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New and Noteworthy JuFo and PTP 6.0

October 26, 2012 | Carsten Karbach

Part I: JuFo

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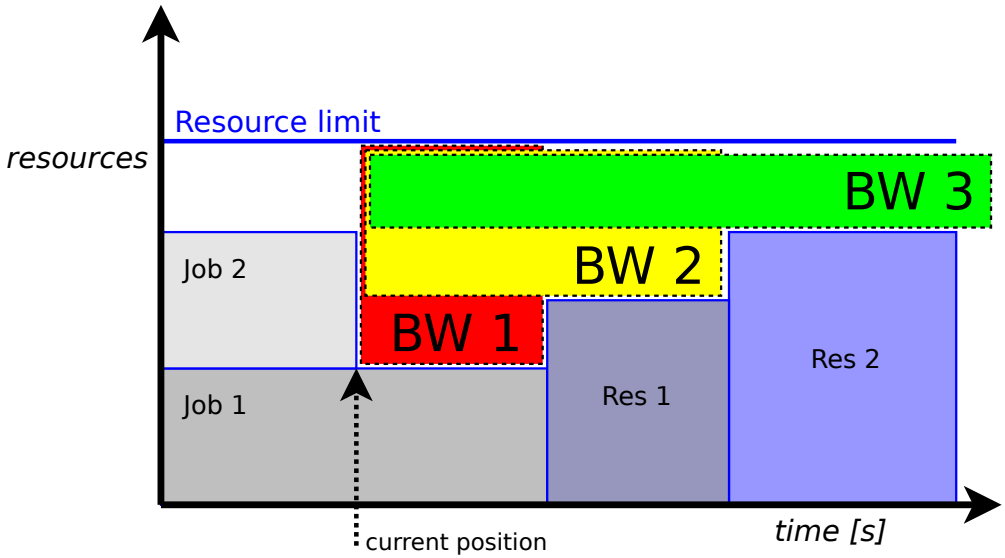
Overview

- **Configurable** simulator for global job schedulers for **on-line prediction** of job dispatch dates
- Based on analysis of JSC batch systems **Moab** and **Loadleveler**
- **Integrated** with monitoring system **LLView**
- **LML** as configuration and communication data format
- **Use-cases**:
  - **User** predicts start dates of submitted jobs
  - **Administrator** simulates job scheduler performance with various input parameters



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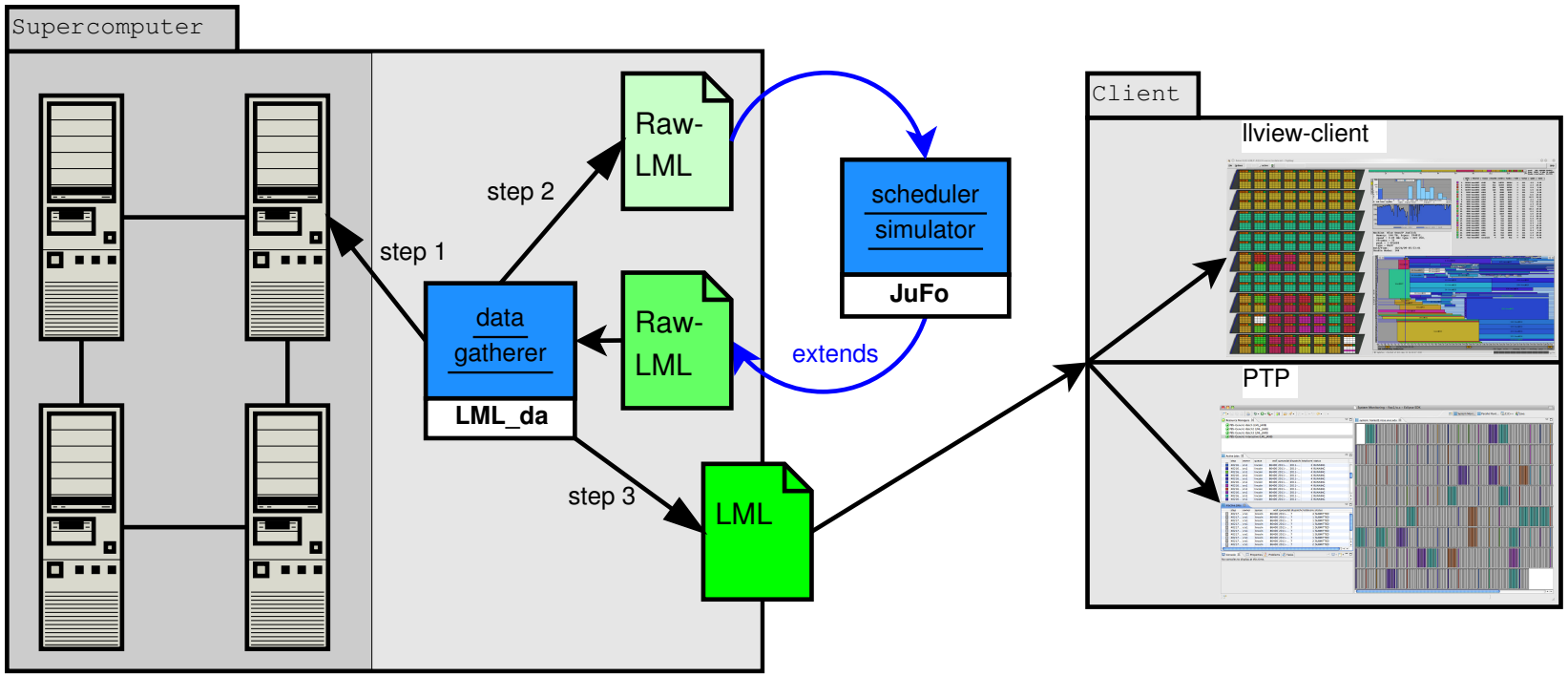
Architecture



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Features

- Supported **scheduling algorithms**
  - First-Come-First-Served
  - List-Scheduling
  - Backfilling
- Available **simulation parameters**
  - Generic job **prioritization**
  - Advanced **reservations**
  - Jobs can request CPUs, GPUs, memory
  - **Nodesharing**
  - **Queue** constraints
- Test framework for evaluating JuFo's accuracy

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Part II: PTP Monitoring Updates

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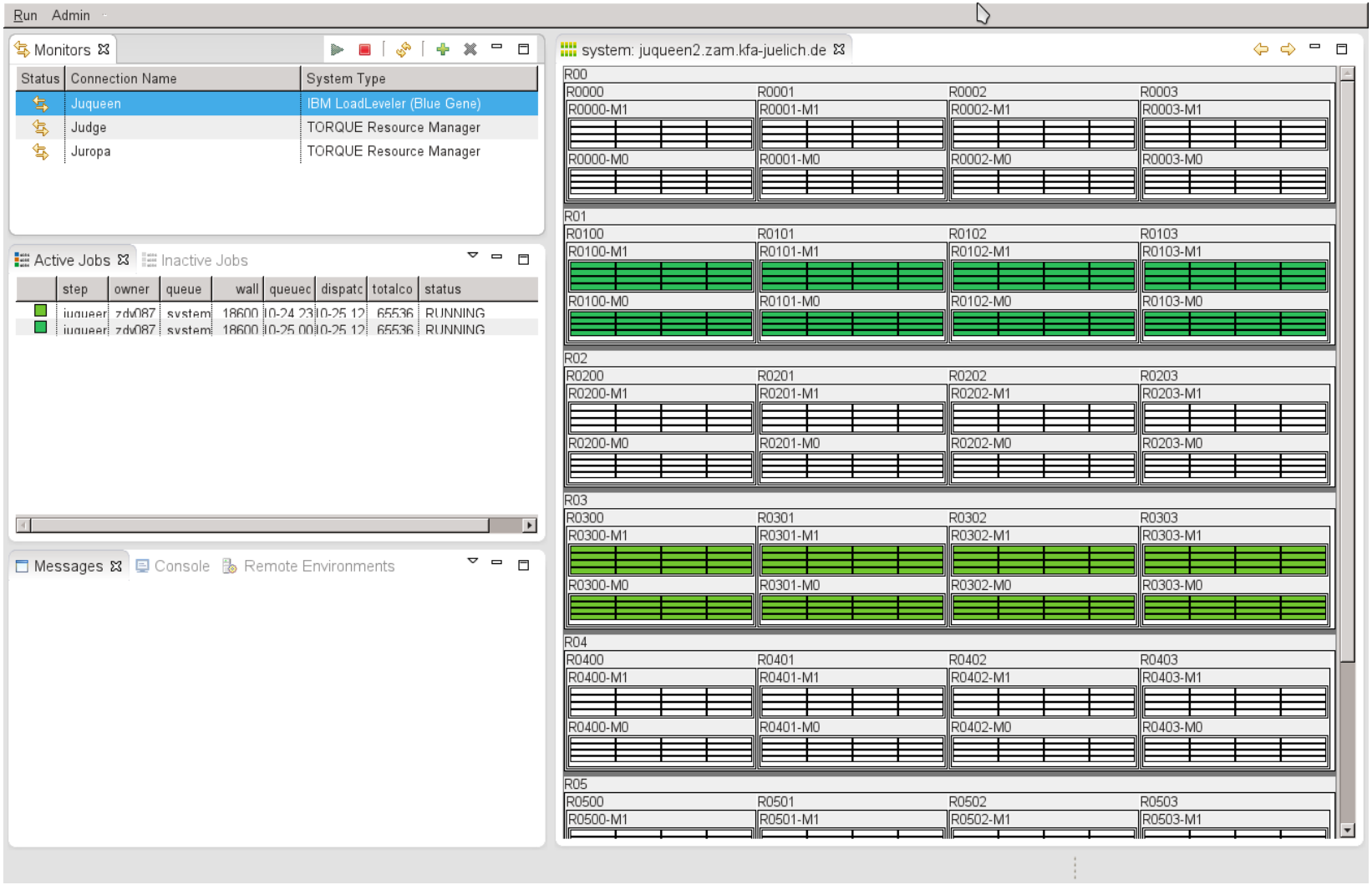
Standalone Monitoring Client



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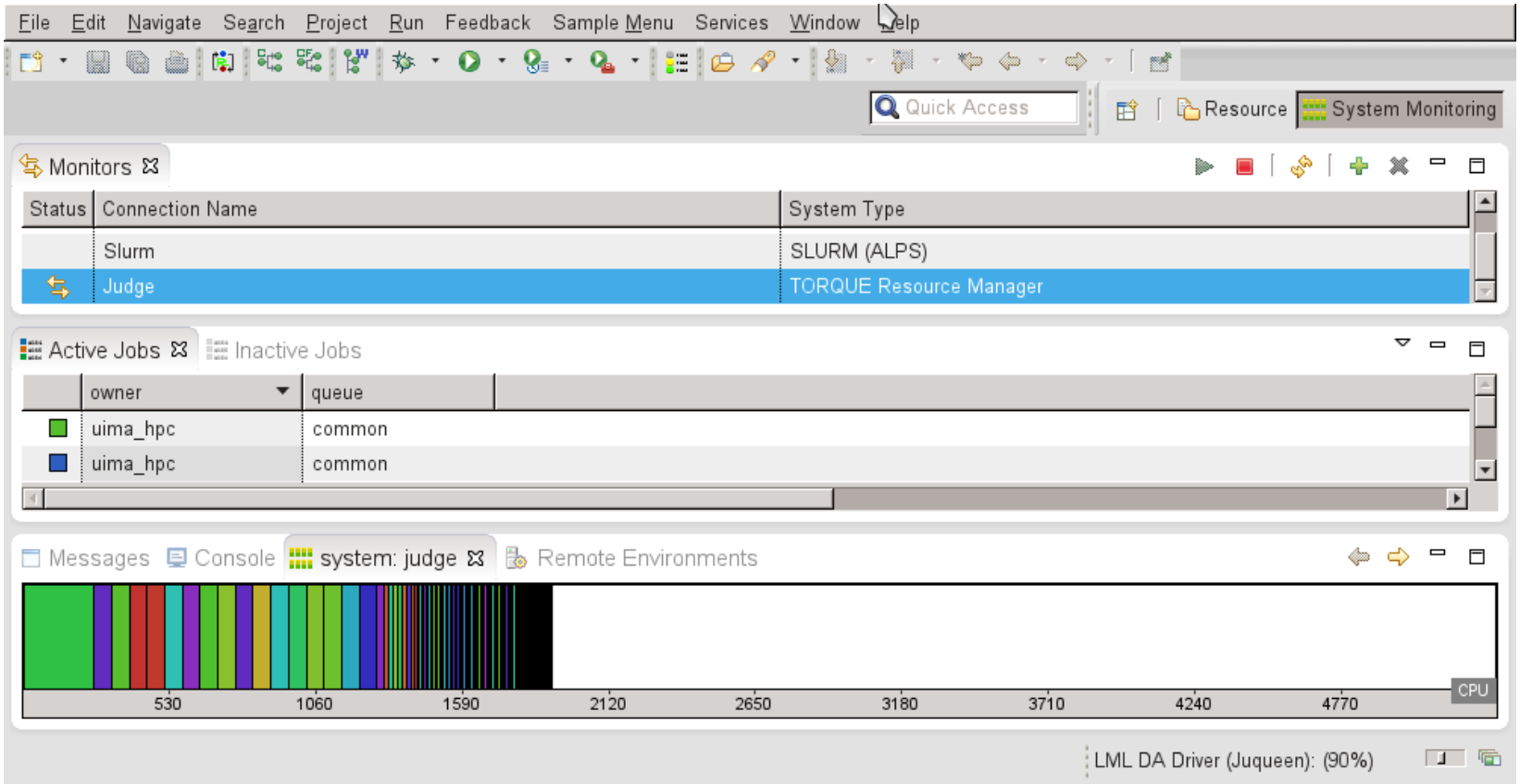
Usage bars on top level



Usage bars can now summarize the **entire system load**

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Further updates

Recent enhancements

- Jobs are searched in table and Nodes View when selected
- LML_da adapter for supporting *Monte Rosa* Cray system at CSCS
  $\rightarrow$ **SLURM ALPS** combination
- **Level-of-detail** can be chosen **separately** for each connection
- **Double-buffering** enabled for Windows

Future work

- **Layout configuration** via Eclipse client
- Support **multiple node displays** for each connection
  (e.g. to visualize power usage, node states, I/O activity)
- **GPU** monitoring