

GridPP and Tokens

Preamble

- There is a clear push to transition to tokens away from X.509 certificates for user authentication
 - <https://indico.cern.ch/event/995485/contributions/4256461/attachments/2208013/3736302/20210316%20HEPIX%20WLCG%20Auth.pptx.pdf> [Hannah Short, HEPiX March 2021]
- Scopes for this work include (from a GridPP perspective)
 - WLCG
 - IRIS
 - Other VOs

Working WLCG Timeline

	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
We are here	M.1	May 2021	WLCG baseline services include HTTP-TPC endpoints.	None	WLCG Ops, Storage providers
	M.2	June 3/4 2021	WLCG hosts "CE and pilot factory hackathon"	None	Pilot framework providers
	M.3	July 2021	Production IAM Instance(s) Available for at least 1 LHC experiment, likely CMS and possibly ATLAS	None	WLCG Ops, IAM, CERN IT
Full workflow available	M.4	Oct 2021	Pilot job submissions <u>may</u> be performed with tokens.	M.3	Experiments, pilot framework providers, OSG/EGI, sites, Monitoring

Working WLCG Timeline

	M.5	Dec 2021	VOMS-Admin shutoff for CMS. IAM is sole authz provider for those (including for VOMS server)	M.3	WLCG Ops, CERN IT
	M.6	Feb	OSG ends support for the Grid Community	M.1,	OSG
		2022	Toolkit	M.4	
Last milestone before Run3	M.7	Mar 2022	All storage services provide support for tokens	M.1	WLCG Ops, Storage providers
		?	All VOs shut off VOMS-Admin		
During Run 3		Sept 2022	End of Condor support for GSI Auth		
	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

Storage with tokens

- Work coordination via DOMA-TPC group (<https://twiki.cern.ch/twiki/bin/view/LCG/ThirdPartyCopy>)
- Capability to use macaroons (storage-provided tokens) for some time now (root or webdav).
- Further support in gfal2/FTS ~ available for Identity provider issued tokens
- VO-based INDIGO IAM test instances (e.g ATLAS/CMS) under development;
- Compliance testing also now running against various sites / storage technologies; testing token support: [wlcg-jwt-compliance-tests \(5 May 2021\)](#)
- Current timeline proposes:
 - All storage services provide support for tokens: March 2022
- Experiments stageout & data reads performed via tokens: March 2023

Milestones

- https://docs.google.com/document/d/11fcZU8fEsfjDiSkjh95nVr4tNXLPCA_xwr2SwriBpiw/edit#
- Next milestone
 - June 3/4 2021: WLCG hosts “CE and pilot factory hackathon”
 - <https://indico.cern.ch/event/1032742/>

WLCG Ops

- WLCG Ops tracking activity has been set up
 - <https://twiki.cern.ch/twiki/bin/view/LCG/WLCGTokensGlobusWG>
- Representatives are needed from all parties concerned:
 - Grid Community Forum
 - MW product teams
 - Experiments
 - Sites
 - Infrastructures
- Please subscribe to the `wlcg-ops-tokens-globus-wg` e-group if you would like to be involved.

Tier1 plans

- Position the Tier1 to be fully ready to work with both production and development requirements by start of Run 3
- Milestone is to lock down requirements in October 2021 to allow 6 months for deployment

Tier1 plans

- Currently assessing which services are involved with this work
 - Specific cases include the deployment of ANTARES (CTA) this year which is a timely opportunity
 - Reviewing the T1 auth layer as a whole
 - Work with both WLCG and other VOs to test workflows
- The Tier1 has the advantage that STFC runs the IRIS IAM IdP (Tom Dack) – the same technology being used by WLCG
 - Scope for testing either through this instance or by spinning up additional instances

GridPP impact

- Aside from specific campaigns (storage), workflows are still being developed
- Assess which national services we run that need to be aware of this work (DIRAC)
- More generally, be aware that software updates may be incoming to allow the adoption of tokens
- This transition is still likely to take an extended period, but the start of Run 3 is an inflection point

Live notes

- https://docs.google.com/document/d/14fut5z_F5d5dg3vQTHwunRTDMCy7Zg_dz2u39w5f1_E/edit?usp=sharing
- Use to track specific outcomes and goals

Token transition resources

- Resources

- Maarten Litmaath's talk from the March GDB
- <https://indico.cern.ch/event/876787/contributions/4258946/attachments/2205635/3731723/WLCG-Ops-Tokens-Globus-210310.pdf>
- Hannah Short's talk from HEPiX in March
- <https://indico.cern.ch/event/995485/contributions/4256461/attachments/2208013/3736302/20210316%20HEPIX%20WLCG%20Auth.pptx.pdf>
- Tom Dack's upcoming vCHEP presentation
- <https://indico.cern.ch/event/948465/contributions/4323987/>