

VOSpace-next

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VOSpace-next summary

- make paging optional
 - add files endpoint
 - simplify transfer negotiation
 - first class JSON support
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- details presented in Nov 2023 (Tucson):
<https://wiki.ivoa.net/internal/IVOA/InterOpNov2023GWS/gws-VOSpace-next.pdf>

OpenCADC VOspace implementations

- **vault:** RDBMS for “nodes”, object store for “bytes”
 - storage using CADC storage-inventory system
 - robust long term storage and preservation
 - currently 230 million files, 1 PiB used
- **cavern:** POSIX filesystem for “nodes” and “bytes”
 - CEPH-fs back end (operational)
 - mountable into Science Platform containers
 - uses extended attributes (node properties) and ACLs (permissions)
 - currently 900 TiB capacity, 500 TiB used
 - **posix-mapper** : helper service to manage local posix uid/gid

VOSpace implementation details

- ready-to-use docker images:
 - **images.opencadc.org/platform/cavern**
 - **images.opencadc.org/storage-inventory/vault**
 - generally: libraries are published in maven, but we prefer to deliver and support use of pre-built images
 - deployment documentation advice is minimal: contact me if you want to try to run either of these
- plans for near future:
 - deployment documentation
 - move as much client code to PyVO as possible
 - incremental improvements to s/w
 - support additional types of back end storage (vault)

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- enhancements tagged as github issues:
<https://github.com/ivoa-std/VOSpace/issues>

- intending to follow P3T developments before next WD

VOSpace implementation details

- open source code in OpenCADDC
- **cavern** (posix filesystem):
<https://github.com/opencadc/vos>
- **vault** (db + storage-inventory)
<https://github.com/opencadc/storage-inventory>
- client tools (python):
<https://github.com/opencadc/vostools>