# KERLABS





### **Summary**



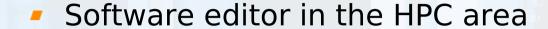
Pascal Gallard, Matthieu Fertré, Louis Rilling





#### Who are we?





Linux cluster made easy



- Leader of an open-source community
  - INRIA, EDF, NEC



- Kerrighed technology
  - Cluster-aware OS



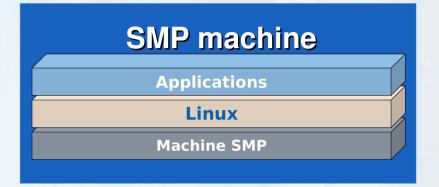


- Global cluster management
- Dynamical load balancing (processors / memory, thermal, power)
- Checkpoint / restart support





#### **Kerrighed technology**



Linux Cluster

Applications
Linux
Noeud 0

Applications
Linux
Noeud 1

Noeud N

Easy use

Cost effective

## Cluster Kerrighed

Applications

Kerrighed / Linux

Noeud 0 Noeud 1 Noeud N

Virtual SMP machine!



#### **Kerlabs in PetaQCD**

- Primary contribution in the fault-tolerant and highavailability fields
- Involved people:
  - Matthieu Fertré
    - Current designer & developper of a full transparent checkpoint solution
  - Louis Rilling
    - Fault tolerant architect in large scale environment
  - Pascal Gallard
    - Work on "available system": self-healing mechanism

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