

# 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



# Software For Science



# ALICE

Load  
Balancing for  
ALICE

- CERN
- LHC
- ALICE



# ALICE

1

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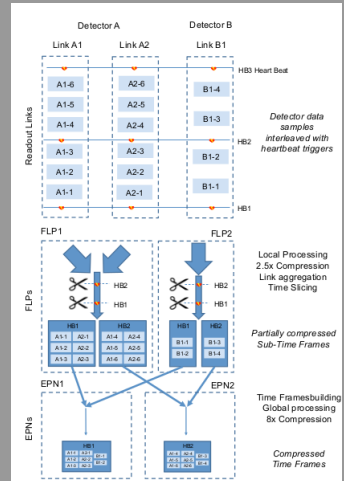
<sup>1</sup><http://alice-collaboration.web.cern.ch/>



# Load Balancing

## Load Balancing for ALICE

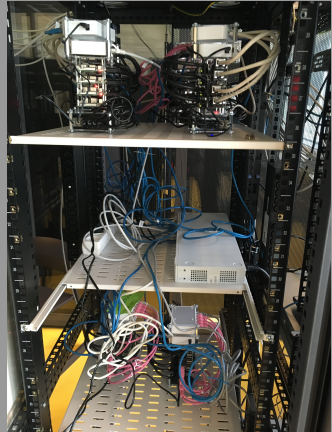
- Setup
- Blacklist Algorithm



# Cluster

Load  
Balancing for  
ALICE

- Raspberry Pi

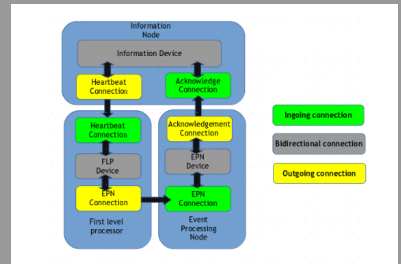


# Experiments

Load  
Balancing for  
ALICE

- Ratio
- Compare
- Expand

3



<sup>3</sup>Block diagram of the cluster connections (van der Heijden, 2018, p. 22)

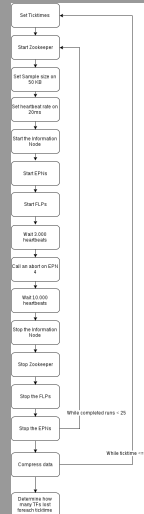
# Experiments

## Experiment 1

Load  
Balancing for  
ALICE

### ■ Definition

Ticktime influence on the  
Blacklist algorithm with one  
fail-over





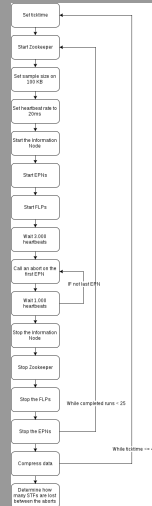
# Experiments

## Experiment 2

Load  
Balancing for  
ALICE

### ■ Definition

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



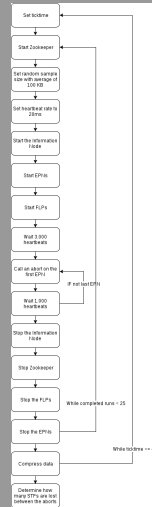
# Experiments

## Experiment 3

Load  
Balancing for  
ALICE

### ■ Definition

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



# Experiments

## Experiment 4

Load  
Balancing for  
ALICE

### ■ Definition

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



# The end

Load  
Balancing for  
ALICE

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