



# Continuous Configuration Security Testing on Unix Based Embedded Systems in the Automotive Domain

Modern vehicles have many ECUs running specific software, which require continuous updates. Always testing the whole application when only small corrections (in the configuration) are made, would require unnecessary resources. A solution to this problem can be to only test the changes made from a safe state, which implies checking mostly the differences in the configuration. Unfortunately currently only few tools and research exists, which tackles this problem in the embedded and automotive domain.

Therefore in this theses, the student has to look at the configuration testing of embedded devices in the automotive domain in the security context. For this, a survey of existing research and frameworks about configuration testing has to be done - in the automotive domain but also in other areas. Then the student has to highlight problems and address them with an own solution by creating a model and test it either by using existing tools or writing a small PoC app. Afterwards, the test results have to be evaluated in regards to the security context e.g. by expert interviews.

 Master- arbeit	<b>30</b> LP
 Master's Thesis	<b>30</b> CP

This thesis is suitable for students with knowledge of embedded systems and the automotive domain.

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If you are interested or you need additional details, feel free to contact me or drop by for a non-binding chat.

