

Clusters Magma/Luna usage

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Clusters MAGMA & LUNA overview

- *cluster Magma (2024)*
 - 23 servers, 2208 cores, 35.3 TB RAM
- *cluster Luna2023*
 - 3 servers, 288 cores, 4.6 TB RAM
- *cluster Luna2022*
 - 6 servers, 384 cores, 6 GPUs, 3 TB RAM
- *cluster Luna2021*
 - 6 servers, 384 cores, 6.1 TB RAM
- in total: **38 servers, 3264 cores, 49 TB RAM, under warranty**

Clusters MAGMA & LUNA overview

- **out of production**
 - *cluster Luna2019* - March/April 2025
 - 36 servers, 2304 cores, 18.4 TB RAM, Infiniband
 - *frontend luna.fzu.cz* - June 2025
- **purchase of a new frontend in progress**

Statistics 2025 (Jan-Oct)

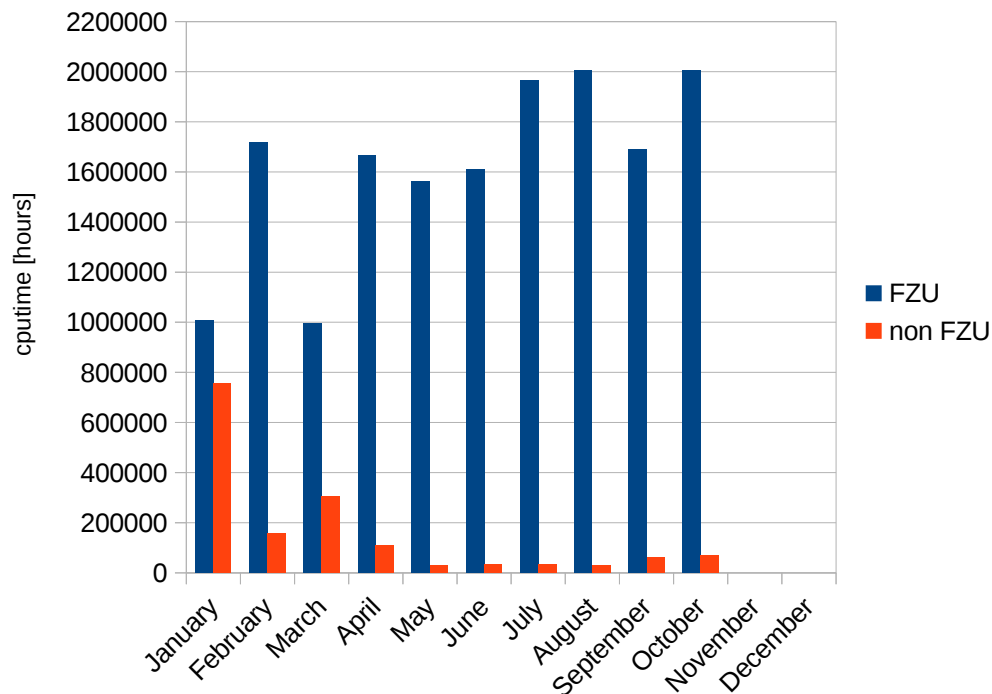
- stable operation with several outages due to planned/unplanned electricity shortages

Statistics 2025 (Jan-Oct)

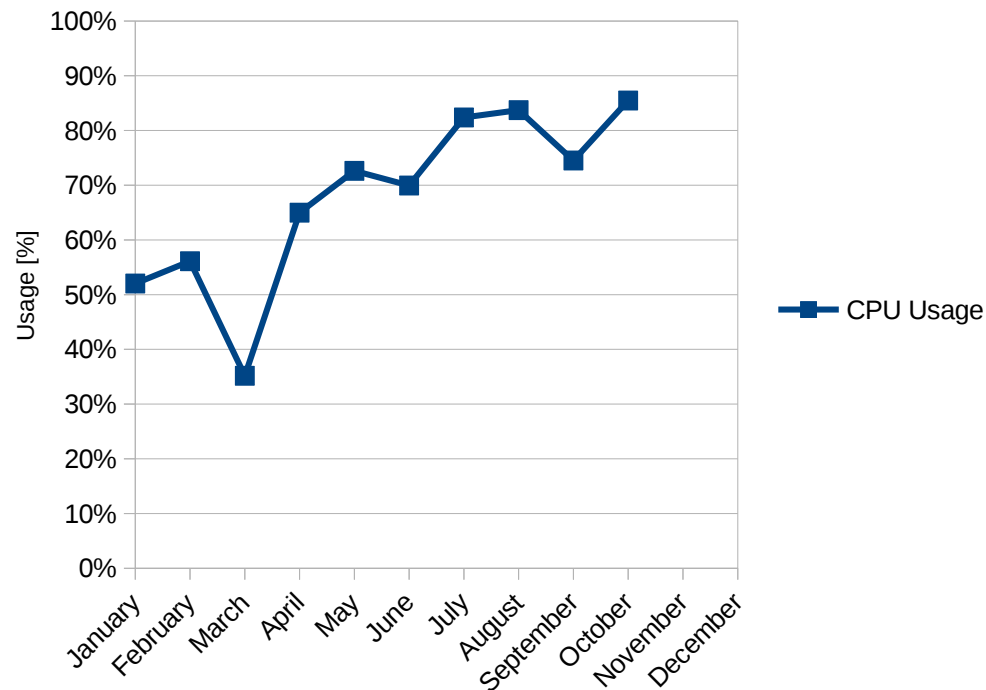
- cputime – in total computed **2 033 years**
 - FZU users: **1 852** years
 - non-FZU users: **181** years
- CPU utilization: on average **65.1 %**
- GPU utilization (*luna201-206*): on average **57.6 %**
- waiting time: mostly within 10 minutes

cputime and CPU utilization

Clusters Magma & Luna - 2025

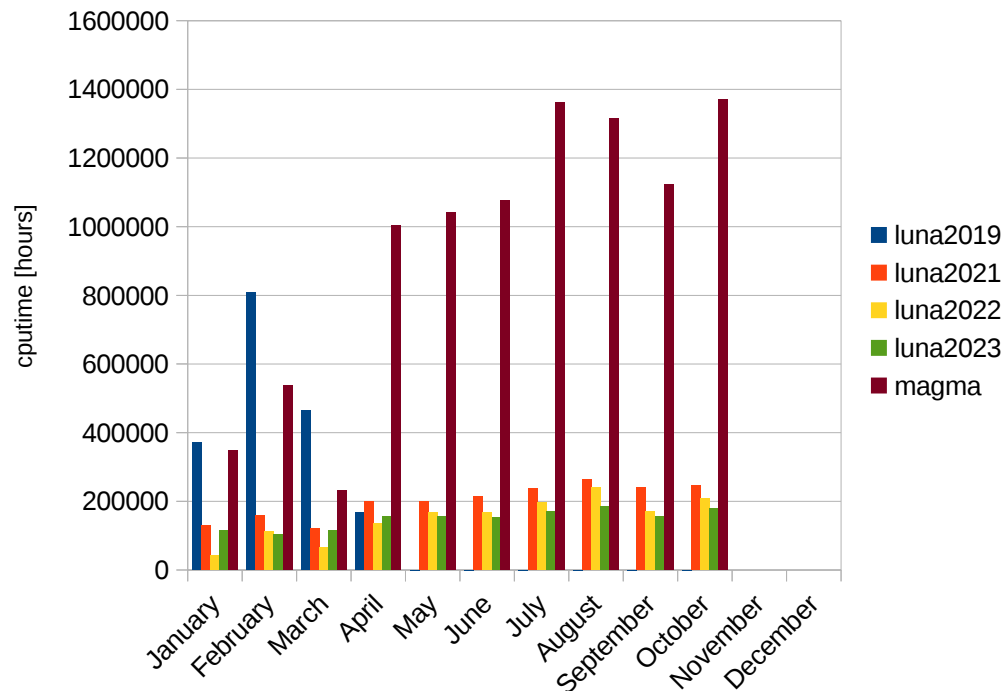


Clusters Magma & Luna - 2025

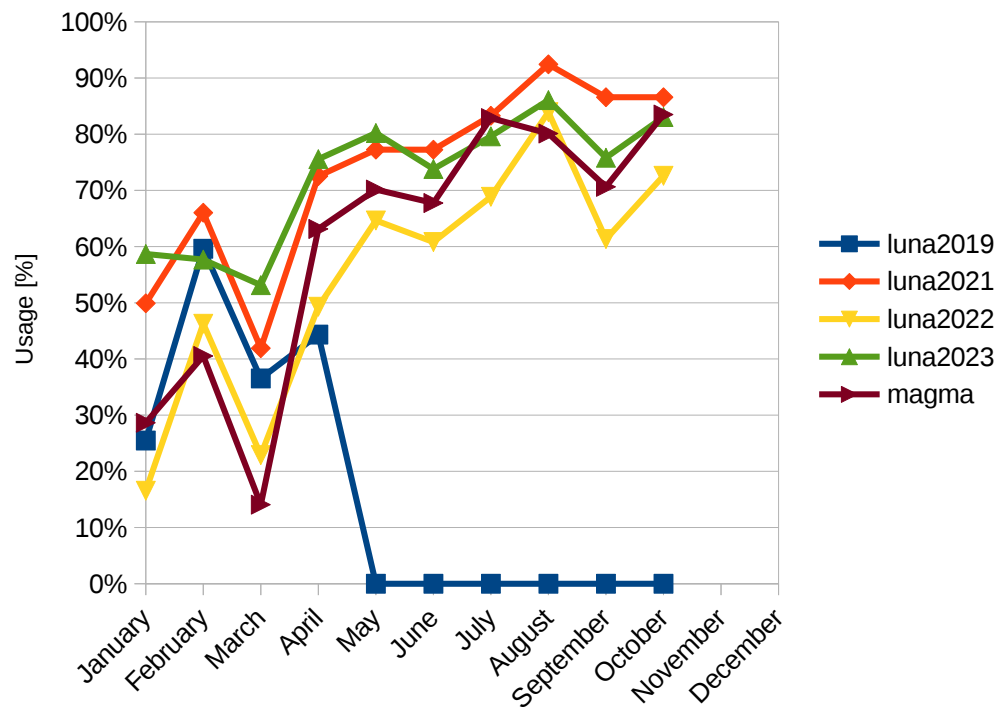


cputime and CPU utilization

Queue Luna - 2025



Queue Luna - 2025



Power consumption

Cluster	Average immediate power (January-October)	Power consumption in total (January-October)
Magma	12.6 kW	115.6 MWh
Luna2022 + Luna2023	4 kW	30.5 MWh
Luna2021	3 kW	20.1 MWh
In total	19.6 kW	166.2 MWh

Note: without cooling and UPS losses

Thank you for your attention