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## A Control Software for the ALICE High Level Trigger

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The Alice High Level Trigger (HLT) cluster is foreseen to consist of 400 to 500 dual SMP PCs at the start-up of the experiment. The software running on these PCs will consist of components communicating via a defined interface, allowing flexible software configurations. During Alice's operation the HLT has to be continuously active to avoid detector dead time. To ensure that the several hundred software components, distributed throughout the cluster, operate and interact properly, a control software was written that is presented here. It was designed to run distributed over the cluster and to support control program hierarchies. Distributed operation avoids central performance bottlenecks and single-points-of-failures. The last point is of particular importance, as each of the commodity type PCs in the HLT cluster cannot be relied upon to operate continuously. Control hierarchies in turn are relevant for scalability over the required number of nodes. The software makes use of existing and widely used technologies: Configurations of programs to be controlled are saved in XML, while Python is used as a scripting language and to specify actions to execute. Interface libraries are used to access the controlled components, presenting a uniform interface to the control program. Using these mechanisms the control software remains generic and can be used for other purposes as well. It is being used for HLT data challenges in Heidelberg and is planned for use during upcoming beam tests.

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