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The NEMO Trigger and Data Acquisition System

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The phase 2 of the NEMO project represents a unique occasion to test a new Trigger and Data Acquisition System (TriDAS), designed to scale up to the km³.

Because of the deep sea optical background, the NEMO “all data to shore” approach requires to handle a large continuous data-stream from off-shore to on-shore, up to the last on-line computing element.

The computing layers of TriDAS start after the Ethernet Floor Control Module (eFCM) electronic boards on-shore, which gate the data-stream arriving from the off-shore detector. It is arranged into 4 elements: hit managing into time-coherent aggregates, data selection according to possible concurrent trigger algorithms, composition of the selected events into a post-trigger files and finally a persistent data storage.

The finalized design of TriDAS adapted for NEMO -Phase 2 is presented together with its on-line data monitoring environment and the dedicated networking architecture.

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