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## **Installation and configuration of an SDN test-bed made of physical switches and virtual switches managed by an Open Flow controller.**

*Monday, 14 October 2013 15:00 (45 minutes)*

The computing models of HEP experiments, starting from the LHC ones, are facing an evolution with the relaxation of the data locality paradigm: the possibility of a job accessing data files over the WAN is becoming more and more common.

One of the key factors for the success of this change is the ability to use the network in the most efficient way: in the best scenario, the network should be capable to change its behavior on the base of a per flow analysis.

The SDN (Software Defined Networks) are a promising technology to address this challenging requirement and OpenFlow is a candidate protocol to implement it. At CNAF, we have installed a Software Defined Networks test-bed functional to build a concrete layout where testing OpenFlow protocol and the interoperability between devices of different vendors.

The objective of this activity is to build a network with a control plane driven by a software layer in charge of defining the “route” for a specific flow, based on conditions verified inside a datacenter network, in order to solve routing problems not addressable with standard networking protocols.

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