Connection Management in Remote Scenarios

Establishing and Managing Connections between Communication Partners

While until recently a suitable cable was all that was needed to establish connections to vehicles and subsystems, vehicle communication in today's remote scenarios is many times more complex. Numerous communication partners – for example tester applications and vehicle interfaces – must be able to recognize each other remotely as well as establish secure connections to each other.

It is essential to ensure at all times that both the software and the data records are up to date, that all participants are in a state allowing communication, and that the user is allowed to access the respective device under test.

Softing offers a server/cloud-based broker application which establishes a secure connection between communication modules in vehicles and test systems. The communication partners, rights and software versions are managed simply using a web application. The solution therefore not only helps to optimize diagnostics and troubleshooting, but also to improve efficiency over the entire vehicle life cycle.

FINDING PERMISSIBLE COMMUNICATION PARTNERS

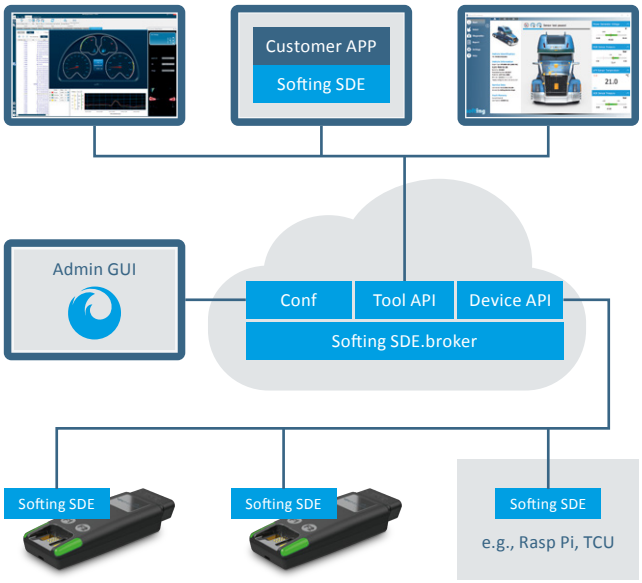
The broker technology from Softing makes it possible for different users to find the right communication partner – the vehicle interface – with their tool. The technology also ensures that only devices whose status allows communication can be accessed.

USER RIGHTS

As not every user is allowed to access every device under test with their engineering tester, Softing SDE.broker also regulates who has access to which device. With a query, an application obtains a list of the devices it can access from the broker. Status information shows whether the device is in a connectible state or is currently otherwise busy – e. g. because diagnostics is not possible due to the driving status or another application is blocking the device.

TYPES OF CONNECTION

Accessible devices and their status can be recognized, for example, via the IP address, the device name or the Vehicle Identification Number (VIN). The connection is possible in a number of ways: Via the broker itself, which manages the communication partner connections in Gateway mode, or, in Independent mode, which involves a direct connection being established between tools and device based on the connection information.



POSSIBLE USES

Remote use cases exist in the entire product life cycle. This may require 1:1 connections via the connection of one tool with many devices as well as connections of many tools with one device under test. The generalization with m tools that have to communicate with n devices is also a common use case. These can all be covered with the help of Softing SDE.broker.

EXAMPLES

- Vehicle identification for test applications in manufacturing
- Diagnostics in a prototype test where only a few test engineers access a fleet

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