Load Balancing for ALICE

Load Balancing for ALICE Software for Science, CERN

June 6, 2018



Index

Load Balancing for ALICE

- ALICE
- Load Balancing
- Cluster
- Experiments
 - Experiment 1
 - Experiment 2
 - Experiment 3
 - Experiment 4



Load Balancing for ALICE

Software For Science



ALICE

Load Balancing for ALICE

- CERN
- LHC
- ALICE

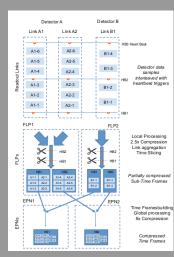


Hogeschool van Amsterdam

Load Balancing

Load Balancing for ALICE

- Setup
- Blacklist Algorithm



Hogeschool van Amsterdam

2

²Technical Design Report for the Upgrade of the Online Offline Computing System, 2015, p. 34

Cluster

Load Balancing for ALICE

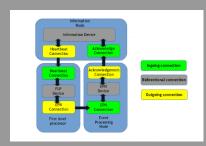
Raspberry Pi





Balancing for ALICE

- Ratio
- Compare
- Expand



³Block diagram of the cluster connections (van der Heijden, 2015p.



Experiment 1

Load Balancing for ALICE

Definition

Ticktime influence on the Blacklist algorithm with one fail-over



⁴Effects of the EPNs and FLPs on the Information Node for ALICE

Experiment 2

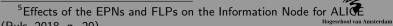
Load Balancing for ALICE

Definition

Ticktime influence on the Blacklist algorithm with all but one fail-over



5



Experiment 3

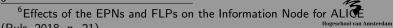
Load Balancing for ALICE

Definition

Ticktime influence on the Blacklist algorithm with all but one fail-over using a random sample size



6



Experiment 4

Load Balancing for ALICE

Definition

Ticktime influence on the Blacklist algorithm with all but one fail-over at once



7

⁷Effects of the EPNs and FLPs on the Information Node for ALIGE
(Puls 2018 p. 22)

Hogeschool van Amsterdam

The end

Load Balancing for ALICE

Software for Science

