PROOF at the NAF

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GEFÖRDERT VOM

Bundesministerium
für Bildung
und Forschung

Analyses at the NAF

What is special about the NAF?

Differences between NAF and Grid clusters:

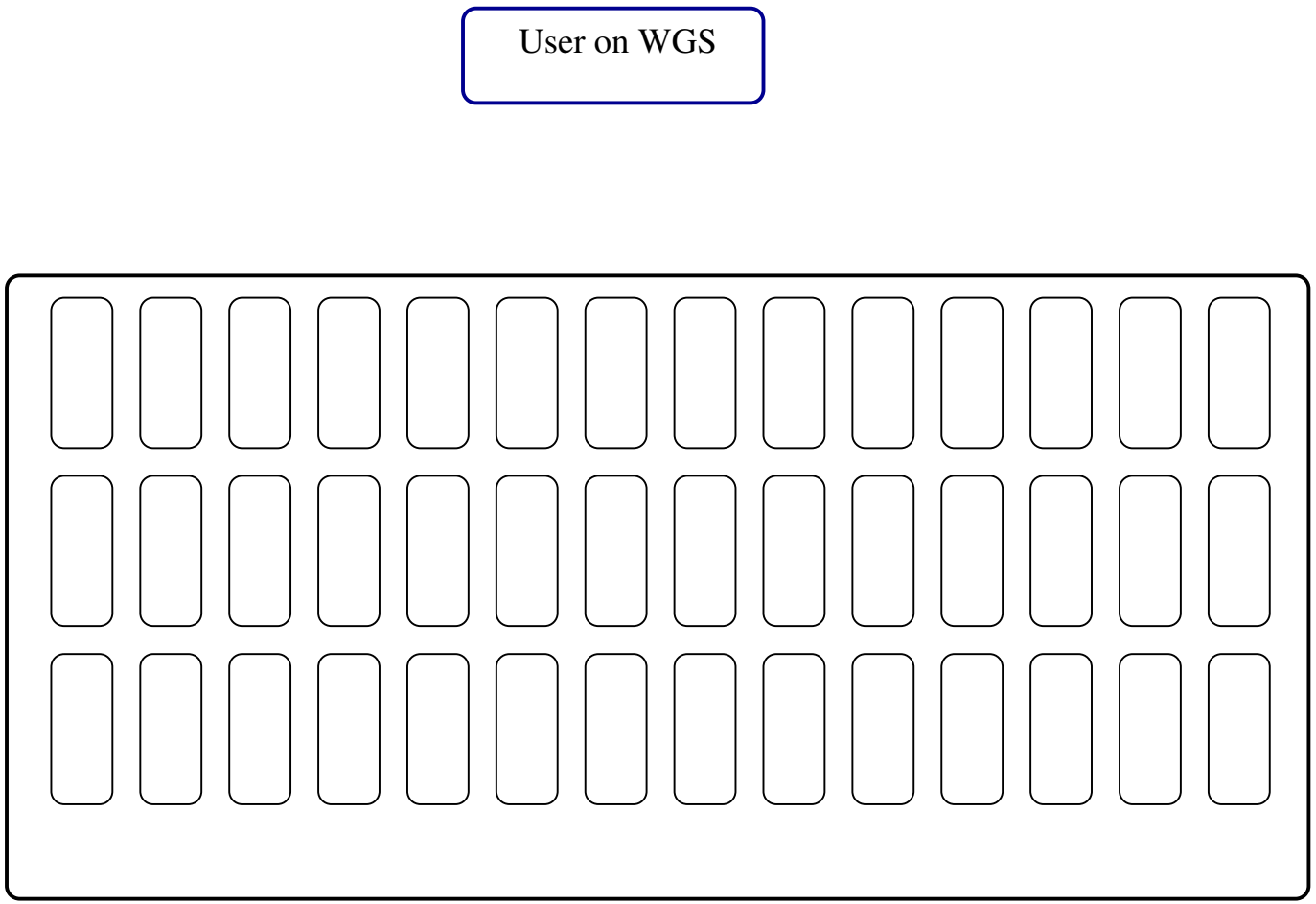
- local batch system (higher reliability)
- worker nodes connected to home directory
- special cluster file system, Lustre

Possible use case:

Final data analysis step with:

- many events
- rather large events
- computing intensive algorithms
- need for fast turn-around

PROOF(Parallel ROOT Facility)



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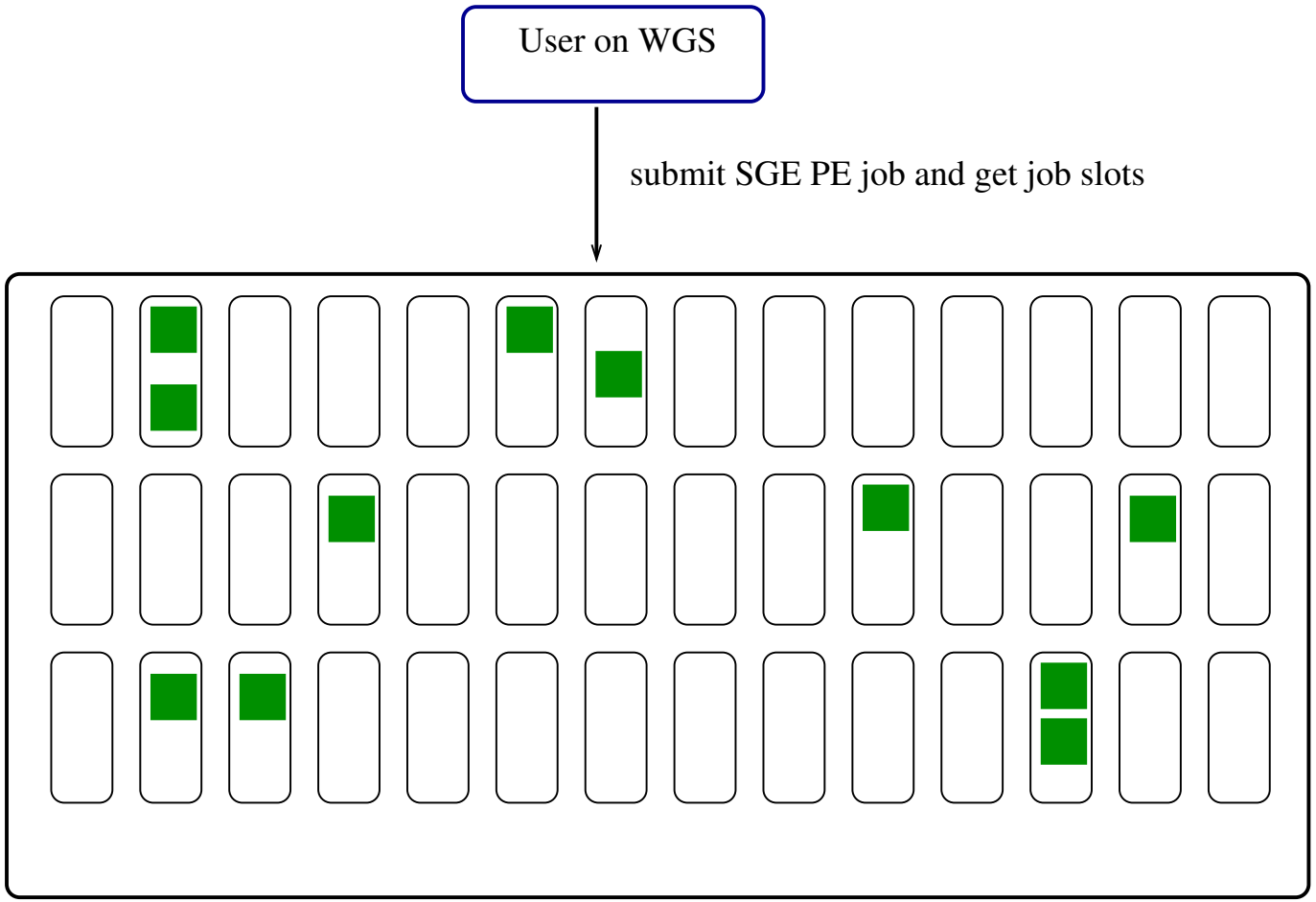

1 start PE job

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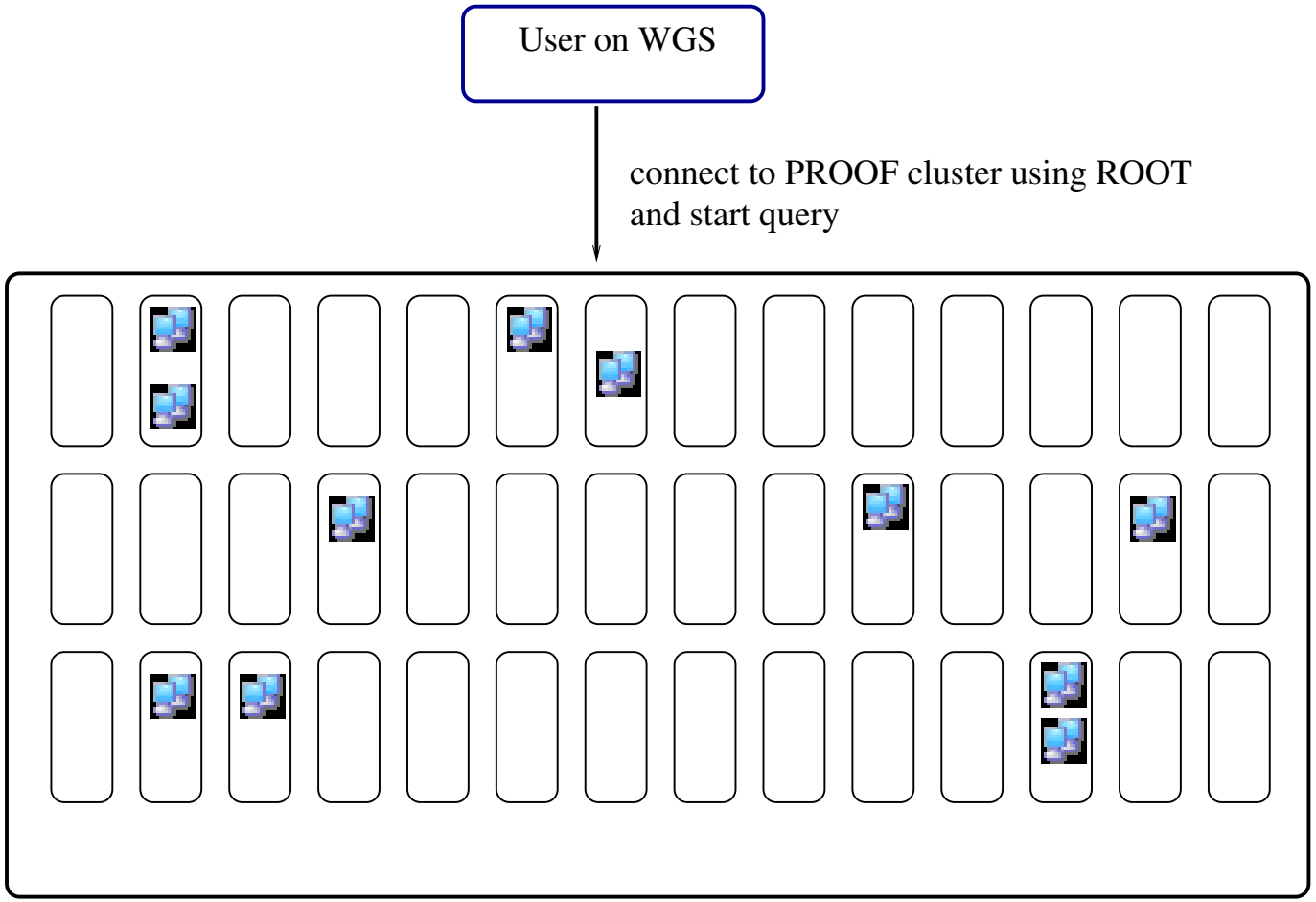

1. start PE job
2. start PROOF cluster

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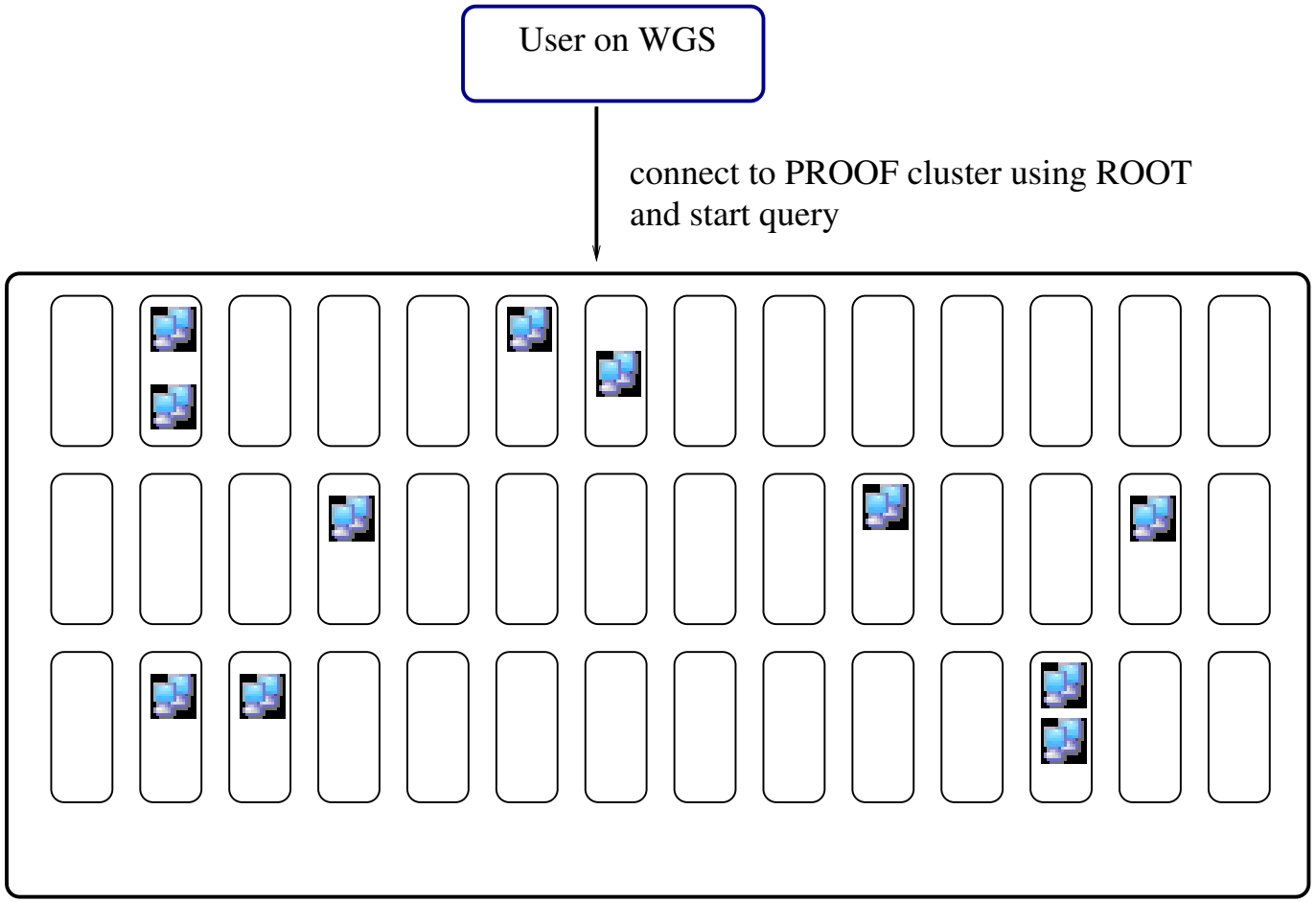

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2. start PROOF cluster
3. connect to cluster within ROOT

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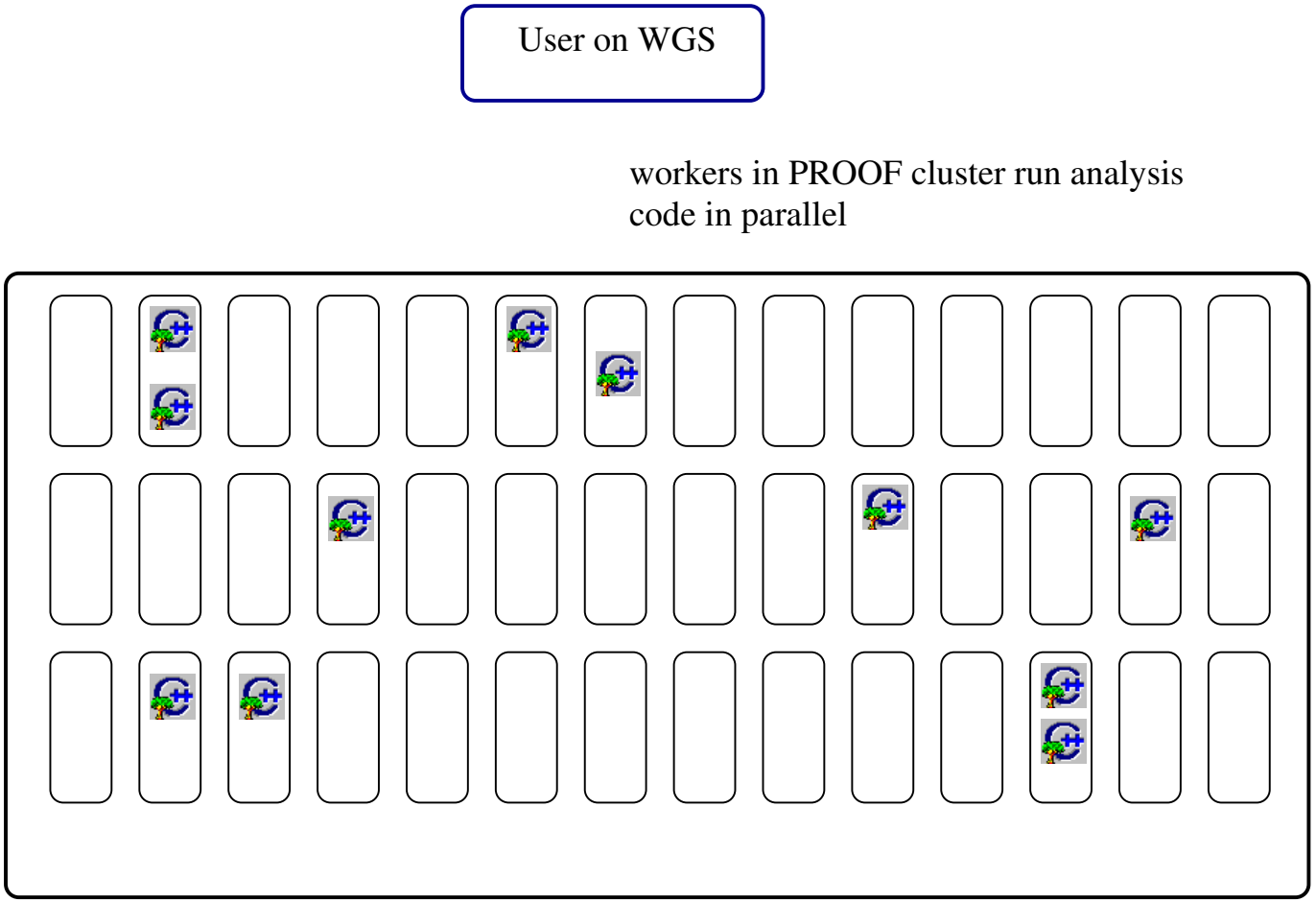

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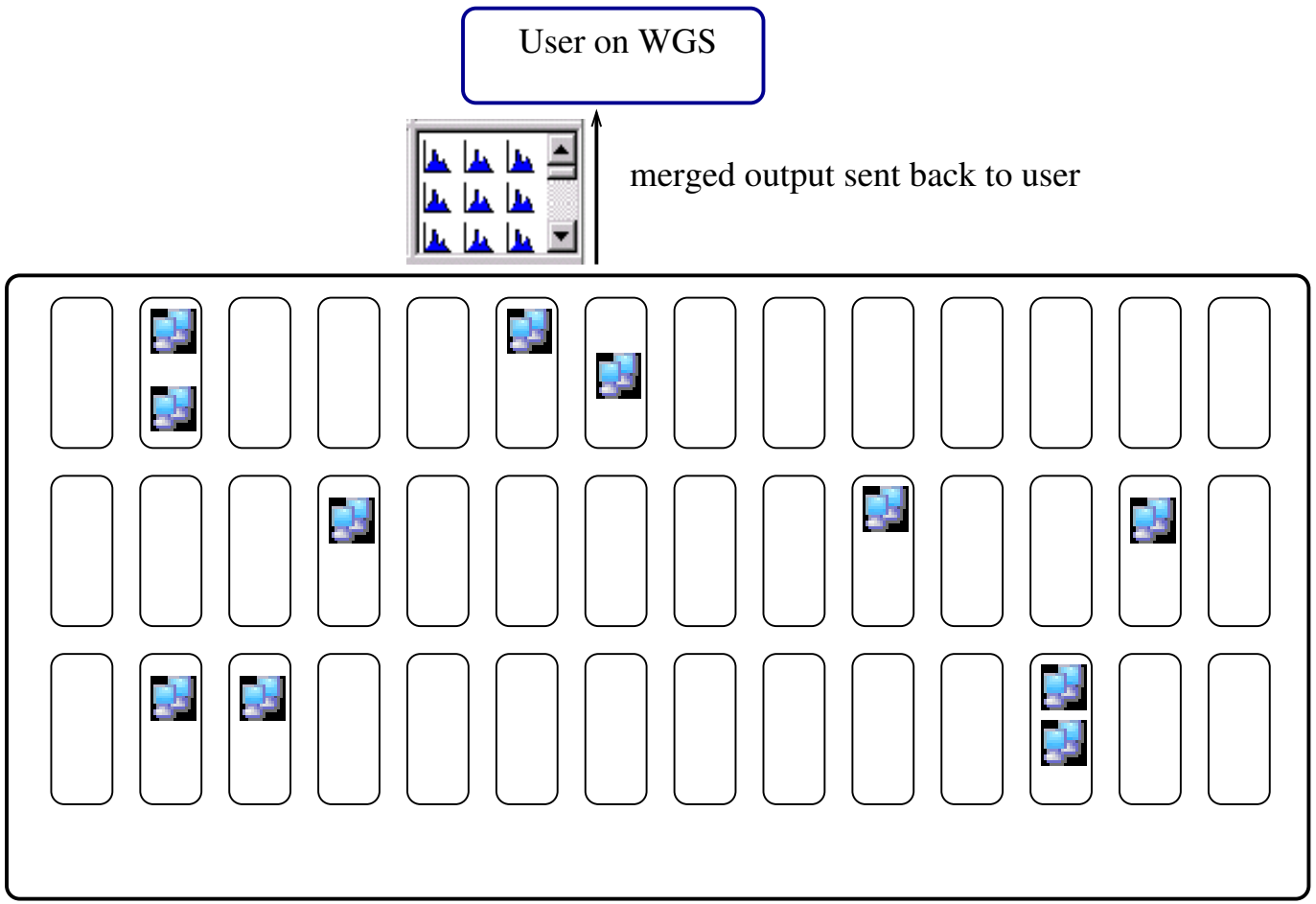

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5. get merged output

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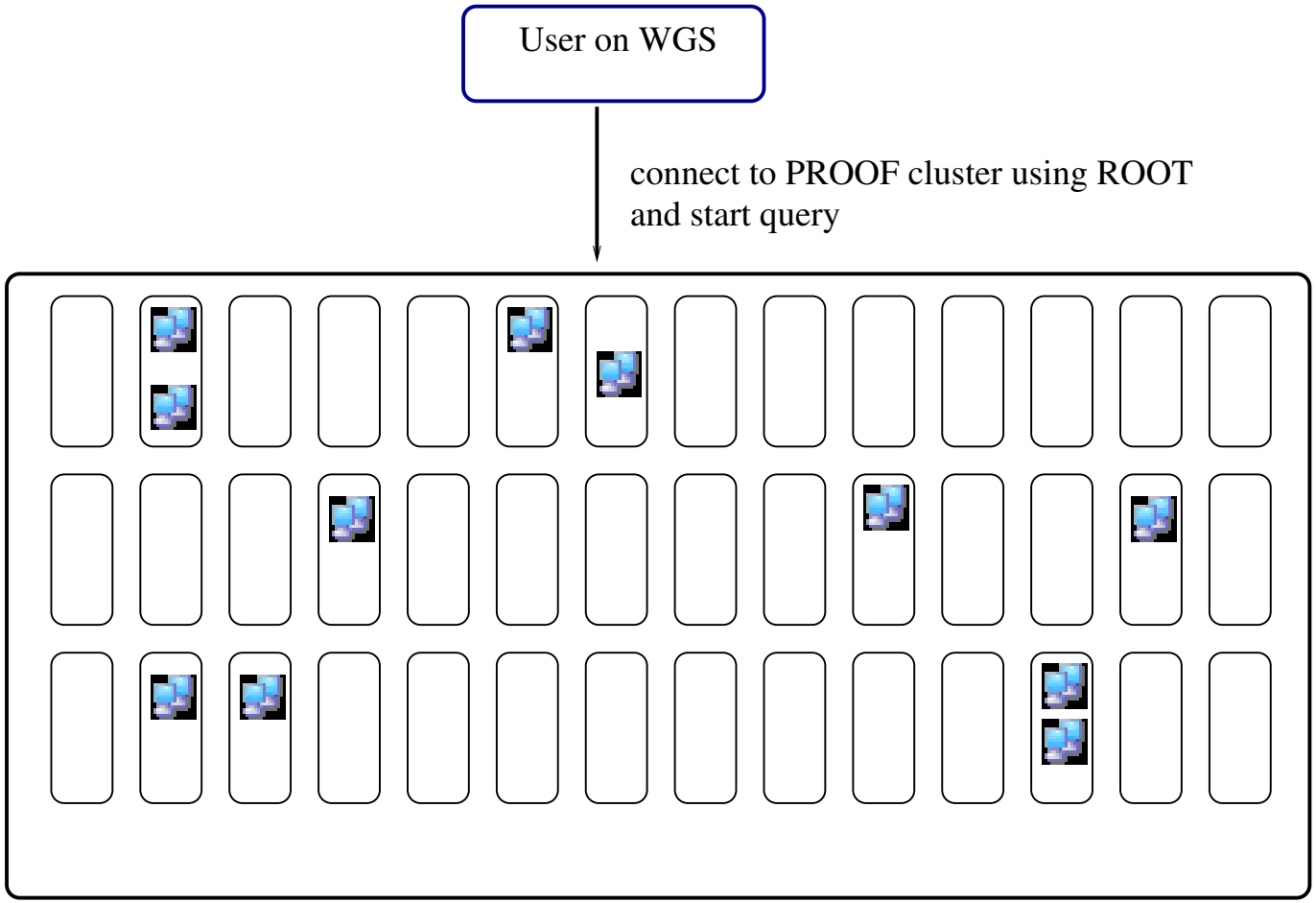
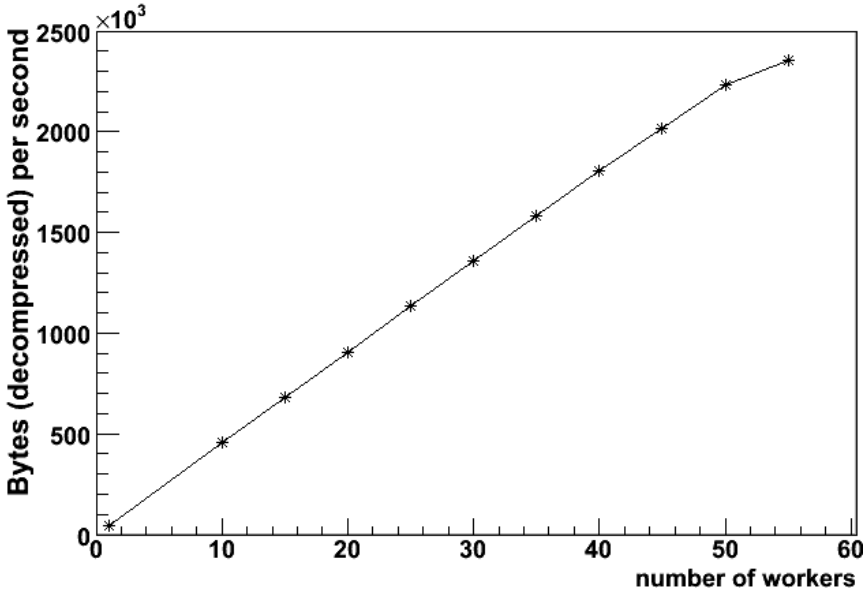


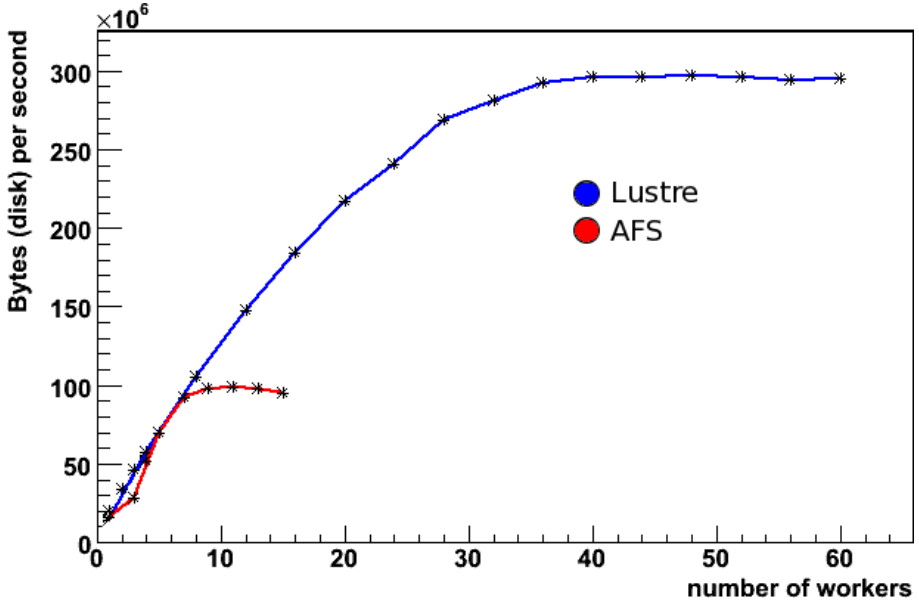
1. start PE job
2. start PROOF cluster
3. connect to cluster within ROOT
4. run your analysis code
5. get merged output
6. study results and repeat 3 to 6

First Performance Plots

CPU-bound task
(reclustering of jets in underlying event analysis)



I/O-bound task
(e.g. plot electron p_T in W candidates)



How-to for CMS users: look at CMS NAF page

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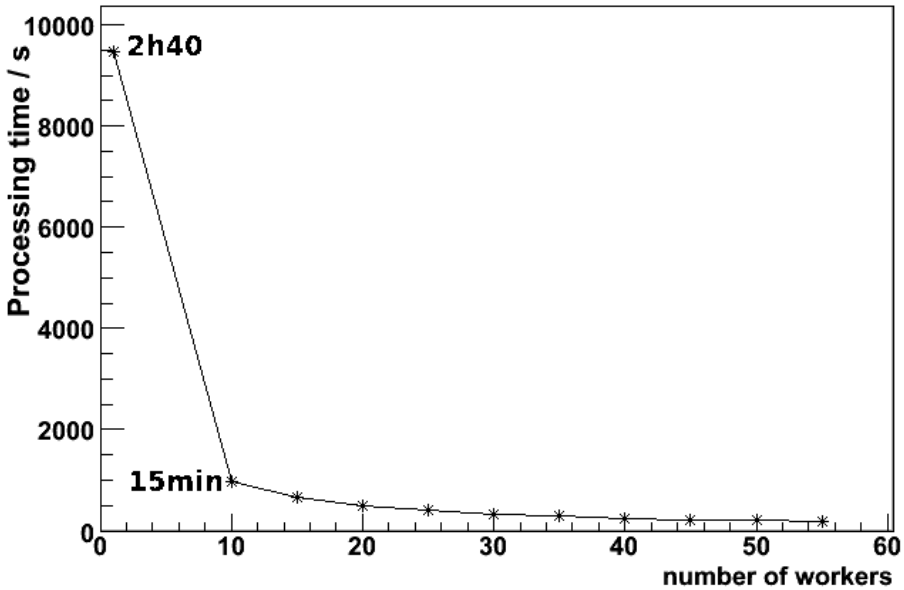

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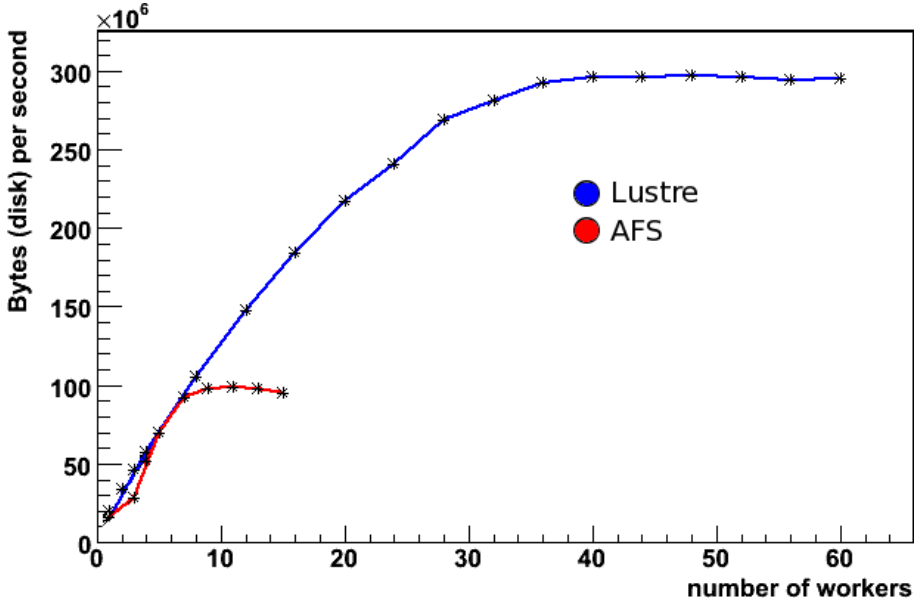

analysis time decreased from more than two hours to five minutes!

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