



Science and  
Technology  
Facilities Council

# Tokens: ATLAS

# Tokens: Storage status

- Most information from Petr Vokac [[S&C Slides](#)]
- Note: macaroons (storage-supplied tokens) already in production for some time.
- dCache 8.2 mandatory for tokens
  - WLCG JWT token support already in 7.2, but with different "scitoken" plugin
- XRootD 5.5.6(?) recommended (5.5.4 ~ok, but .6 will include other fixes).
- (X)Cache & tokens
  - not yet clear, tricky to choose right token, e.g: XCache vs. final storage access
- DPM:
  - Approaching end of support for DPM;
    - dCache migration support ends this month
    - DPM sites will not be able to participate in DC24
- EOS (appears to be ok (webdav tokens), at least with 5.X)
- TAPE REST API and tokens:
  - storage.stage not yet supported / implemented

**dCache 8.2.22+  
recommended  
for ATLAS sites**



# WLCG compliance tests

- Daily tests: primarily testing compliance of storage technologies against token specifications.
- Uses WLCG group based tokens (c.f scope based tokens that Experiments are typically adopting).

Statistics by Tag	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
critical	432	338	94	0	01:07:04	
not-critical	36	6	30	0	00:08:47	
se-bnl-preproduction-dcache	26	22	4	0	00:04:46	
se-cern-eos	26	0	26	0	00:00:00	
se-cnaf-amnesiac-storm	26	24	2	0	00:04:21	
se-florida-xrootd	26	23	3	0	00:04:55	
se-florida-xrootd-redis	26	23	3	0	00:04:52	
se-fnal-dcache	26	26	0	0	00:05:10	
se-infn-t1-xfer-storm	26	24	2	0	00:04:16	
se-nebraska-xrootd	26	20	6	0	00:05:07	
se-nebraska-xrootd-redis	26	20	6	0	00:05:09	
se-prague-dcache	26	0	26	0	00:00:00	
se-prague-xrootd	26	0	26	0	00:00:00	
se-prometheus-dcache	26	26	0	0	00:04:40	
se-ral-test-xrootd	26	22	4	0	00:04:23	
se-ubonn-xrootd	26	24	2	0	00:04:30	
se-ucsd-xrootd	26	23	3	0	00:05:23	
se-ucsd-xrootd-redis	26	23	3	0	00:05:36	
se-wisconsin-xrootd	26	22	4	0	00:05:21	
se-wisconsin-xrootd-redis	26	22	4	0	00:07:24	

- RAL failures related to directory specific tests, or, tests that fail at the tear-down stage due to ‘directory’ cleanup.

# (Storage) Status at RAL

- Tokens support enabled on development machine:
  - WLCG compliance testbed (webdav)
  - CMS tests running (webdav passing)
  - Tested with ATLAS tokens (webdav)
- Only working currently for webdav-based tokens
  - Root-based (ZTN protocol) token support tbd.
- Next focus: moving from dev. to production
  - Need in understanding of authZ/N models and banning / traceability to be provided

```
export BEARER_TOKEN=$(oidc-token -s storage.read:/atlasdatadisk/SAM/ -s storage.create:/atlasdatadisk/SAM/ -s storage.modify:/atlasdatadisk/SAM/ \
-s storage.stage:/atlasdatadisk/SAM/ --aud=davs://ceph-dev-gw4.gridpp.rl.ac.uk:1094 atlas)
```

```
curl -L -i -s --capath /etc/grid-security/certificates -H "Authorization: Bearer $BEARER_TOKEN" -X PUT --upload-file /etc/services https://ceph-dev-gw4.gridpp.rl.ac.uk:1094/atlasdatadisk/SAM/test1
HTTP/1.1 100 Continue
Connection: Close
Server: XrootD/v5.5.4
```

```
HTTP/1.1 200 OK
Connection: Keep-Alive
Server: XrootD/v5.5.4
Content-Length: 3
```

```
:-)%
```

**Note the use of:**  
***/atlasdatadisk/ rather than***  
***/atlas:datadisk/***



# Compute

- Support for HTCondor 9.0.x release series ends in May 2023
- No-GSI support in stable HTCondor 10
- Deadline in February 2023 for ATLAS sites to be ready for HTCondor 10 migration
  - Tokens required for HTCondor-CE (x509 no longer supported for submission)
  - New grid type "arc" supports only ARC-CE REST (still with x509)
- All ATLAS jobs are submitted exclusively with tokens to HTCondor-CE
- Possible to configure ARC-CE to accept job submission with tokens
  - Not forcing to use exclusively tokens with ARC-CE, yet.
    - 7 out of ~ 50 ARC-CE sites already accept tokens [[arc-rest/](#)]
- Basic demonstrators for WFMS token support ongoing. [Sept'22 ARC/HTCondor CE Hackathon](#)
  - more focus in next S&C week expected on WFMS token workflow

## UK ARC-CEs

Grid Type	Site	URL	Version	Token support
UK	lcl1.gridpp.rl.ac.uk:443 (SAND)	UKLSOUTHGRID-HEP (GGUS)	6.17.0	no
UK	ce01.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH (GGUS)	6.17.0	no
UK	ce02.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce03.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce04.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce05.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce06.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce07.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce08.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce09.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce10.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce11.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce12.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce13.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce14.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce15.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce16.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce17.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce18.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce19.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce20.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce21.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce22.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce23.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce24.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce25.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce26.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce27.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce28.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce29.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce30.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce31.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce32.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce33.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce34.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce35.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce36.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce37.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce38.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce39.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce40.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce41.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce42.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce43.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce44.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
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UK	ce98.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce99.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no
UK	ce100.gla.ac.uk:443 (SAND)	UKLSOUTHGRID-GLA-ASGOW-CEPH TEST (GGUS)	6.17.0	no

## ARCCETokenConfigTips

