulting and implementation services