



Contribution ID: 97

Type: Mini Oral and Poster

The data taking network for COMET Phase-I

Tuesday 13 October 2020 16:28 (1 minute)

An experiment to search for mu-e conversion named COMET is constructing in J-PARC Hadron hall. The experiment will be carried out using a two staged approach, Phase-I and Phase-II.

The data taking system of the Phase-I experiment is going to be developed based on common network technology. The data taking system needs two kinds of networks. One is a front-end network. This network bundles around twenty front-end devices which have a 1 Gb optical network port and send to a front-end computer. The other is a back-end network. The back-end network collects all event fragments from the front-end computers using 10 Gb network equipment. We used a low price 1G/10G optical network switch for the front-end network. And the direct connection between 10G optical network ports was used for the back-end network. The back-end PC has ten 10G network ports. And each network port connects the front-end PC's port without a network switch. We evaluated data taking performance with an event building on the two kinds of networks. The event building throughput of the front-end network achieved 400 MiB/s. And the event building throughput of the backend networks achieved 1 GiB/s. It means, we could reduce the construction cost of the data taking network using this structure without the decrease performance.

We will report the structure of the data taking system of the COMET Phase-I and the performance of their networks.

Minioral

Yes

IEEE Member

No

Are you a student?

No

Authors: Dr IGARASHI, Youichi (KEK); Dr IGARASHI, Youichi (KEK)

Presenter: Dr IGARASHI, Youichi (KEK)

Session Classification: Poster session B-01