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Software Validation Infrastructure for the Atlas High-Level Trigger Validation Infrastructure for the ATLAS High-Level Trigger

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The ATLAS trigger system is responsible for selecting the interesting collision events delivered by the Large Hadron Collider(LHC). The ATLAS trigger will need to achieve a $\sim 10^{-7}$ rejection factor against random proton-proton collisions, and still be able to efficiently select interesting events. After a first processing level based on FPGAs and ASICs, the final event selection is based on custom software running on two CPU farms, containing around two thousand multi-core machines. This is known as the high-level trigger(HLT).

With more than 100 contributors and around 250 different packages, a thorough validation of the HLT software is essential. This paper describes the existing infrastructure used for validating the HLT software, as well as future plans.

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