

Transitioning to Tokens: Impact and Interoperability

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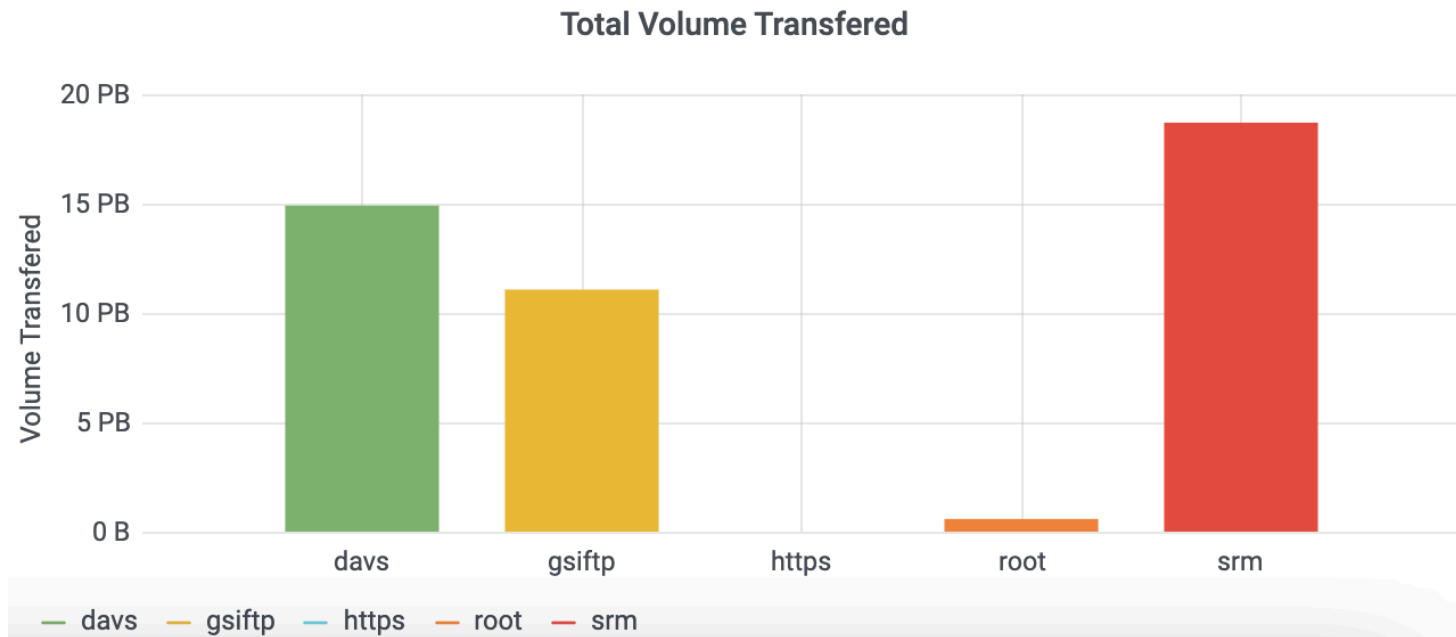
- OSG is in the middle of two large-scale changes:
 - Move to the use of a **token-based** Authentication and Authorization Infrastructure (AAI).
 - Focus on HTTP-TPC as a bulk data transfer protocol.
- The OSG 3.6 release reflects these changes. This is our first release without the Grid Community Toolkit (formerly, the Globus Toolkit).
 - The 3.6.0 release was 3 days ago. Like 3.5, we are starting with a limited number of components and add more as they are validated.
 - This largely reflects the [transition plan](#) outlined in 2019.
 - Today I want to go through the compatibility concerns.



Progress on HTTP-TPC

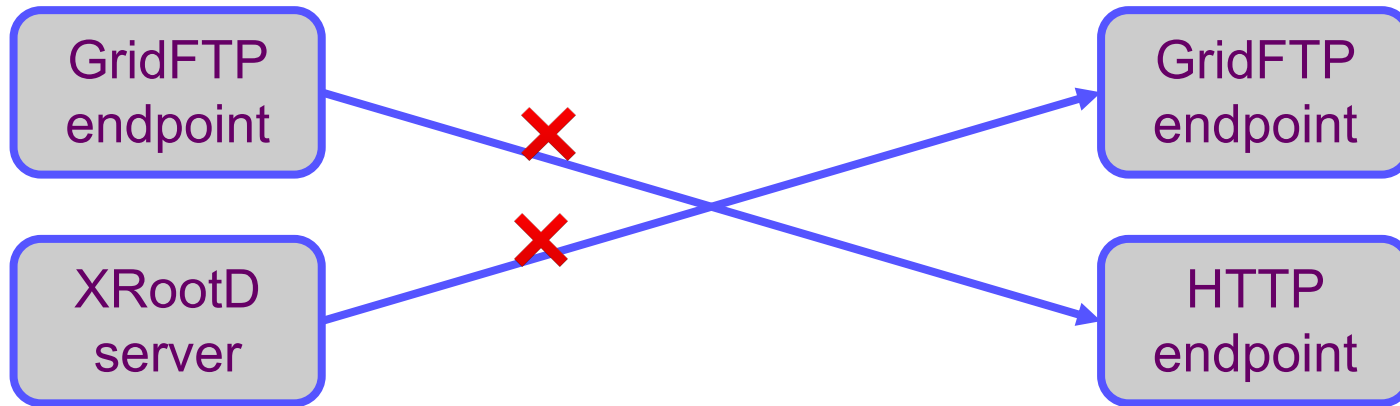


- As Diego just discussed, HTTP-TPC has made the most progress.
 - The chart below shows the data movement over the last 30 days for ATLAS.
 - About 1/3 of the traffic and 1/2 sites have moved to HTTP-TPC.



OSG 3.5

EGI



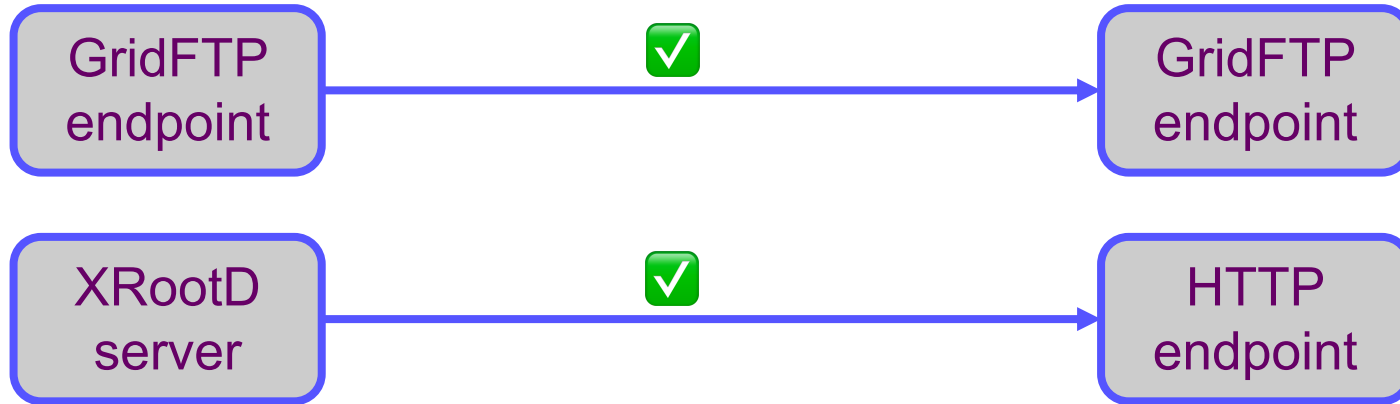
OSG 3.6

EGI

Note XRootD software
implements the HTTP
protocol for OSG

OSG 3.5

EGI



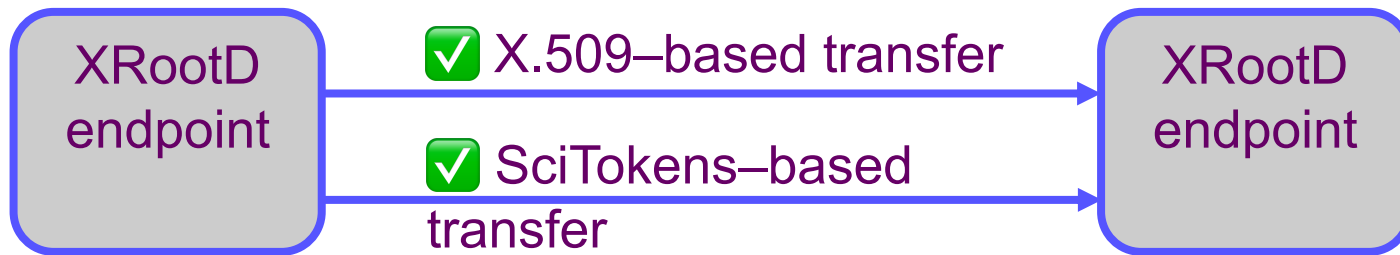
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OSG 3.5

EGI



OSG 3.6

EGI

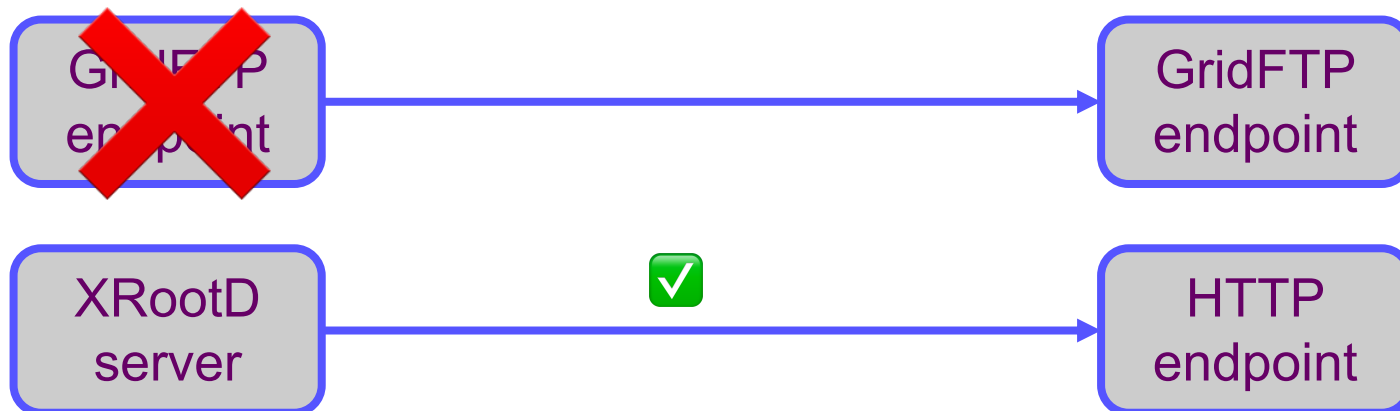
OSG 3.5

EGI

No supported GridFTP software
in OSG 3.6. By time OSG 3.5 is
retired, we will need to fully
transition to HTTP-TPC.

OSG 3.6

EGI



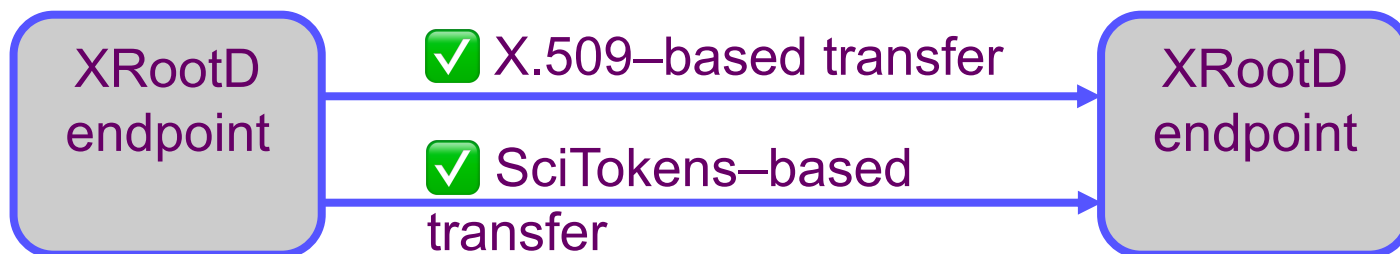
OSG 3.5

EGI

The XRootD software **does not** depend on the Toolkit. Hence, X.509-based transfers continue to work!

OSG 3.6

EGI



Data Movement – Take Home



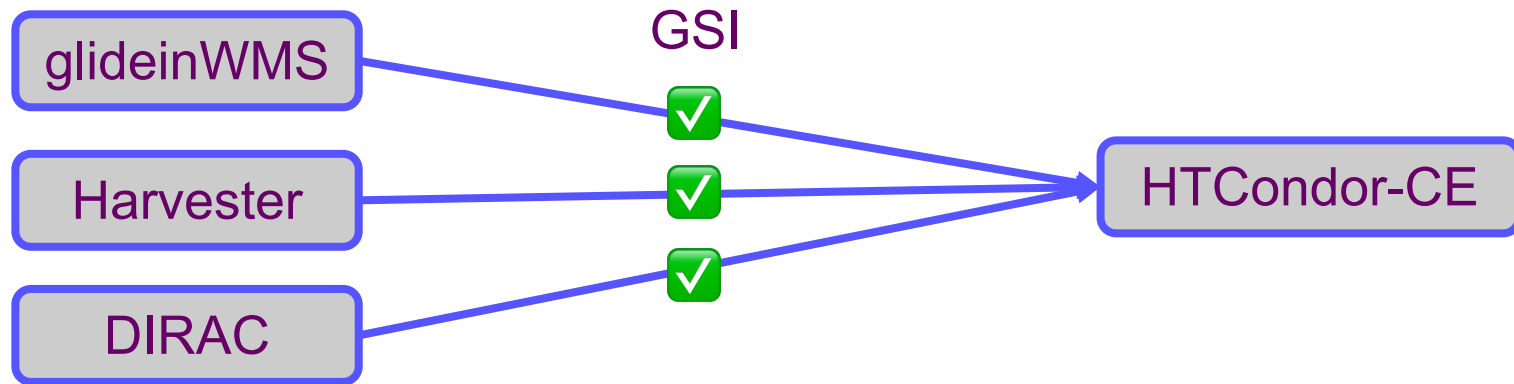
- Take-home message for data movement:
 - OSG 3.6 has no supported software implementing the GridFTP protocol.
 - The OSG 3.6 XRootD server is unchanged.
- Sites need to move completely to HTTP-TPC (or HTTP or XRootD) before upgrading from OSG 3.5.
 - Or run a GridFTP server not supported by OSG (e.g., dCache).

Compatibility - Pilot Submission to CE



Pilot Factory

OSG 3.5



Pilot Factory

All pilot factories submit to HTCondor-CE using X.509 for authentication

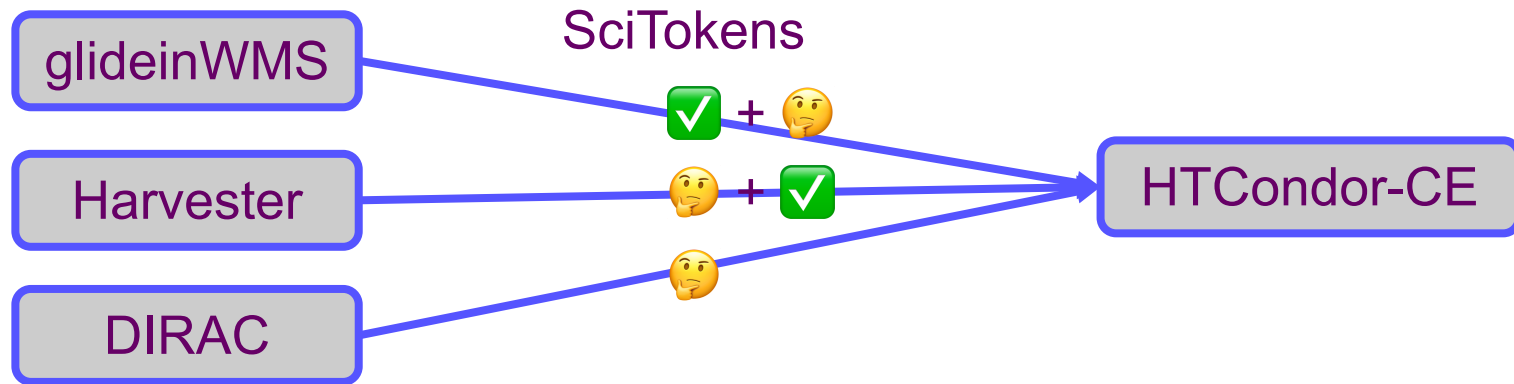
OSG 3.6

Compatibility - Pilot Submission to CE



Pilot Factory

OSG 3.5



Pilot Factory

OSG 3.6

Harvester has successfully tested SciTokens.

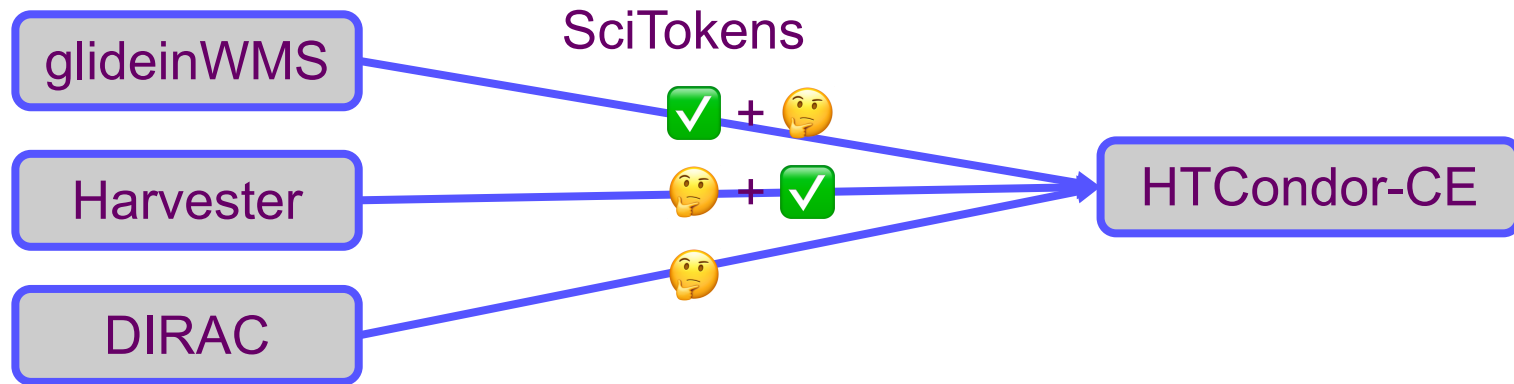
DIRAC status is unclear – although it uses HTCondor to submit the pilots (which supports SciTokens).

Compatibility - Pilot Submission to CE



Pilot Factory

OSG 3.5



Pilot Factory

The current version of glideinWMS support SciTokens. OSG has successfully tested this but are waiting on some bugfixes before rolling out to production instances.

OSG 3.6

OSG 3.5 supports both GSI and SciTokens

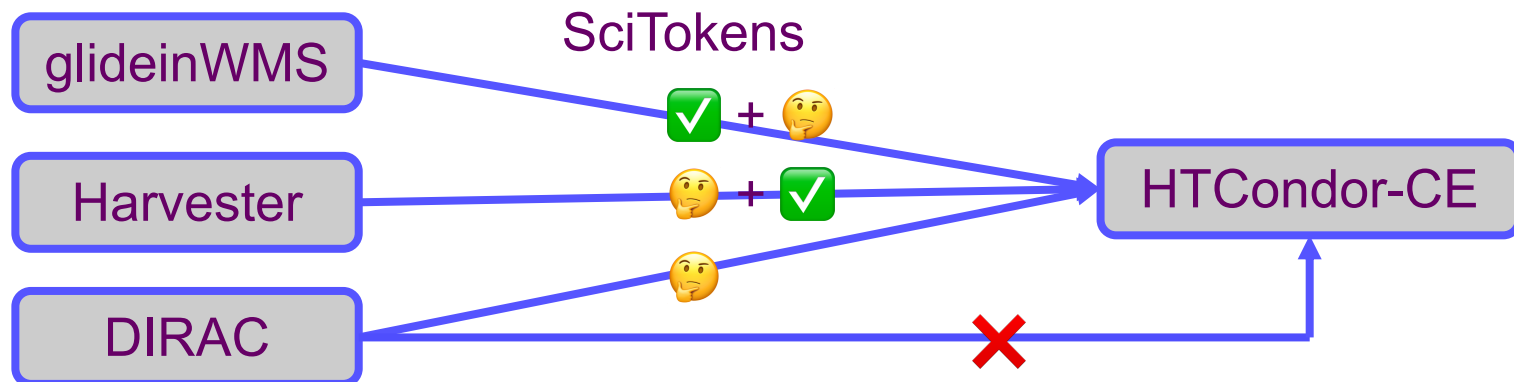
Pilot Factory

OSG 3.5

OSG 3.6 supports only
SciTokens.

Pilot Factory

OSG 3.6



Pilot Submission – Take Home



- The current release series (OSG 3.5) supports both X.509 (GSI) and SciTokens submission.
 - OSG 3.6 *only* supports SciTokens.
 - Coordinate with the communities you support for a timely transition.
 - Upgrade *after* all the pilot factories that submit to your CE upgrade.
- This area will move rapidly over the next few months as we work with the factories and software providers.



External Coordination



- Communities – particularly HEP experiments – often span across several cyberinfrastructures.
 - Careful planning is needed to ensure OSG remains interoperable with, for example, the rest of the WLCG.
 - Some is mitigated by the pilot architecture: only the central ‘factories’ submit to CEs.
 - This is not true for data transfer!
- OSG has been coordinating closely with the WLCG to incorporate the OSG 3.5 “end of life” date into their timelines.
 - WLCG transition is the subject of a talk [on Friday](#).
- If you have concerns, make sure to highlight it with your OSG Council representative!



By design, OSG maintains a 12 month overlap between release series. This allows for a gradual transition as features come online. OSG Software is here to help with the technology and to coordinate with the technical teams.

**FINAL MESSAGE – DON'T
PANIC**



Questions?

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