Load Balancing for ALICE

# Load Balancing for ALICE Software for Science, CERN

June 5, 2018



#### Index

Load Balancing for ALICE

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



## **ALICE**

Load Balancing for ALICE

- CERN
- LHC
- ALICE

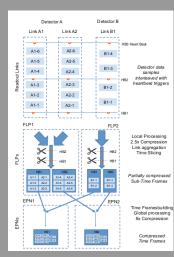


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## Load Balancing

Load Balancing for ALICE

- Setup
- Blacklist Algorithm



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2

<sup>&</sup>lt;sup>2</sup>Technical Design Report for the Upgrade of the Online Offline Computing System, 2015, p. 34

# Cluster

Load Balancing for ALICE

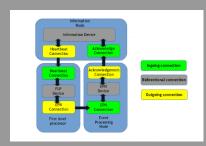
Raspberry Pi





Balancing for ALICE

- Ratio
- Compare
- Expand



<sup>&</sup>lt;sup>3</sup>Block 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



<sup>&</sup>lt;sup>4</sup>Effects of the EPNs and FLPs on the Information Node for ALICE

Experiment 2

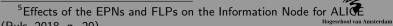
Load Balancing for ALICE

Definition

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



5



Experiment 3

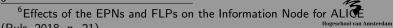
Load Balancing for ALICE

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

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

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# The end

Load Balancing for ALICE

Any questions perhaps?

