Master Thesis Project: Architectural Properties for Continuous Deployment

Background
A modern car contains 100 MLOC or more and the expectations are that this will increase exponentially in the near future. At the same time customers expect software features to evolve over time. This means that the software needs to be continuously updated which requires the automotive software architecture standard, AUTOSAR, to support continuous deployment of new source code.

Aim
How can AUTOSAR evolve to support continuous deployment?

Method
Today there are numerous architectures that already support continuous deployment. The starting point will be to choose a suitable set of such architectures as reference objects. The chosen reference architectures will then be analysed using a standard architectural analysis framework to see what properties support continuous deployment. The next step is then to explore how AUTOSAR can be changed to support the relevant properties in the future.

Setting
The thesis work will be carried out within the research project Next Generation Electrical Architecture, NGEA. The students will be offered workplaces at one of the involved parties, Viktoria Swedish ICT. Besides participating in relevant research meetings the students will also present their results to the NGEA consortium. The project can start as soon as possible.

Contact and Academic Supervisor
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