

Batch System and I/O Monitoring with LLview

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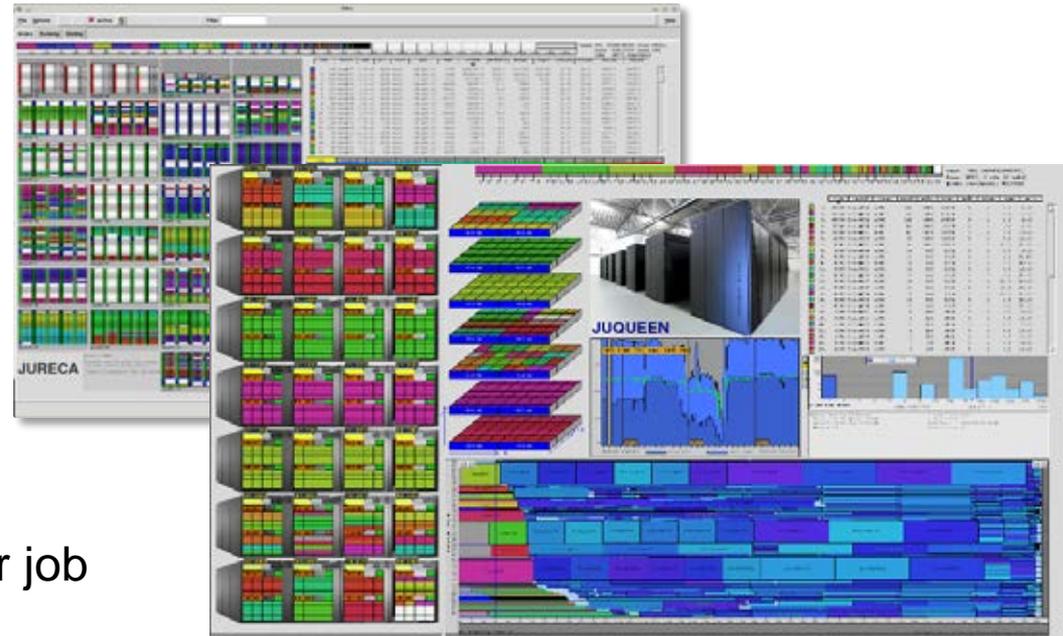
Batch System Monitoring: LLview

Ever since **LLview** shows

- where jobs are running
- system usage at a glance
- Network topology of jobs
- Job scheduling prediction
- ...

Missing yet valuable information

- **I/O activity per job**
- Actual cpu usage (load) per job
- Memory usage per job
- History of all these

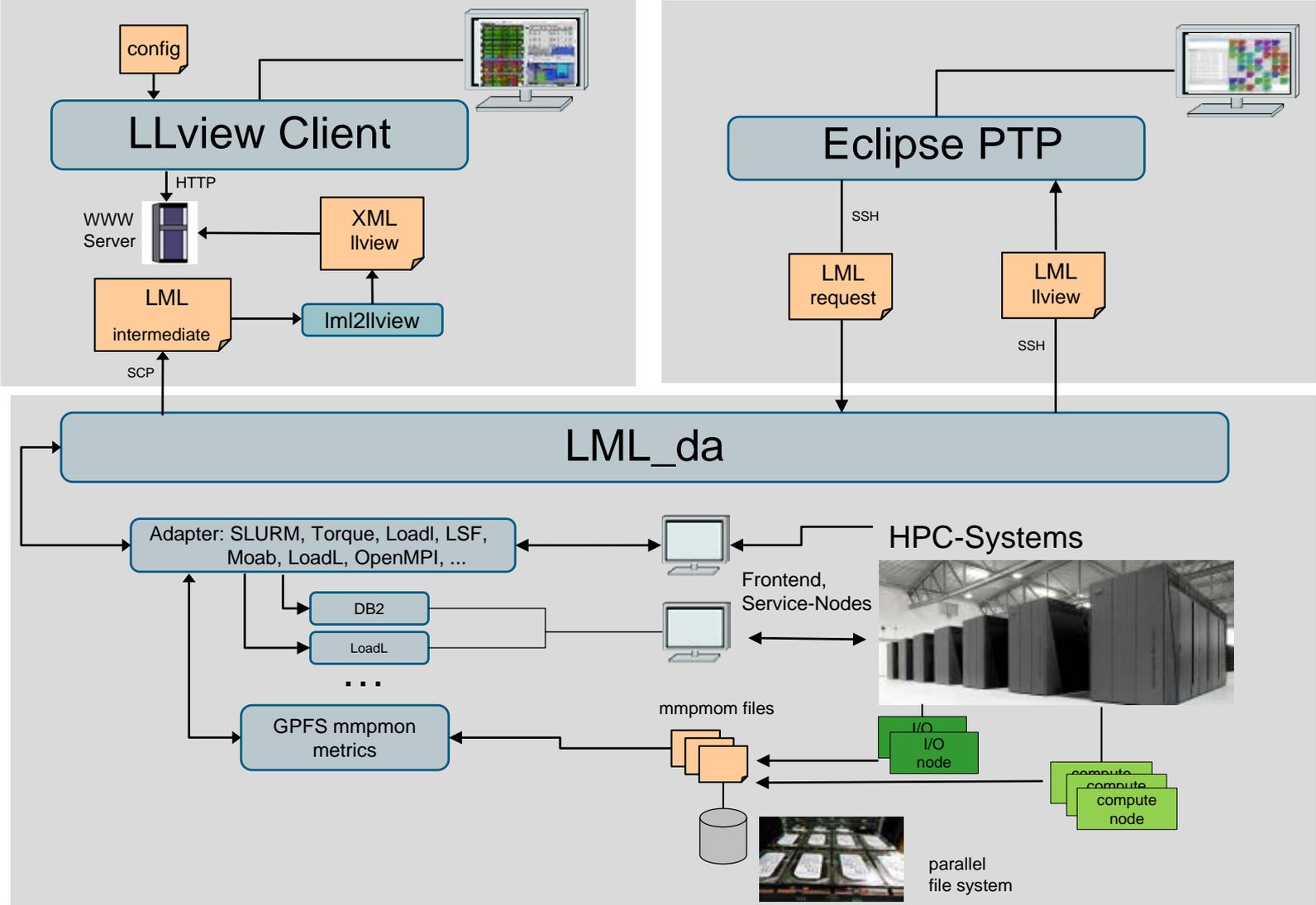


- This can be implemented based on
- **GPFS mmpmon**
 - Batch system/Scheduler information (e.g. Slurm)

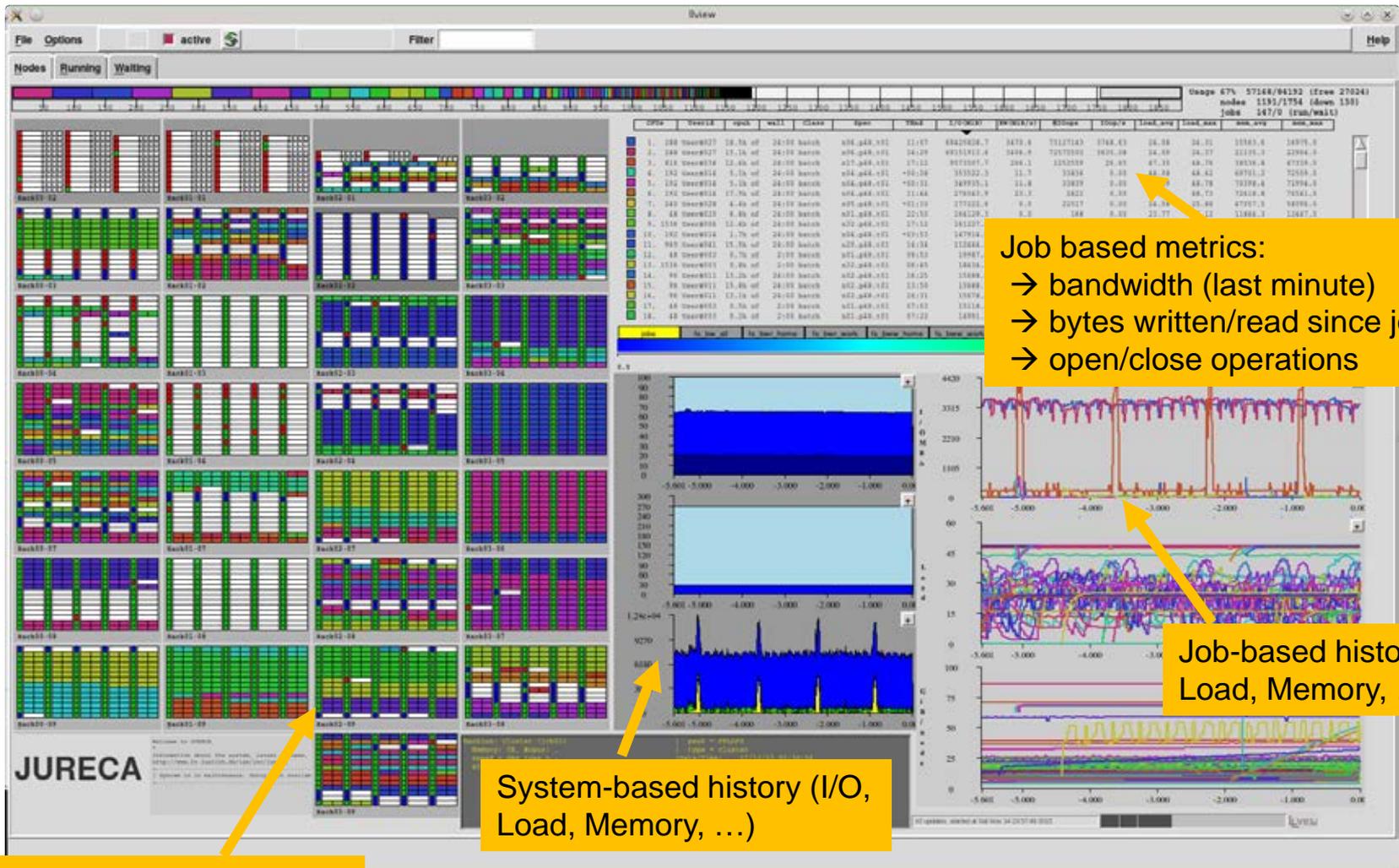
LLview download:

<http://www.fz-juelich.de/jsc/llview> (OpenSource)

LLview Architecture



I/O Monitoring: LLview & GPFS mmpmon



Job based metrics:
→ bandwidth (last minute)
→ bytes written/read since job start
→ open/close operations

Job-based history (I/O, Load, Memory, ...)

System-based history (I/O, Load, Memory, ...)

Node-based mapping of I/O load (color-coded)

→ Jülich Supercomputing Centre @ SC15 (Booth #233)