

Follow-up on the WLCG Token Transition Timeline



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Context – [presentation from last December](#)

- The transition from GSI/VOMS security to WLCG JWTs (“tokens”) is large, important activity for the community.
- Correspondingly, it’s important to have a target timeline for the WLCG token transition:
 - Many parties (technology providers, middleware integrators, sites, VOs) must coordinate and set expectations.
 - Dependencies need to be understood.
 - Work has to be scheduled against many other competing interests.
- As a goal, we should target completion before the start of HL-LHC.
 - I define “completion” as making GSI/VOMS security **optional** for site services.
 - I expect usage of GSI/VOMS to continue internal to the VO and at some sites for much longer.

Working backwards from the goal

What would it mean to finish this transition by HL-LHC?

- Assume 2026 is too late: we'll be working on other pressing items then.
- Don't want to target 2025 as we'll need time for schedule slippage.
- Therefore, we want a plausible set of milestones to finish by 2024.

What follows is a set of plausible milestones I'd propose as a baseline:

- It's meant to continue the conversation started last year, not be set in concrete.
- It's in good enough shape to start getting technical input. Looking for:
 - Think a milestone is missing? Let's propose additional ones!
 - Don't think a particular milestone is achievable? What's a good date?
- Remember, the point of a strawman is to beat it up and come up with a better idea...

High Level Milestones– Part 1

Milestone ID	Date	Description	Dependencies	Teams
M.0	Feb 2021	Produce document with list of use cases for CMS VOMS-Admin API.	None	WLCG Ops
M.1	May 2021	WLCG baseline services include HTTP-TPC.	None	WLCG Ops, Storage providers
M.2	May 2021	WLCG hosts “CE and pilot factory hackathon”	None	Pilot framework providers
M.3	July 2021	Production IAM Instances Available	None	WLCG AAI, IAM
M.4	Oct 2021	Pilot job submissions may be performed with tokens	M.3	Experiments, pilot framework providers, OSG/EGI, sites
M.5	Dec 2021	VOMS-Admin shutoff. IAM is sole authz provider (including for VOMS server)	M.3	WLCG AAI



High Level Milestones – Part 2

Milestone ID	Date	Description	Dependencies	Teams
M.6	Feb 2022	OSG ends support for the Grid Community Toolkit	M.1, M.4	OSG
M.7	Mar 2022	All storage services provide support for tokens	M.1	WLCG Ops, Storage providers
M.8	Oct 2022	Rucio transfers performed with token auth in production	M.7	Rucio, Experiments
M.9	Mar 2023	Experiments stageout & data reads performed via tokens.	M.7	Experiments
M.10	Mar 2024	X.509 client auth becomes optional.	M.9, M.8, M.4	Experiments



Full Document

Full document for discussion is here:

- https://docs.google.com/document/d/11fcZU8fEsfjDiSkjh95nVr4tNXLPCA_xwr2SwriBpiw/edit
- Please leave comments, tidy up loose ends, etc!

Most important / difficult milestones:

- **M.5: VOMS-Admin shutoff.** December 2021. Implies relatively straightforward adoption of IAM. Indicates we've solved “the VOMS-Admin API problem.”
- **M.9: Stageout & Data reads can use tokens.** March 2023. Implies pilot jobs has access to a token which, in turn, implies the workflow frameworks can acquire and manage tokens.
 - Is there a reasonable “WLCG-level” milestone we can add before this to ensure workflow systems are on track?!

Where to from here?

I'd like to spend the next few weeks getting input from all stakeholders (software providers, VOs, sites).

- Please invest some time thinking about this!
- If we can get reasonable feedback, I'd like to show a draft to the WLCG MB in March.

Will we ever have a finalized plan?

- Probably not – aiming for a living document. Better to have a best, rough consensus than something agreed upon but obsolete!



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