

# DOMA-QoS: call for participation

How you can help shape the future!

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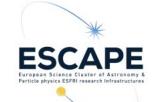
# DOMA-QoS: optimising storage

- To allow experiements to describe their storage needs in more finegrain; distinguishing between
  - the needs of different work-flows (CPU-bound vs IO-bound)
  - the needs for storing **different kinds of data** (low value data vs high value data)
- Match available storage to the different demands
  - Use **cheapest storage** that satisfies requirements ( $\rightarrow$  increased capacity).
  - Support (limit capacity of) more expensive storage, where work-flow would benefit.
- Support technical changes to enable QoS.
- Liaise between experiments and sites to build a consensus opinion on WLCG's role within Storage QoS.

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#### Prove this has merit

- We want to build demonstrators, to show Storage QoS is practical (works in the real world) and useful (cuts down cost, provides better performance).
- Therefore, we are looking for real (physical) storage that
  - has sufficient capacity to be useful,
  - different enough (from RAID-6 disk) that it needs to be handled differently.
- Sites do not need to identify an interested experiment:
  - We will act as match-maker and (try to) find interest within an experiment.
- We're also interested in feedback from experiments.
- Fits in with the LHCC review feedback.





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# So, what's stopping us?

- Have the feeling that sites are reluctant for a number of reasons:
  - Suffering from **reputaiton**: poor performance, sites banned, etc.
  - Non-trivial infrastructure costs: buying hardware, etc.
  - Operational costs: setting up experimental software, investigating problems, etc.
- To resolve these problems, we need "buy-in" from the experiments.
  - At least, at some level, we need the experiments to say they are happy for sites to invest in building these prototypes.
  - Perhaps experiments could unlock some pledged resources towards such projects.
  - Indemnify sites who are taking a risk and building up demonstrators.
- Such activity cannot be done on generic ideas, but must be concrete projects.

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## Call for participation

- Document: "Call for participation: DOMA-QoS proposed demonstrators"
- For details, see: https://docs.google.com/document/d/15nGnkpsv4YAtmR32VcKTH\_ yYhNJ6yWeNjASTiocOwBw/edit?usp=sharing
- Codify what we want to achieve, and how to go about it.
- Provides some examples that may be built upon.







#### Suggested demonstrators

```
#1 Fast disk (NVMe-SSD) [1 possible]
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- #2 Erasure coding (CEPH, etc) [2 possible]
- #3 Opportunistic storage (out-of-warranty drives) [1 possible]
- #4 Shingled Magnetic Recording (SMR) [0]
- #5 Low endurance SSD [0]
- #n <your idea here!>







### Summary

- Please read the Call for Participation document
- Let us know if you are interested in participating: wlcg-doma-qos@cern.ch



