

# Cluster Luna usage and outlook

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# Clusters LUNA overview

- *cluster Luna2019*
  - 32+4 servers, 2048+256 CPUs, 16.4+2 TB RAM, Infiniband
  - **end of warranty** December 18, 2023
- *cluster Luna2021*
  - 6 servers, 384 CPUs, 6 TB RAM
- *cluster Luna2022*
  - 6 servers, 384 CPUs, 6 GPUs, 3 TB RAM
- in total: **48 servers, 3072 CPUs, 27.4 TB RAM**

# Statistics 2023 (Jan-Sep)

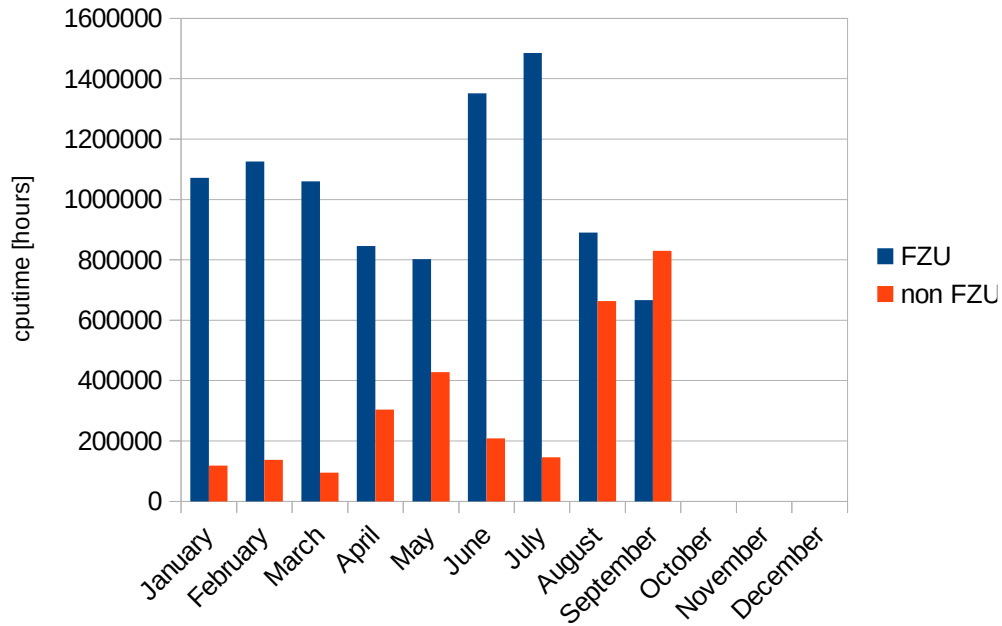
- stable operation with minimum outages
- service maintenance:
  - replacement of several failed memory modules
  - installation of additional fans for luna nodes with GPU due to overheating

# Statistics 2023 (Jan-Sep)

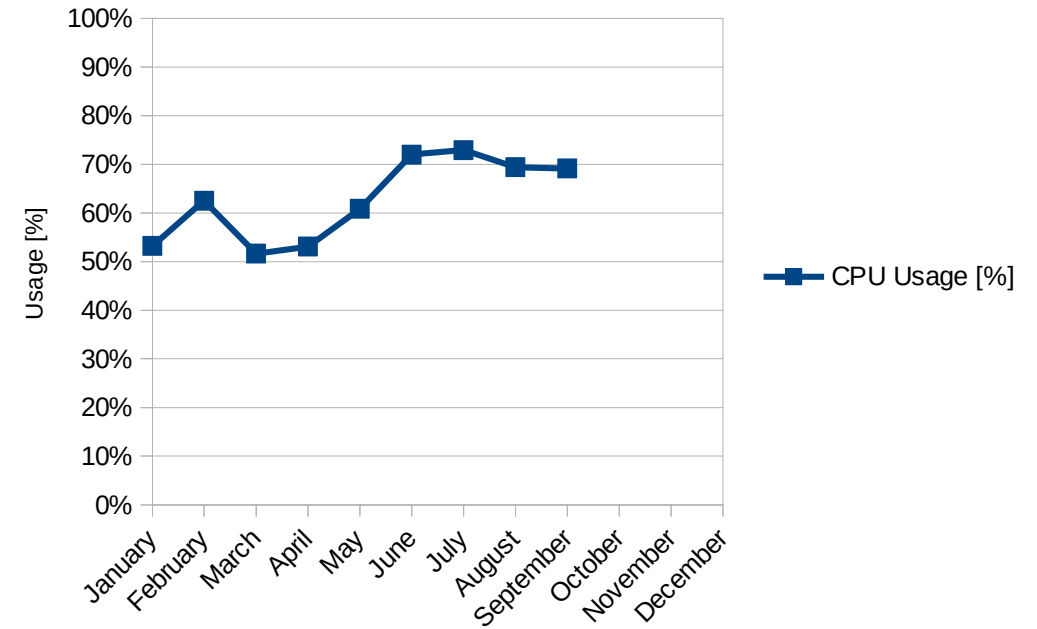
- cputime – in total computed **1 397 years**
  - FZU users: 1 062 years
  - non-FZU users: 335 years
- CPU utilization: on average **66.5 %**
- GPU utilization (*luna201-206*): on average **63.2 %**
- waiting time: mostly within 10 minutes

# cputime and CPU utilization

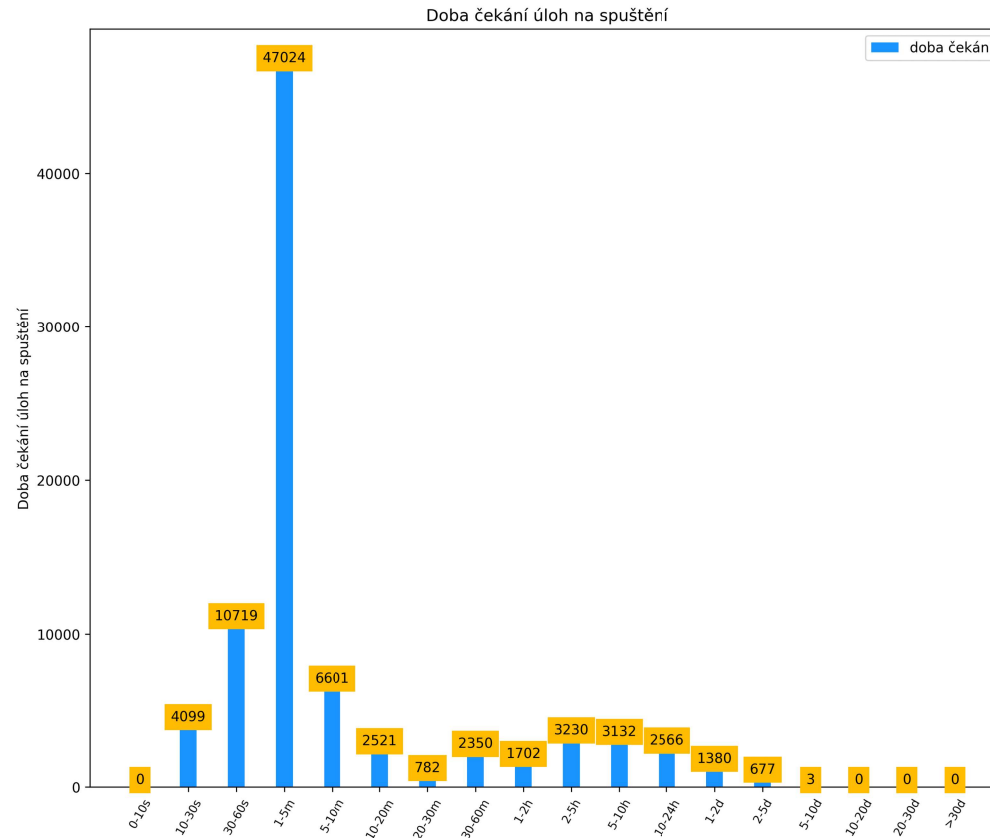
Clusters Luna - 2023



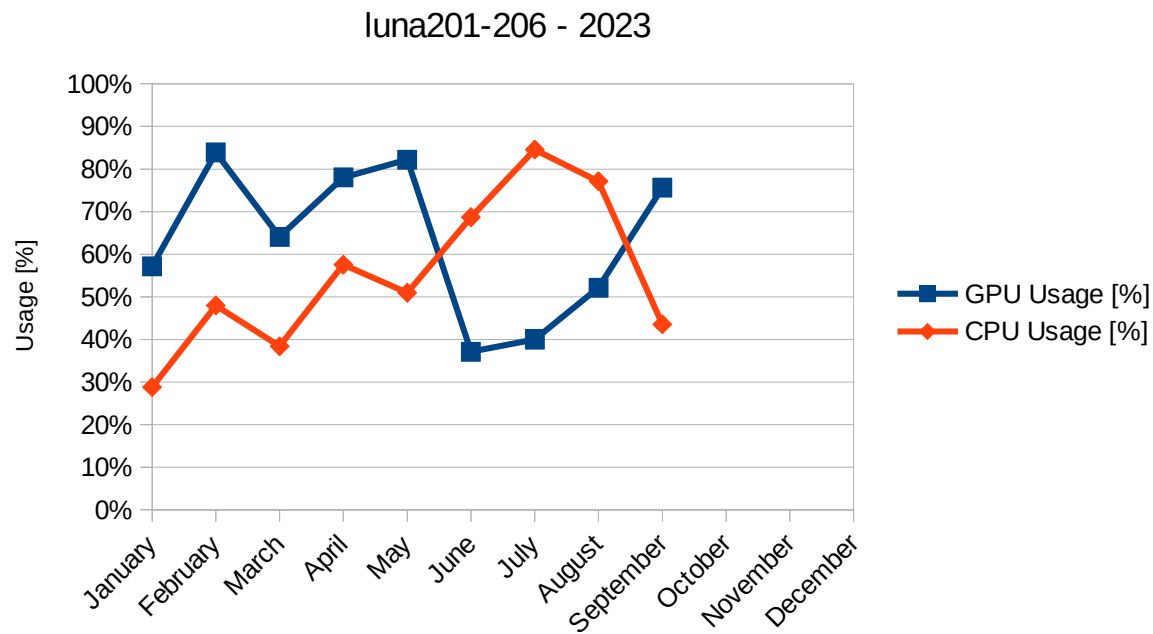
Clusters Luna - 2023



# Waiting time in the queue luna



# Luna2022 – CPU/GPU utilization



# Power consumption

Cluster	Average immediate power (March-October)	Power consumption in total (March-October)
Luna2019	7.2 kW	88 MWh
Luna2021	2.4 kW	17 MWh
Luna2022	4.3 kW	26 MWh



Thank you for your attention