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## Design and performance of the LHCb trigger and full real-time reconstruction in Run 2 of the LHC

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The LHCb collaboration has redesigned its trigger to enable the full offline detector reconstruction to be performed in real time. Together with the real-time alignment and calibration of the detector, and a software infrastructure for persisting the high-level physics objects produced during real-time processing, this redesign enabled the widespread deployment of real-time analysis during Run 2. We will describe the design of the Run 2 trigger and real-time reconstruction, and present data-driven performance measurements for a representative sample of LHCb's physics programme.

**Author:** LHCb COLLABORATION

**Presenter:** DE CIAN, Michel (EPFL - Ecole Polytechnique Federale Lausanne (CH))

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