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Data Movement Manager (DMM) for the SENSE-Rucio Interoperation Prototype

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The data movement manager (DMM) is a prototype interface between the CERN developed data management software Rucio and the software defined networking (SDN) service SENSE by ESNet. It allows for SDN enabled high energy physics data flows using the existing worldwide LHC computing grid infrastructure. In addition to the key feature of DMM, namely transfer-priority based bandwidth allocation for optimal network usage; it also allows for the identification of the exact cause of underperforming flows using end-to-end monitoring of the data flows by having access to host (network interface) level throughput metrics and transfer-tool (FTS) data transfer job level metrics. This paper describes the design and implementation of DMM.

Primary authors: ARORA, Aashay (Univ. of California San Diego (US)); DAVILA FOYO, Diego (Univ. of California San Diego (US)); BALCAS, Justas (California Institute of Technology (US)); LEHMAN, Thomas (ESnet); YANG, Xi (LBNL)

Presenter: ARORA, Aashay (Univ. of California San Diego (US))

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