

21st International Conference on Computing in High Energy and Nuclear Physics (CHEP2015)



Contribution ID: 529

Type: poster presentation

The NOvA Data Acquisition Error Handling System

The NOvA experiment studies neutrino oscillations with 2 functionally identical detectors separated by a baseline of 810km. The Data Acquisition (DAQ) system for the far detector in Ash River in Minnesota comprises more than 10,000 Front End Boards, and a cluster of 168 custom PPC-based, and 206 COTS x86 linux nodes performing a variety of functions.

An Error Handling system has been developed to facilitate operation of this expansive system, using status messages generated by DAQ applications, a dedicated “rule engine” for analyzing status messages for specific or general patterns, and an Error Handler for taking pre-defined actions based on the outcome of the message analysis.

The performance of the Error Handling system in the context of production data-taking on the near and far NOvA detectors will be presented.

Primary author: Dr SHANAHAN, Peter (Fermilab)

Co-authors: WALDRON, Abbey (S); PALEY, Jonathan (Argonne National Laboratory); LU, Qiming (Fermi National Accelerator Laboratory)

Presenter: Dr SHANAHAN, Peter (Fermilab)

Track Classification: Track1: Online computing