

Jpred 4

Incorporating Jnet

Monitoring Tools

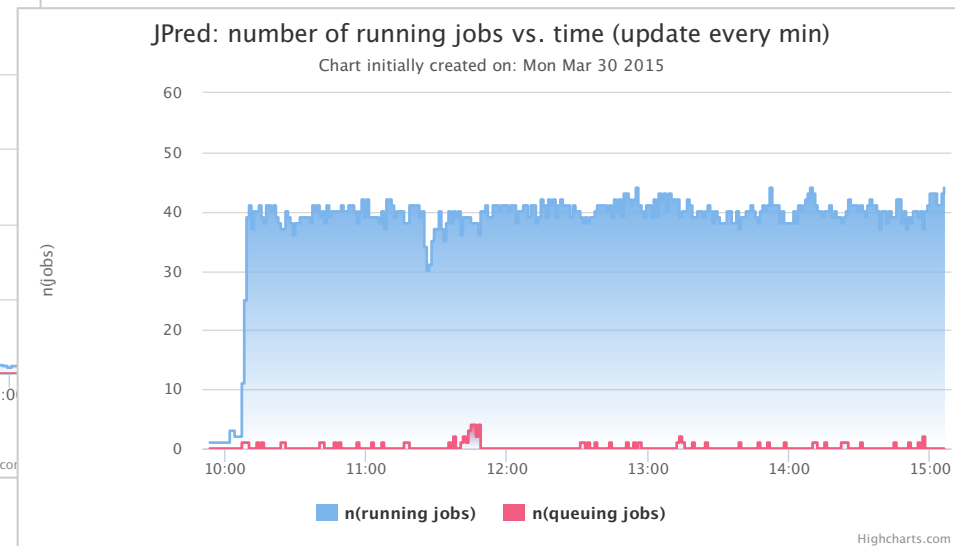
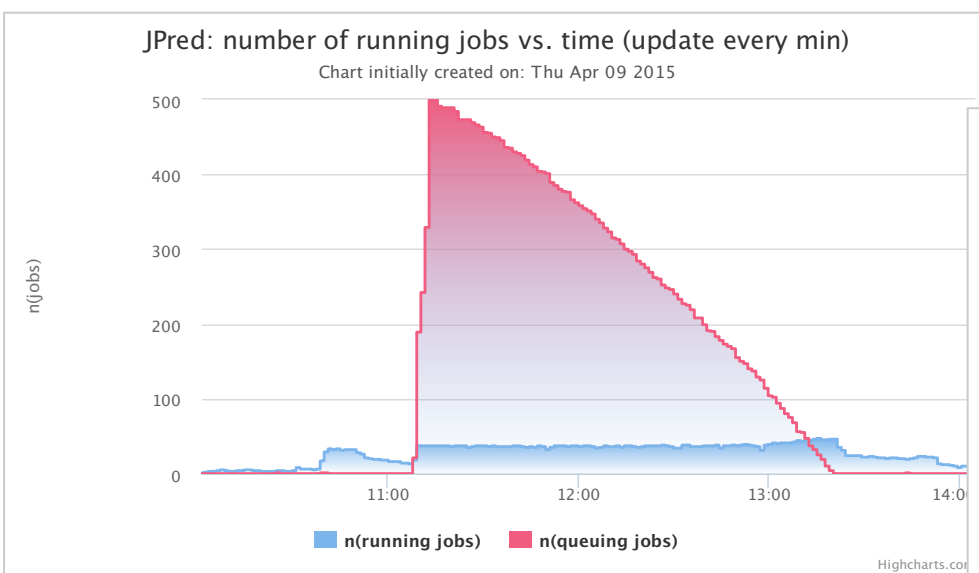


Types

- “Live”
 - updates every min
 - URL: http://www.compbio.dundee.ac.uk/jpred4/monitor_all_in_one.shtml
- Usage patterns
 - Statistics per hour for the last 30 days
 - URL: <http://www.compbio.dundee.ac.uk/jpred4/heatmap.shtml>
- Global overview
 - Statistics per day for the last few months
 - Statistics per month during JPred existence
 - URL: <http://www.compbio.dundee.ac.uk/jpred4/stats.shtml>

Examples: “Live”

- 4 monitors:
 - Number of running/queuing jobs
 - Average time per job in the past hour
 - Median time per job in the past hour
 - Number of slots (for submission) used currently on the cluster



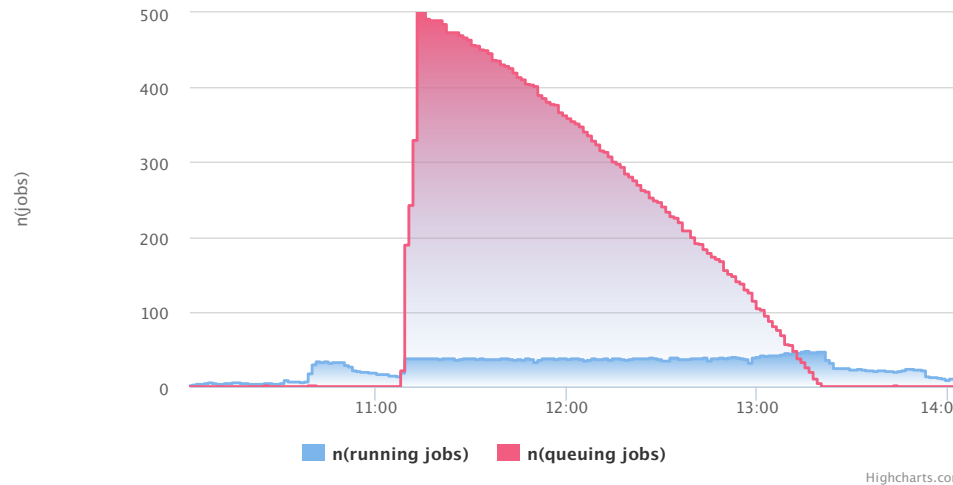
Examples: “Live”

LEFT: one can see large (batch) submission - immediately a lot of job queuing, as JPred limited to 50-70 jobs running in parallel at a time. At the same time it's clear from the plot that JPred jobs are quite fast (median time ~5 min per job), so, around 500 submissions complete in a matter of a couple of hours. Monitoring - simplifies scheduling.

RIGHT: example of mass submission using scheduling (through another new JPred tool: RESTful API). - In the example a user controls submissions (automatically) to not more that 40 jobs, i.e. below number of nodes available to JPred jobs. Therefore any other user who would like to submit a job - would be able to do it without any waiting.

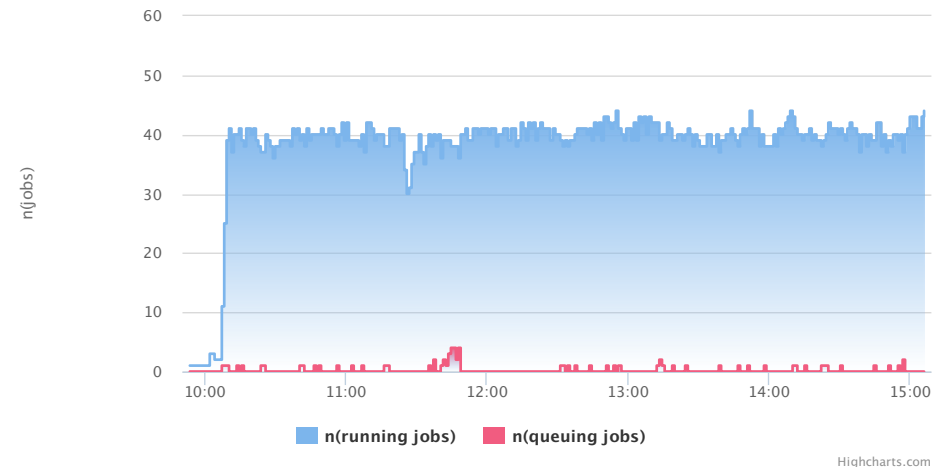
JPred: number of running jobs vs. time (update every min)

Chart initially created on: Thu Apr 09 2015



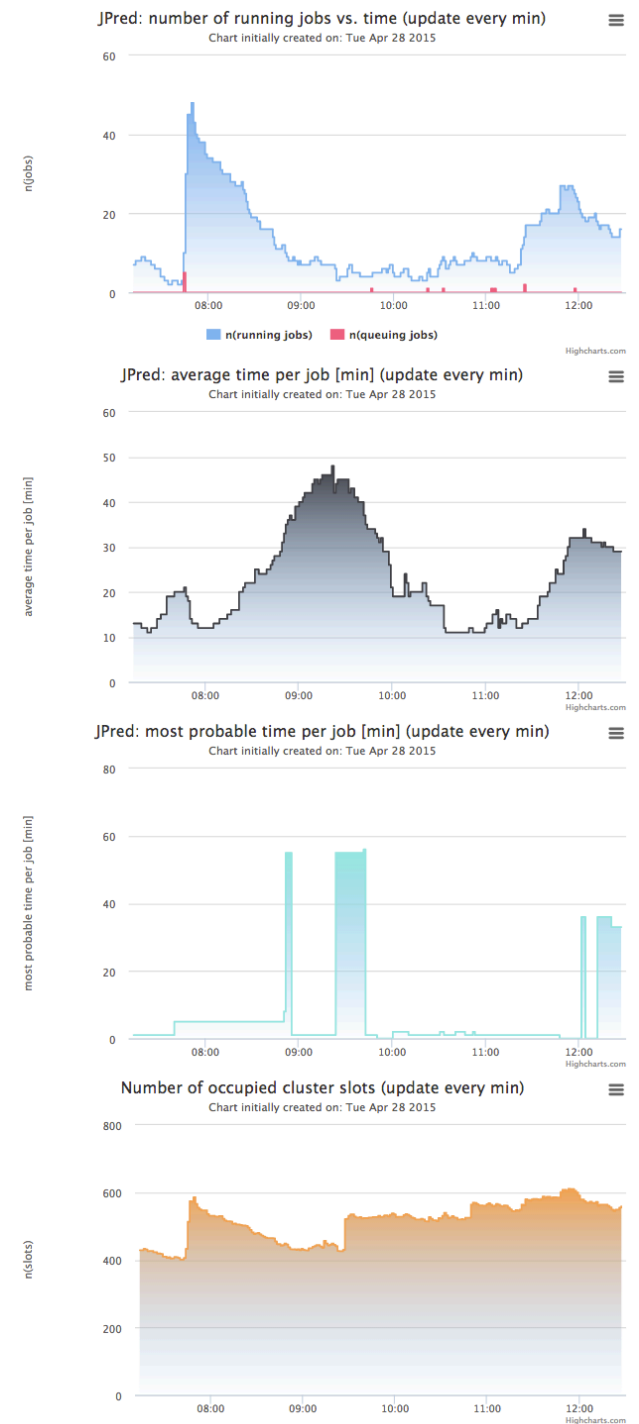
JPred: number of running jobs vs. time (update every min)

Chart initially created on: Mon Mar 30 2015



All “Live” Monitors

- All plots are zoom-able in X and Y, all could be saved in SVG, PNG, JPG, PDF

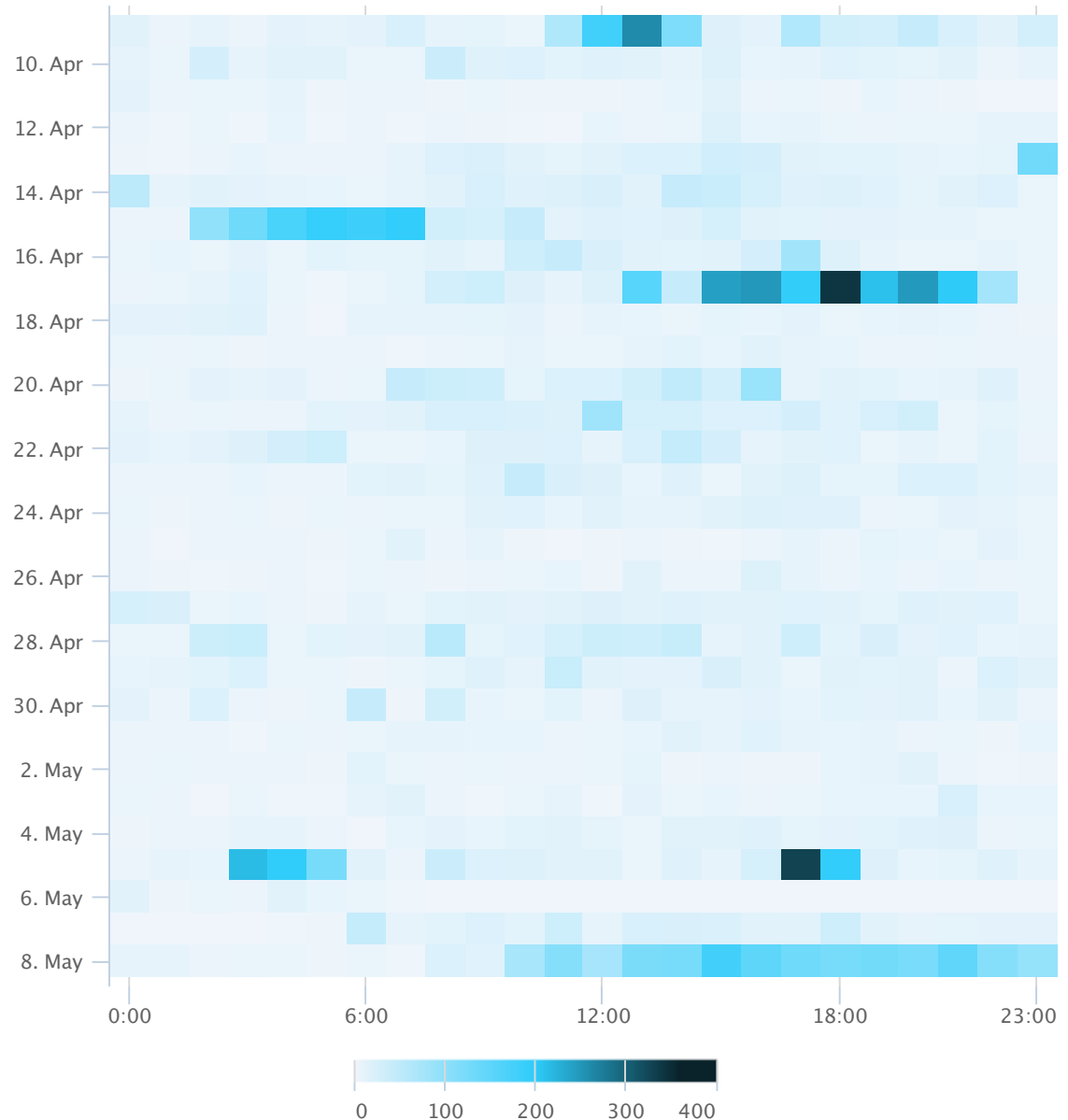


Example: “heat map”

- Usage patterns - allow for even more complex scheduling.
 - For example, from the job submission dynamics in the past month - a user may identify that night hours and weekends are less occupied and plan submissions accordingly.

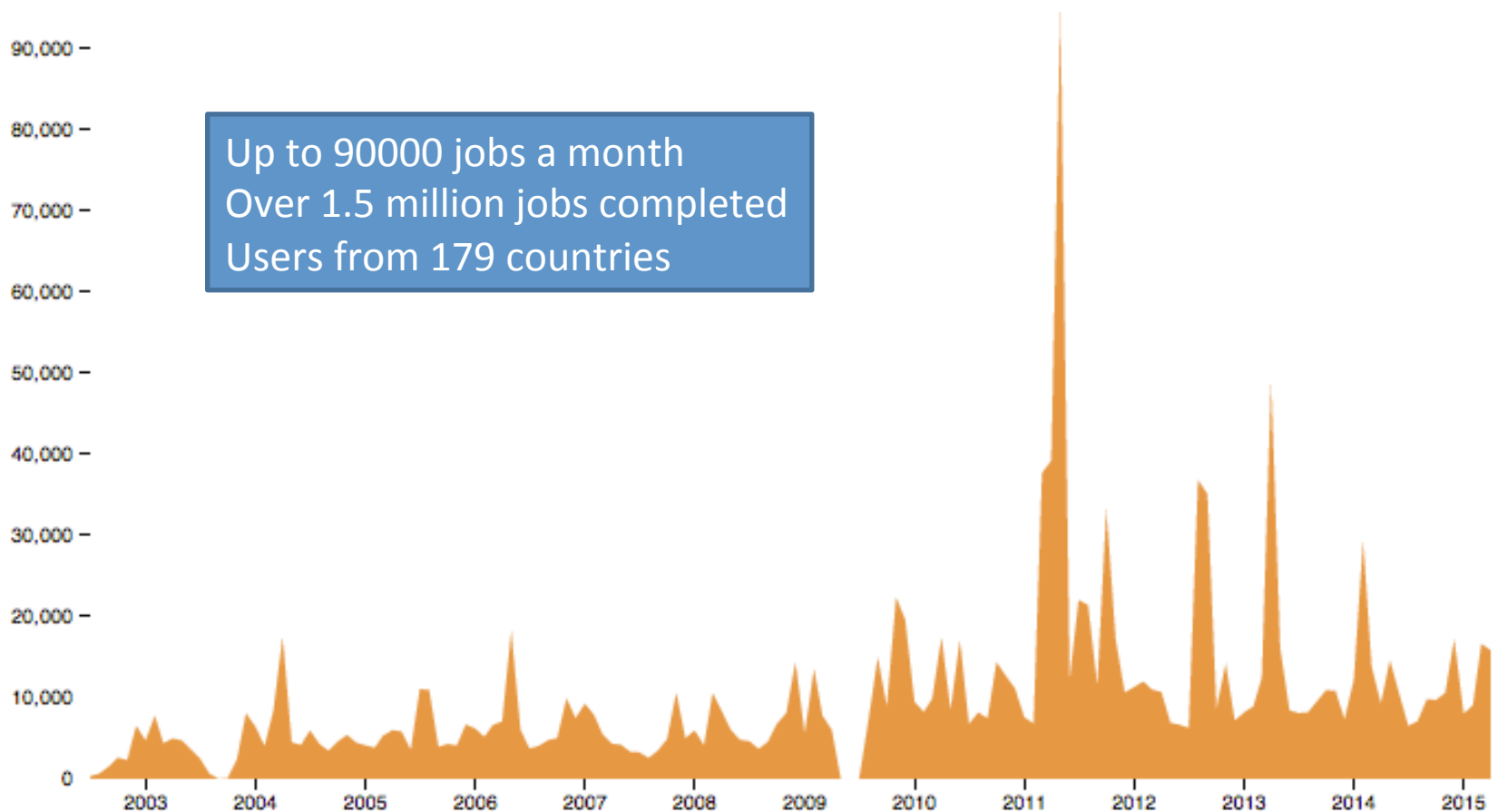
Distribution of JPred jobs (“heat map”)

Number of jobs started in a given hour (GMT) on a given day



Overall Statistics

JPred: Monthly Usage Statistics^(?) [Download the data]



<http://www.compbio.dundee.ac.uk/jpred4/stats.shtml>