IA2 ongoing developments

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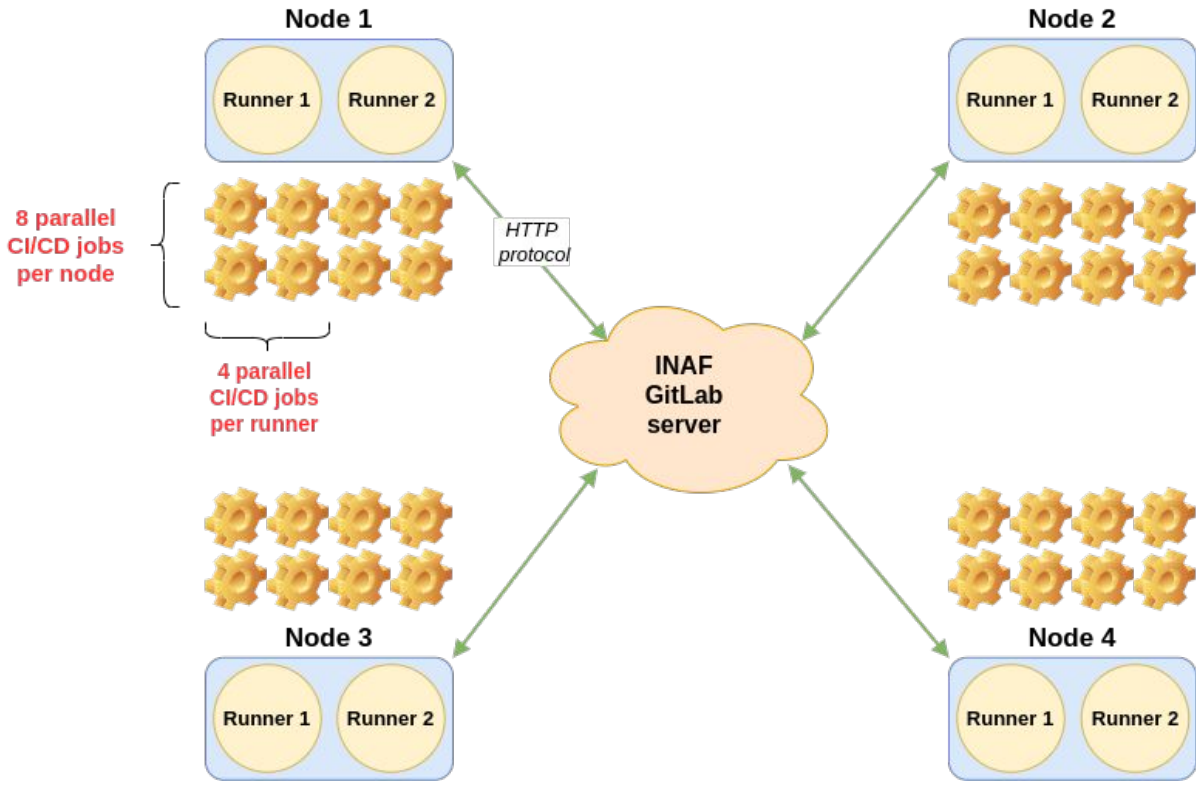
Test cluster for GitLab CI/CD runners



Motivation:
increased demand for a GitLab CI/CD support infrastructure from INAF researchers and technologists

Initial test platform:

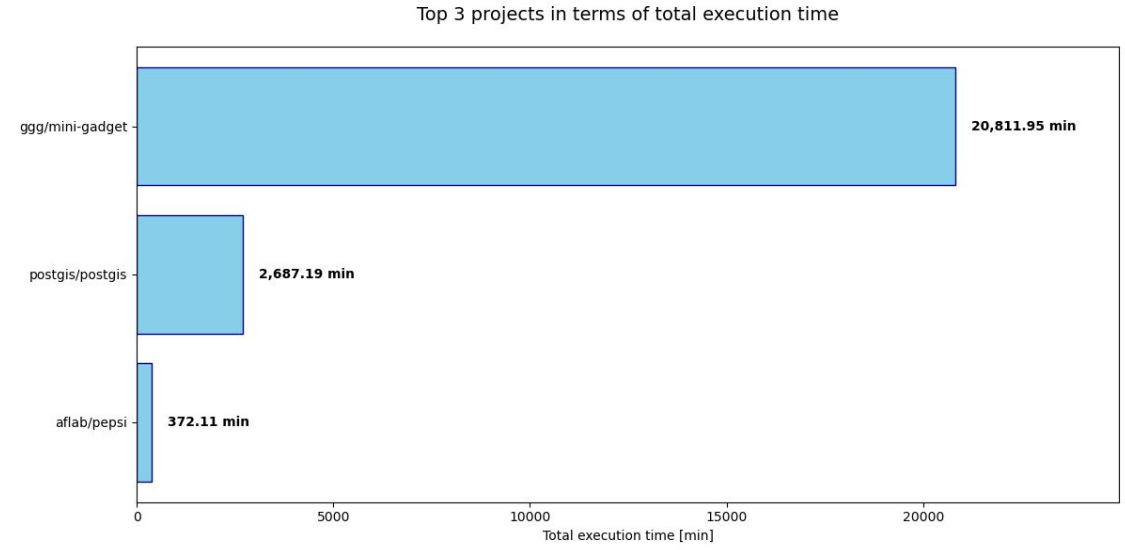
- 4 physical machines with a Intel(R) Xeon(R) CPU E5645 @ 2.40GHz (1 thread/core, 6 cores/socket and 2 sockets) and 96 GB of RAM, kindly provided by the OATs Planck group (thanks to A. Zacchei)

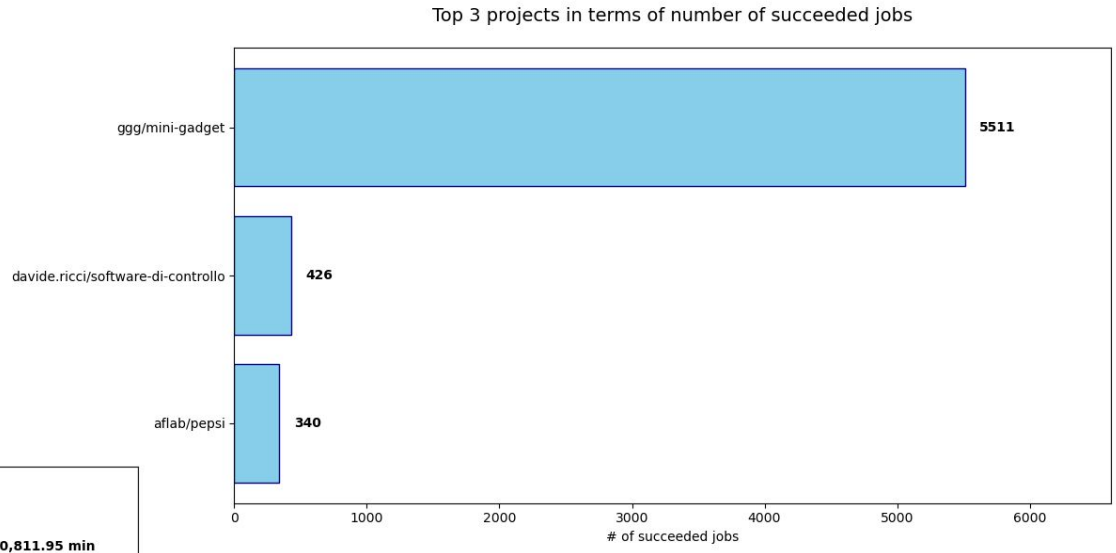
Production cluster:

- now virtualized on new hardware: up to 48 vCores and up to 256 GB RAM

Test cluster for GitLab CI/CD runners: some stats

- **Total number of jobs:** ~11.5k
- **Jobs success rate:** ~70%



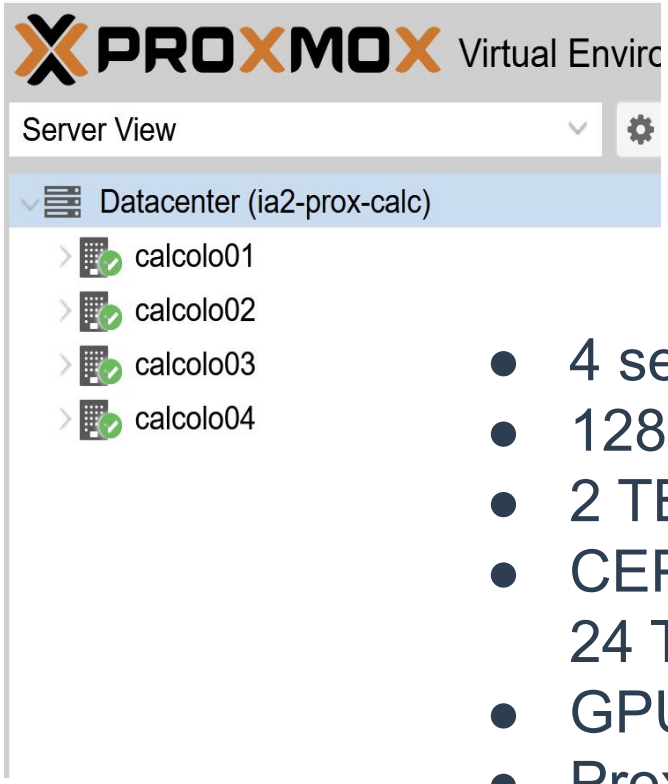


NOTE: the stats showed in these charts consider only real projects (no tests, schools or courses)

Rosetta worker nodes

- need to perform small computing tasks on users data
- GitLab runners are not designed to provide access to user data
- Solution: integrate some of the nodes as Rosetta worker nodes (thanks to Stefano Alberto Russo)
- User get personal home directory mounted as volume in a container
- Singularity
  - it works for user data
  - multiple batch sessions per node
  - limitations: only one graphical session per node

New Hardware and Proxmox



- 4 servers
- 128 vCores per server
- 2 TB RAM per server
- CEPH Hyper Converged Storage, 6 SSDs per server, 24 TB disk space available
- GPU NVIDIA Ada L40S 48GB GDDR6
- Proxmox VE, alternative to VMware
- VMware will be dismissed in INAF

OKD - K8s integration on Proxmox VE