

Cluster Luna usage

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December 2024

Clusters overview

- ***cluster Luna2019***
 - 36 servers, 2304 CPUs, 18.4 TB RAM, Infiniband
- ***cluster Luna2021***
 - 6 servers, 384 CPUs, 6 TB RAM
- ***cluster Luna2022***
 - 6 servers, 384 CPUs, **6 GPUs**, 3 TB RAM
- ***cluster Luna2023***
 - 3 servers, 288 CPUs, 4.6 TB RAM
- ***cluster Magma*** (new from November 2024)
 - 23 servers, **2208 CPUs**, **35.3 TB RAM**

Clusters overview

- in total:
 - 74 servers
 - 5568 CPUs
 - 67.3 TB RAM
- out-of-warranty:
 - *cluster Luna2019* (2304 CPUs, 5 years)

Cluster Magma

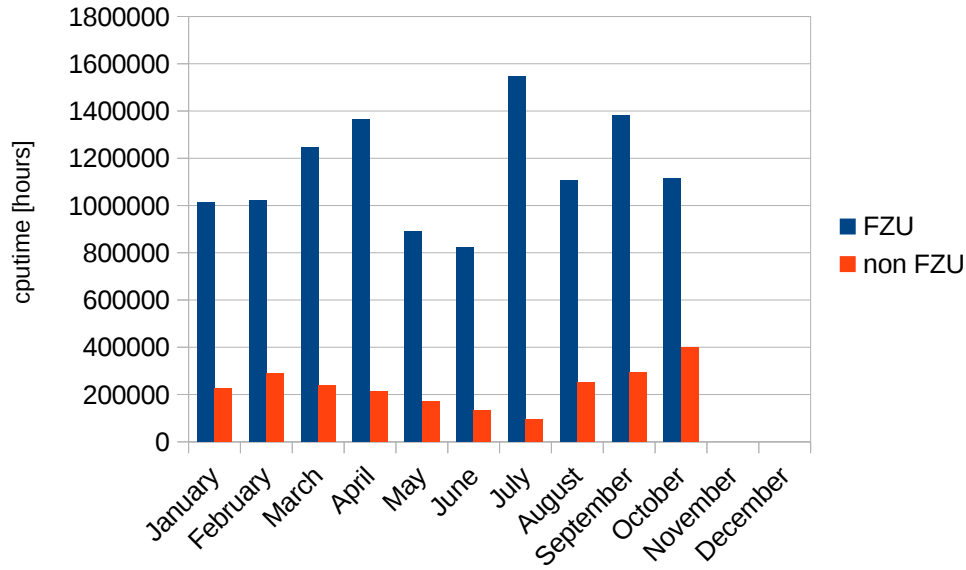
- November 2024
- 23x 1U server **HPE Proliant DL365 Gen11**
 - 2x 48-core AMD Epyc Genoa 9454, 2.75 GHz
 - 24x 64GB RAM DDR5 ECC, 4.8 GHz, in total **1536 GB**
 - 1x **3.84TB SSD** NVMe Datacenter Gen4
 - 2x **10GbE** RJ45
- in total **2208 CPUs, 35.3 TB RAM, 88.3 TB /scratch**

Statistics 2024 (Jan-Oct)

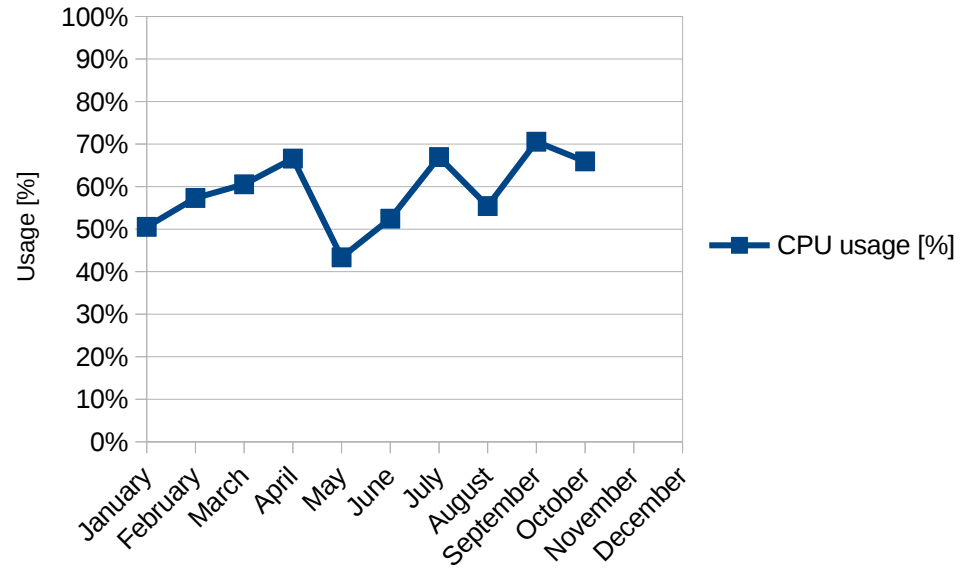
- cputime – in total computed **1 578 years**
 - FZU users: **1 314** years
 - non-FZU users: **264** years
- CPU utilization: on average **59.1 %**
- GPU utilization (*luna201-206*): on average **76.7 %**
- waiting time: mostly within 10 minutes

cputime and CPU utilization

Clusters Luna - 2024

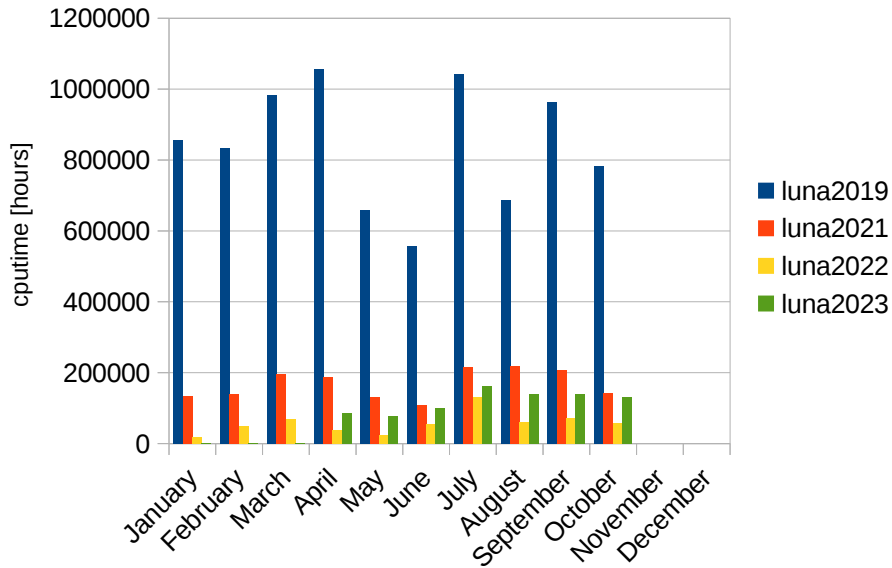


Clusters Luna - 2024

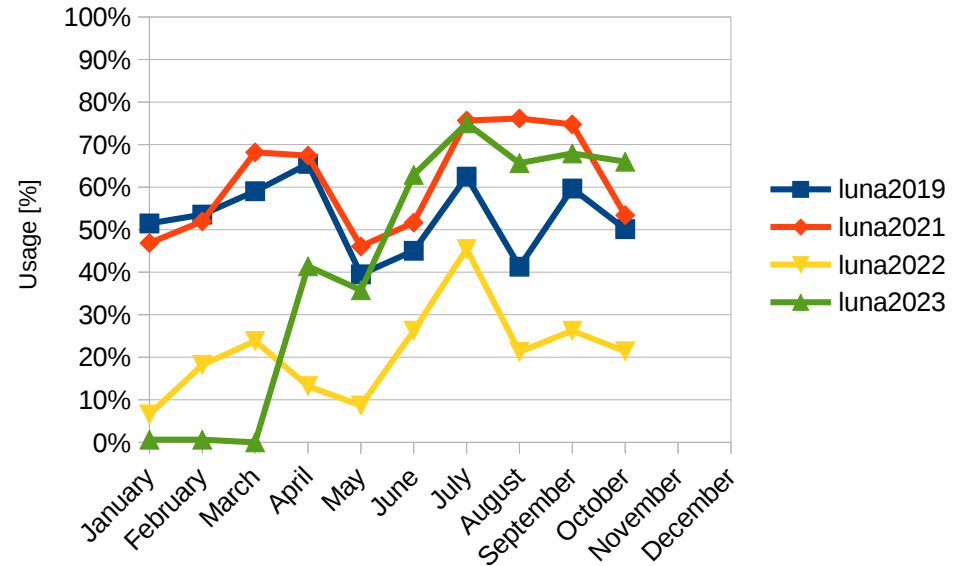


cputime and CPU utilization

Queue luna - 2024



Queue luna - 2024



luna & magma monitoring

<https://grafana.cerit-sc.cz/d/be5f2brotlclcc/metacentrum-meta-pbs-fzu-overview?orgId=1&from=now-1h&to=now>



Power consumption

Cluster	Average immediate power (Jan-Nov)	Maximum immediate power (Jan-Nov)
Luna2019	10.4 kW	14.5 kW
Luna2021	2.9 kW	3.9 kW
Luna2022	3.8 kW	5.6 kW
Magma	13.7 kW	19.2 kW

Thank you for your attention