

## Remote Service Center

## DiSA (Digital Service Assistant) Upgrade for Remote Vehicle Access

DiSA – IAV's Digital Service Assistant – shows the fundamentals of future smart service: customer-centric service processes, optimized workshop efficiency, and new technologies for the workshops. Today, new vehicles already offer remote access to diagnostic and measurement data, something that will be even more significant in future vehicles. It goes without saying that many diagnostic tasks can be done remotely, without the vehicle being physically present in the workshop. This is particularly helpful when the driver needs immediate assistance "en route".

The remote service center module upgrades DiSA with a fully featured dashboard to support remote service technicians, a role that scarcely exists in workshops at the moment but will become increasingly important. DiSA's remote service support dashboard implements features including:

- · Reading out diagnostic data such as a car's DTCs
- Reading out, displaying, and analyzing raw data, i.e. measurement and actuator data
- Providing a variety of predictive diagnostics
- Conducting end-2-end diagnostics, especially for online services

This gives a remote comprehensive view of a vehicle's status or "health", including a comparison to the status of a whole fleet of vehicles. In case of an incident an advice can be given to the driver on how to continue, as well as helping the driver to help himself or herself.

The next development step for DiSA has also maximized the portability of the whole system: The Java-based in-car software is compatible with a variety of connected ECUs. All cloud functions are now integrated in AWS (Amazon Web Services) for an easy roll-out in different regions and markets. Transferring to cloud systems of other providers is also easily possible. The dashboard can run on different platforms and devices and can easily be integrated in existing systems.





## DiSA Remote Service Support



The remote service center makes it easy to ascertain the status or "health" of a vehicle, for example by pulling diagnostic data (DTCs) or measurement data.

When assistance is required, a service ticket is generated automatically, or manually by the service technician for minor problems reported directly by the driver.



All data is automatically stored in the DiSA cloud. Even if the car is temporarily not online, necessary data can be retrieved automatically later on.

Predictive diagnostics are possible based on selected aggregated measurement data, either for a single car or for a whole fleet.



The end-2-end diagnostic function permits online support such as remote lock/unlock, remote heating or A/C analysis to tell the customer exactly what went wrong in the processing chain.



With the findings from the end-2-end diagnostics, the driver can be given intelligent help to help himself on his smartphone – with the user's consent.