

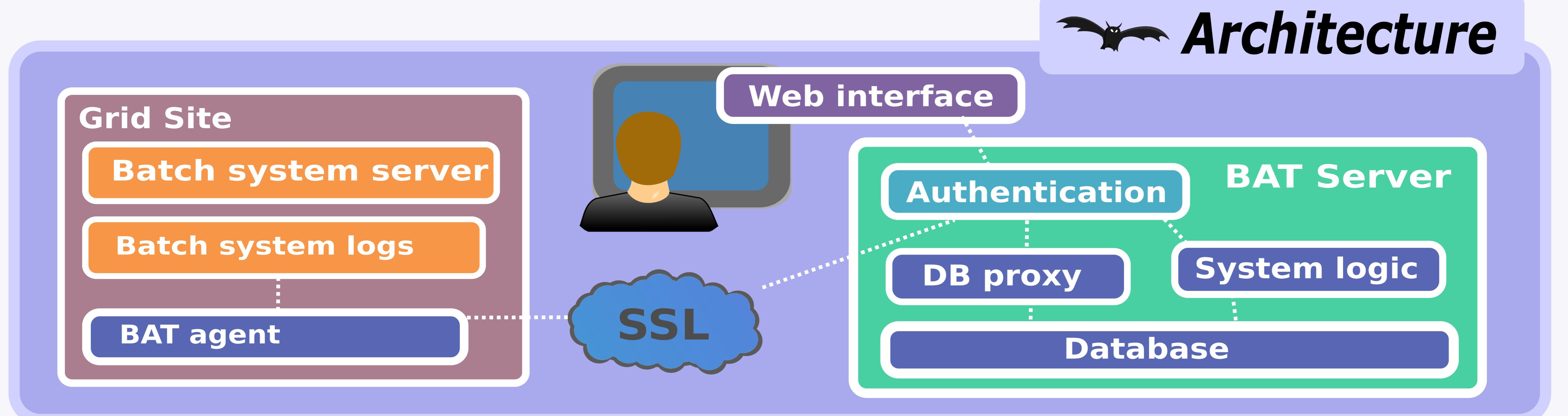


A View on Site Efficiency with Batch System Analysis Tool

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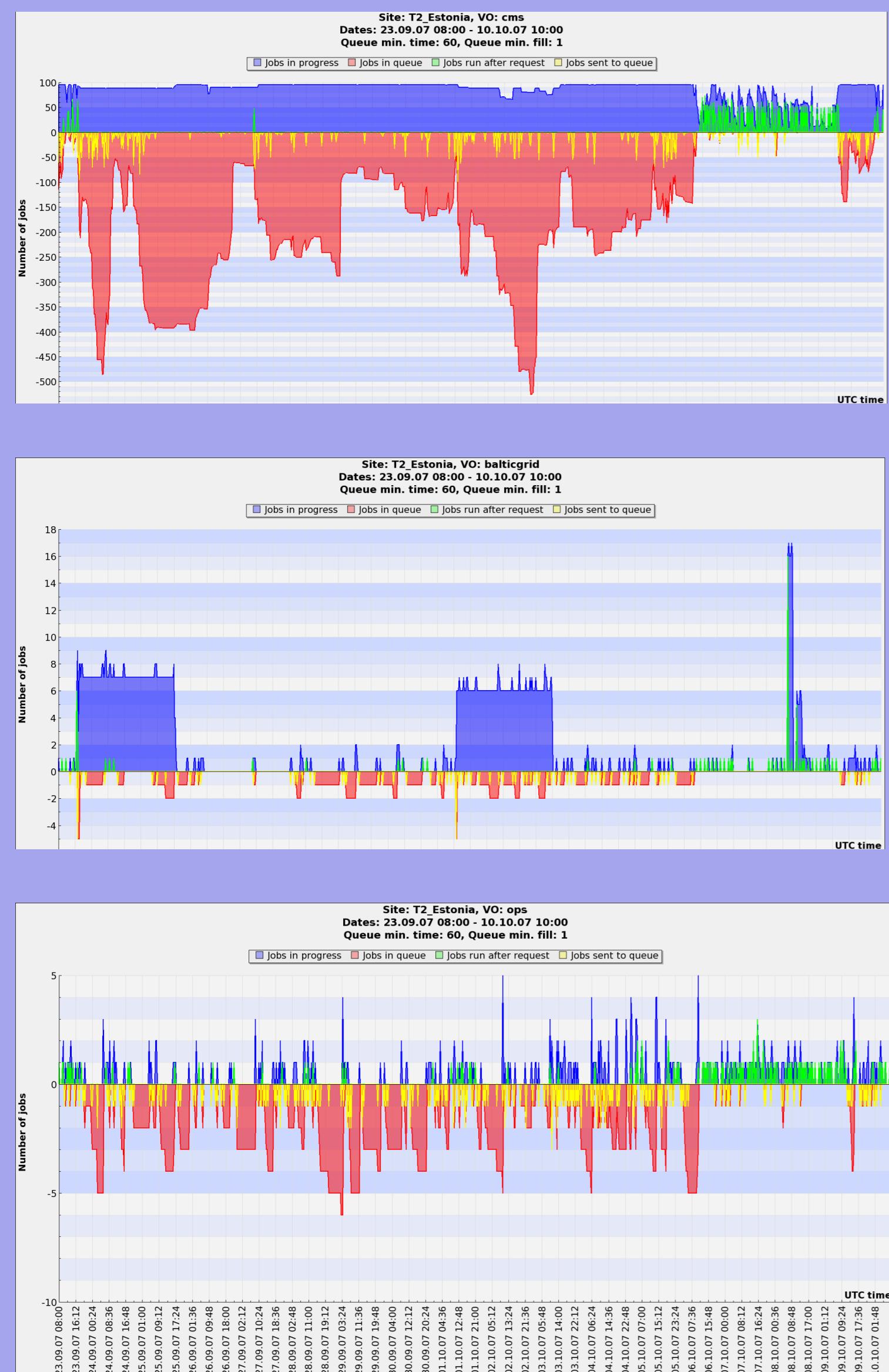
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<https://grid.cyfronet.pl/bat>





BAT for VO Admin



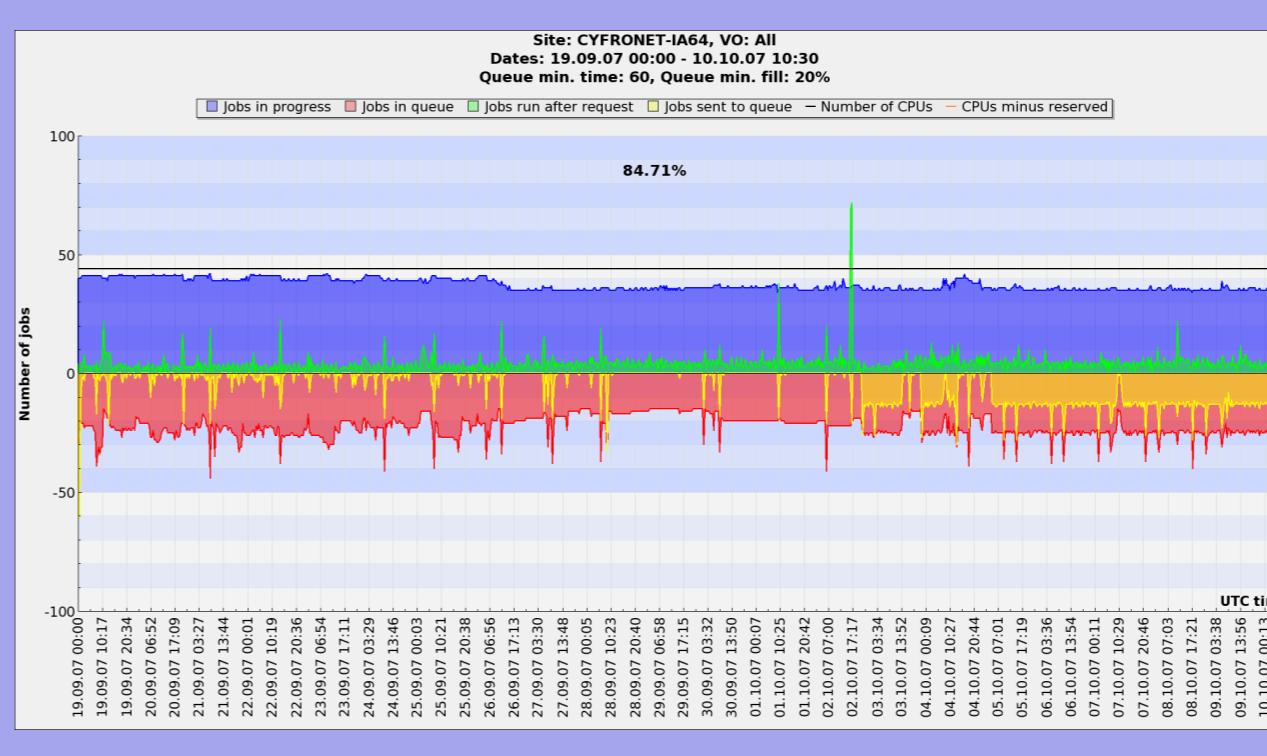
**VO limits
and priorities**

The diagrams present usage at 96-CPU site (T2_Estonia). CMS VO is computing intensively (blue field) occupying majority of resources (89) having also a lot of queued jobs (red field). BalticGrid VO gets access to some 6-7 CPUs. The site policy favours CMS in terms of resources but each VO gets more CPUs if they are free indicating a **fair-share policy**. During high site load periods OPS VO jobs experience some delays in getting through.

Functionality

BAT is a **monitoring tool** for BalticGrid that collects accounting data from sites and allows **querying, processing** and **visualization** via web interface. **BAT agent** is an independent program installed at grid sites which parses batch system accounting log files and sends job details over SSL to **BAT database**. Data retention and summarization save disk space while preserving good level of details. Each agent uses its own credentials to authenticate with BAT server. While successful BAT server grants the agent with write rights. **BAT user** authenticates with the server and is assigned role(s) giving access to the relevant data. User submits a query via web interface with specific parameters. The query is processed by system logic and results are presented in graphs.

BAT for Site Admin



VO efficiency

Allows to assess if CPU time is used effectively. Graph presents used CPUtime (green) and walltime(red) for each VO. In this graph biomed VO could be a subject for improvements.



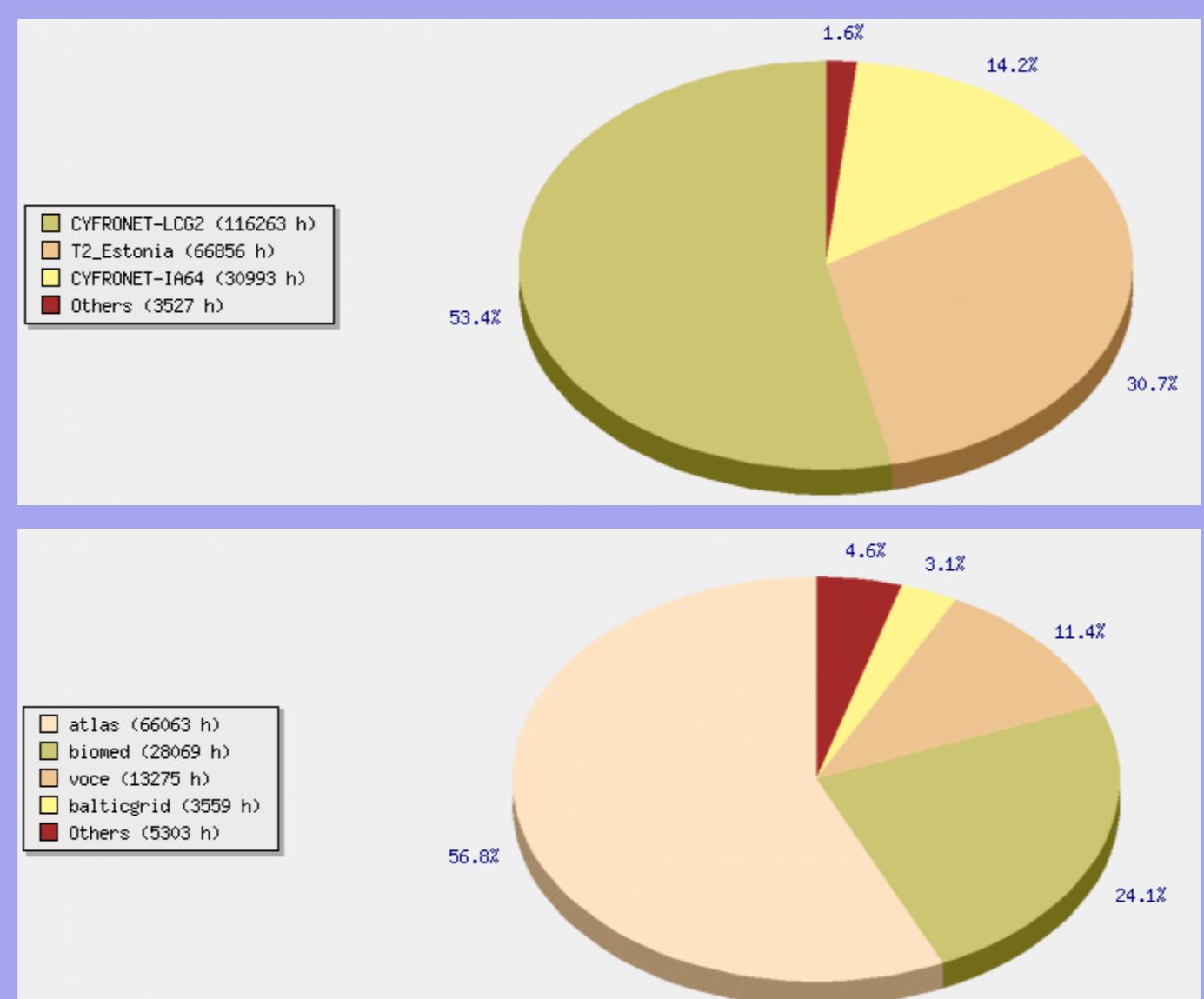


BAT for Grid Operator

Site summary

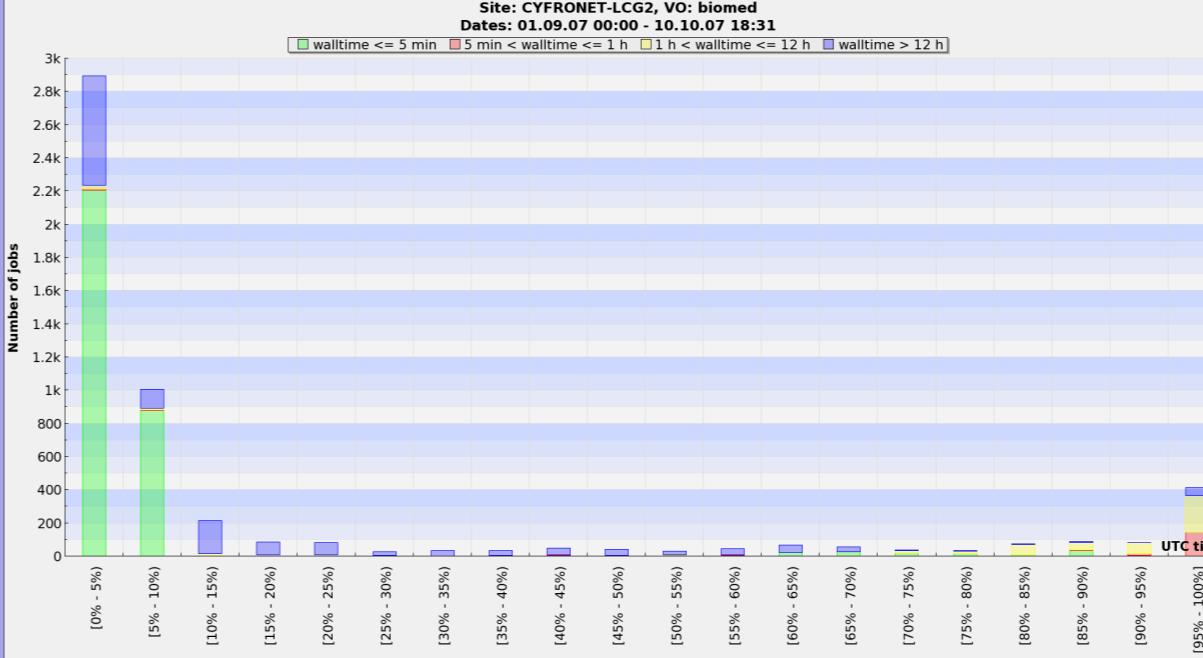
Gathering data in one database BAT gives possibility to control sites from one place. Grid Operator role allows to access data for groups of sites.

Upper piechart shows walltime summary (in hours) for few selected sites. Second graph presents the same walltime but as a function of VOs on those sites.



Job efficiency

Distribution of jobs based on their efficiency. Each bar represents 5% range. Colours indicate job walltime range. Jobs with 0-5% efficiency need to be investigated esp. those with >12h walltime



Using query parameters

Monitoring jobs from OPS VO should start executing within 30 minutes. By changing "Queue min. time" query parameter Site Admin is able to find when such jobs were waiting longer

