



Master thesis inaugural speech

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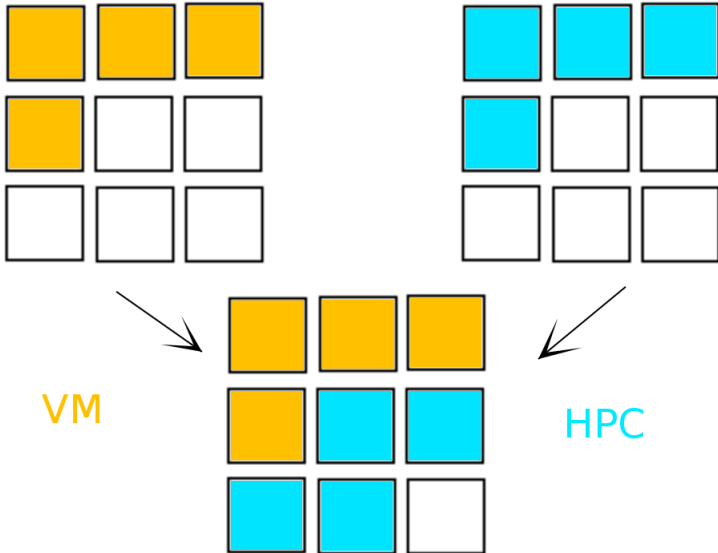
Develop a management system to merge cluster for virtuell machines
and HPC applications

- ▶ VM
 - ▶ virtualisation of underlying raw hardware
 - ▶ emulation of hardware
 - ▶ operating-system-level virtualisation
- ▶ HPC
 - ▶ need high cpu / memorycapacity
 - ▶ parallel application
 - ▶ modeling / simulation of complex Systems

- ▶ VM
 - ▶ High availability
 - ▶ hot migration
- ▶ HPC
 - ▶ MPI for jobs



Merge of clusters



VM

HPC

Tackle these problems

- ▶ Clusters don't working to capacity
 - ▶ multiple cluster required
 - ▶ higher power consumption
- ▶ no overhead of vm for hpc

- ▶ manage cluster
- ▶ distribute VMs and HPC application
- ▶ replace VMs for HPC application
- ▶ measure of workload

