

# State of the ARC

# ARC 5 to ARC 6 May 2019

[http://www.nordugrid.org/arc/releases/6.0/release\\_notes\\_6.0.html](http://www.nordugrid.org/arc/releases/6.0/release_notes_6.0.html)

Main bulk of changes related to arc.conf

Improved sys-admin experience through arc.conf cleanup and a new nice arcctl tool - which is a wrapper around the various arex tools (gm-jobs etc), in addition to new RTE system.

The internal job-loop in A-Rex was re-engineered to be event-driven for increased performance.

Documentation online - sphinx site generated from GitLab:

<http://www.nordugrid.org/documents/arc6/>

# Authgroups and mapping in ARC 6

No more gridmap-file, much easier mapping and access control

Example:

```
[authgroup:atlas-lcgadmin]
voms=atlas * lcgadmin *
```

```
[authgroup:atlas-production]
voms=atlas * production *
```

```
[mapping]
map_to_user=atlas-lcgadmin grid:grid
map_to_pool=atlas-production /etc/grid-security/pool/atlas
map_to_user=atlas-analysis gridana:gridana
```

```
[queue:main]
benchmark=HEPSPEC:14.998
allowaccess=atlas-production
```

# Jura accounting ARC 6.4.0 - local accounting database

<http://www.nordugrid.org/documents/arc6/tech/accounting/accounting-ng.html>

## Deprecated arc.conf block and options:

In the [arex/jura] block:  
urdelivered\_keepfailed (in [arex/jura] block)

In the [arex/jura/sgas:targetname] block:  
legacy\_fallback

In the [arex/jura/apel:targetname] block:  
use\_ssl  
benchmark\_type  
benchmark\_value  
benchmark\_description  
legacy\_fallback

[arex/jura/archiving] block (the whole block is deprecated)  
archivedir  
logfile  
archivettl

- Accounting records created by ARC 6.4.0 are affected by a bug causing missing benchmark values: [Bug 3921, Comment 3](#) Recommendations are to update to a newer version of ARC. The bug report gives instructions on how to manually fix the wrong benchmark values.
- The benchmark values should now be configured per-queue [queue:name] instead of the [arex/jura/apel] block.
- The new system automatically provides archiving of all accounting records in the database, therefore the old way of record archiving via the JURA [arex/jura/archiving] is **DEPRECATED**. Please remove this block from your arc.conf.
- The temporary legacy\_fallback option will no longer be available in arc.conf.
- The arcctl accounting command provides a new set of commands for flexible analysis of local accounting data, see [documentation](#).
  - The jura command is **no longer available**.
- APEL publishing now sends summary records instead of individual records by default.
- There will be **no more accounting files** in the <controldir>/logs folder.
- As of ARC 6.8.0, a default benchmark value can be added to the [lrms] block.

# Community defined RTE's - technology preview

## ARC 6.5

[http://www.nordugrid.org/arc/arc6/admins/details/rtes\\_community.html](http://www.nordugrid.org/arc/arc6/admins/details/rtes_community.html)

Community-defined RTEs are RTEs that created, managed and distributed by particular community.

The "*Community-defined RTEs*" ecosystem enables automated software environment provisioning on ARC CEs by community software managers.

The ecosystem consists of two layers: An ARCHERY-based software (RTE) registry and a new set of ARC control tool modules

# OICD tokens - ARC 6.6

[http://www.nordugrid.org/documents/arc6/misc/oidc\\_tokens.html](http://www.nordugrid.org/documents/arc6/misc/oidc_tokens.html)

WLCGAuthorizationWG

Technology preview - basics are in place in ARC.

Delegation is not yet sorted out. Waiting for the WLCGAuthorizationWG to make decisions related to this.

# REST interface

<http://www.nordugrid.org/arc/arc6/tech/rest/rest.html>

Expect technology preview in ARC 6.9 or 6.10

# Further development ARC

- Since quite many years - no dedicated development projects and thus no dedicated manpower → no major ground-breaking changes have been made
- Mostly smaller scale maintenance and improvements.

## Necessary larger changes for the future growth of ARC:

- Prepare ARC and ARC Control Tower for non-WLCG communities
  - Handling of sensitive data?
- Prepare ARC for HL-LHC
- ARC for larger HPC systems - authentication - job submission



# ARC 7

Main planning starts 03.11

On the plate so far:

- Token based authentication ([http://www.nordugrid.org/arc/arc6/misc/oidc\\_tokens.html](http://www.nordugrid.org/arc/arc6/misc/oidc_tokens.html))
  - delegation still to-do
- Restructuring of control directory
- Full removal of pre 6.4.0 accounting - ARC will fail on startup if arc.conf contains deprecated accounting options
  - Code removal is done already
- ...

The issue: <https://source.coderefinery.org/nordugrid/arc/-/issues/84> is open for you to add stuff that comes to your mind

Any items you have in mind right now?