

What Is Next for the HTCondor-CE?

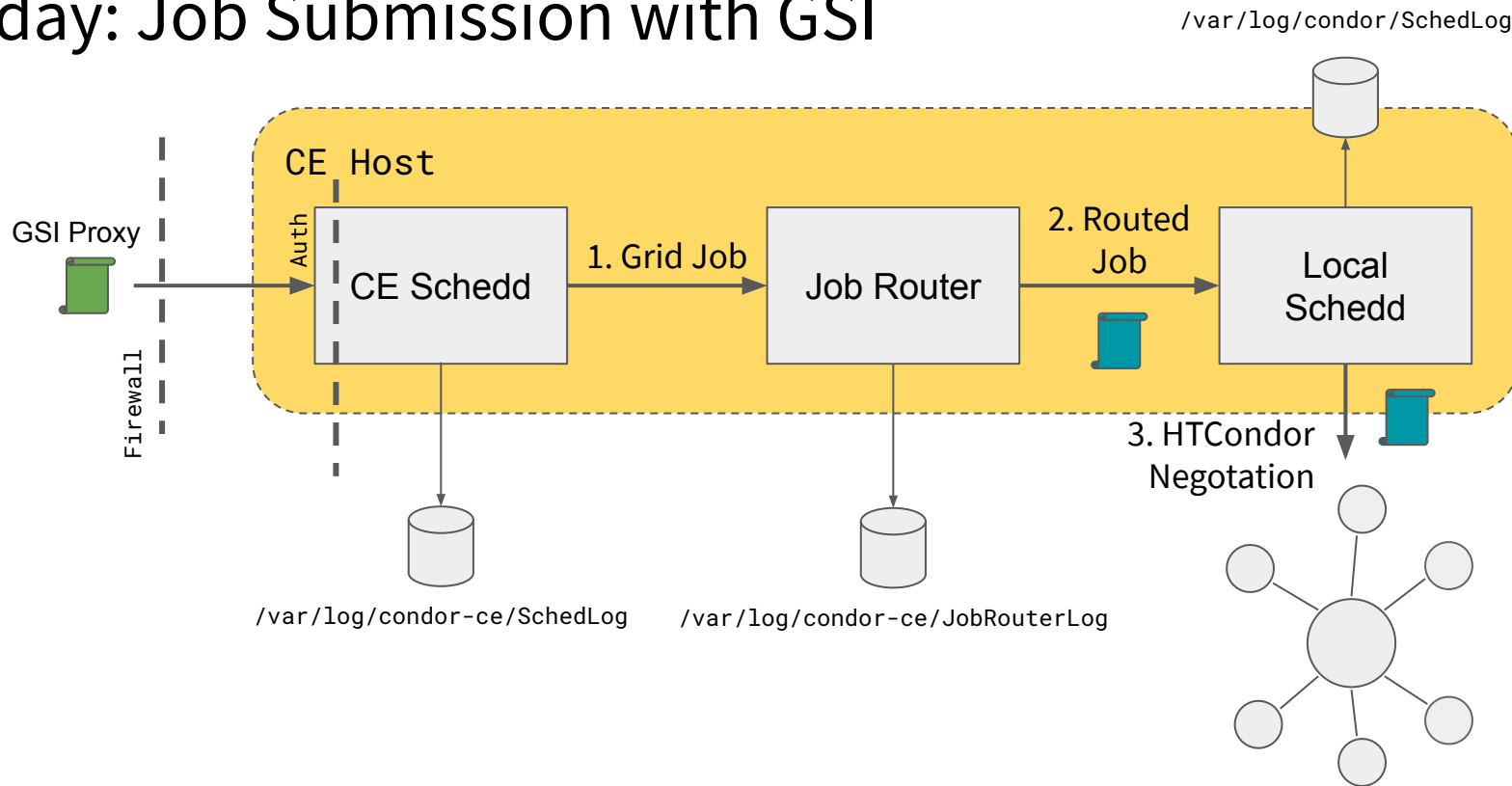
HTCondor Workshop Autumn 2020

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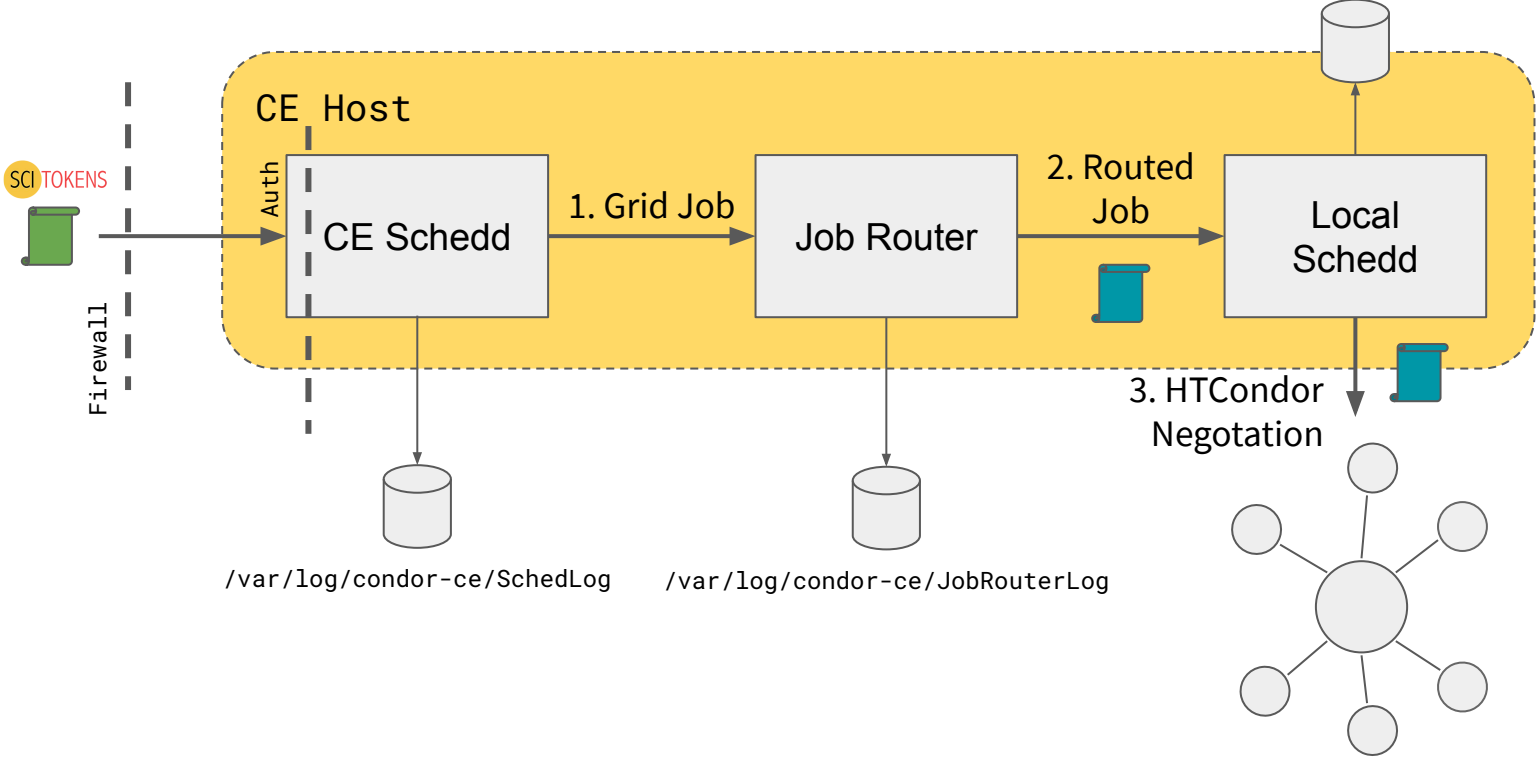


Today: Job Submission with GSI



Future: Job Submission with SciTokens

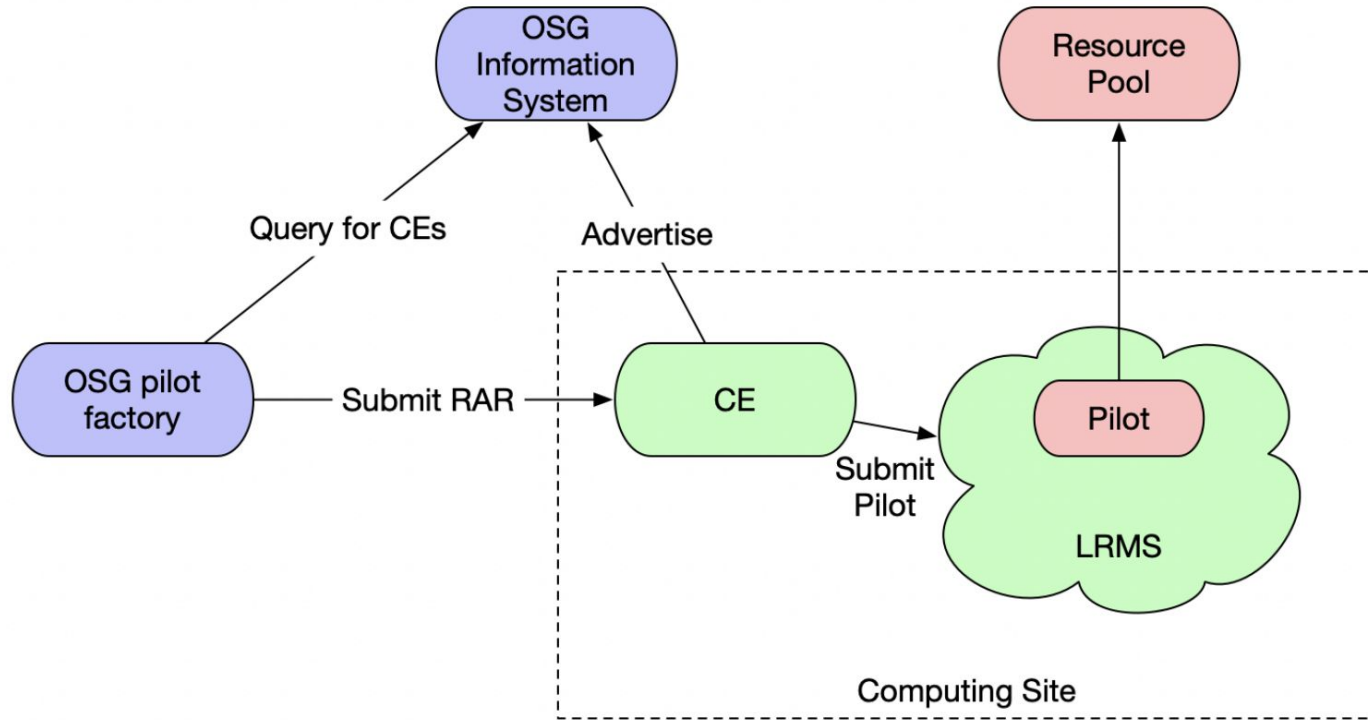
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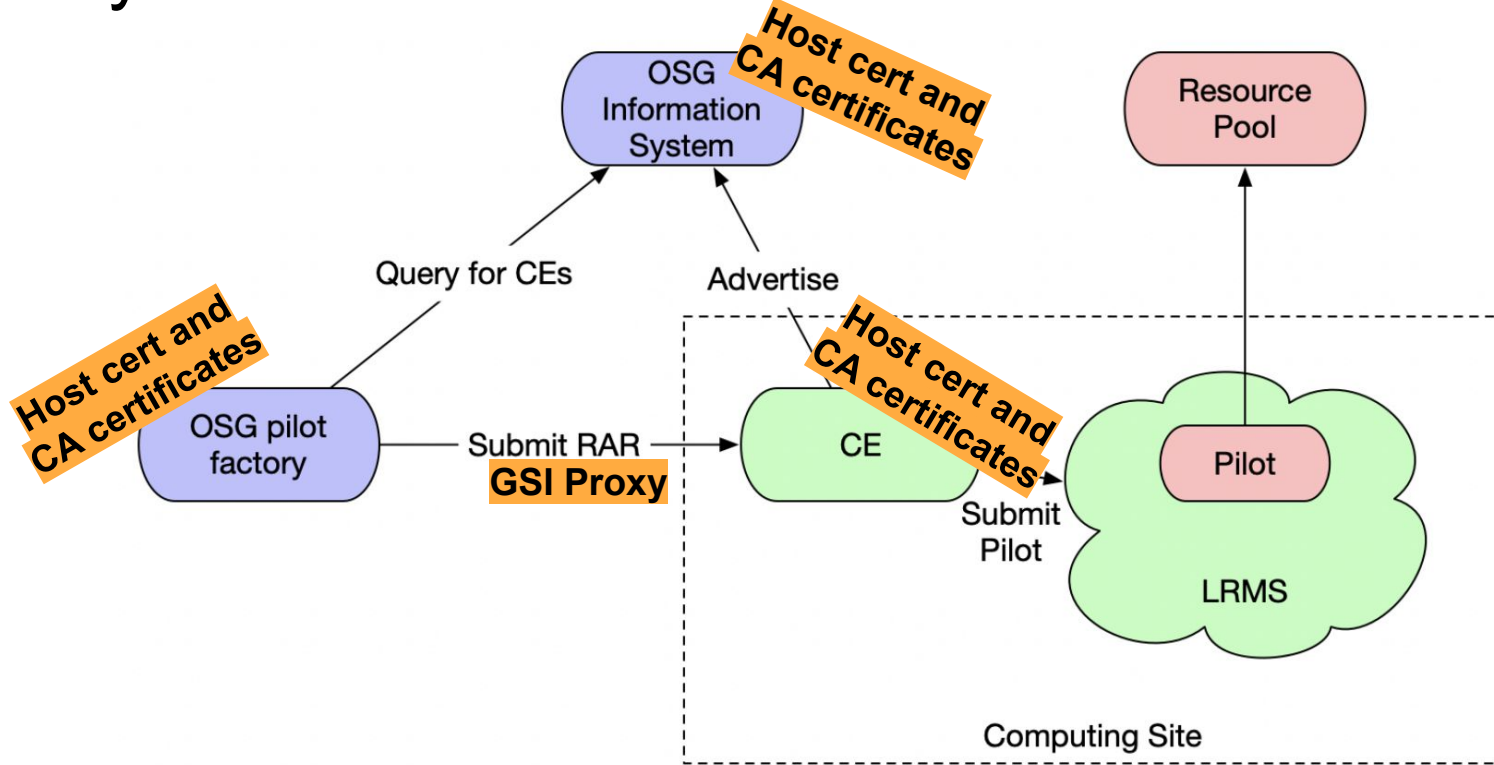
SciTokens: The Future is Now!

- SciTokens are already supported with HTCondor-CE 4 and HTCondor 8.9.5
- GSI is still supported but SciTokens is preferred
- GlideinWMS and Harvester teams have demonstrated SciTokens-based job submission to production HTCondor-CEs!
- VO token infrastructure is steadily maturing
- Enable support by adding token issuers to your mapfile:
`SCITOKENS https://wlcg.cloud.cnafr.infn.it dteam`
- HTCondor-CE configuration and troubleshooting documentation to come

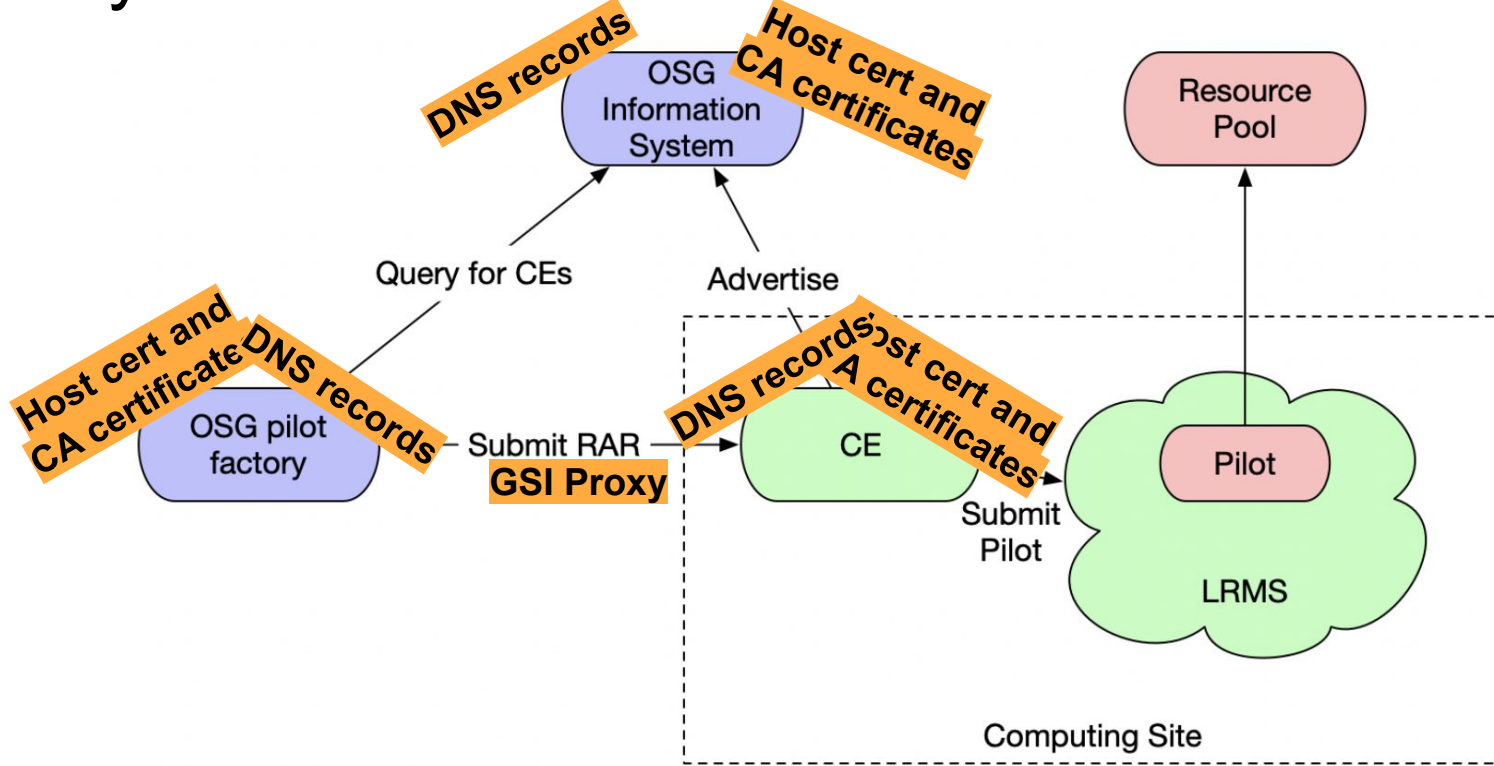
Today's Grid Trust Model



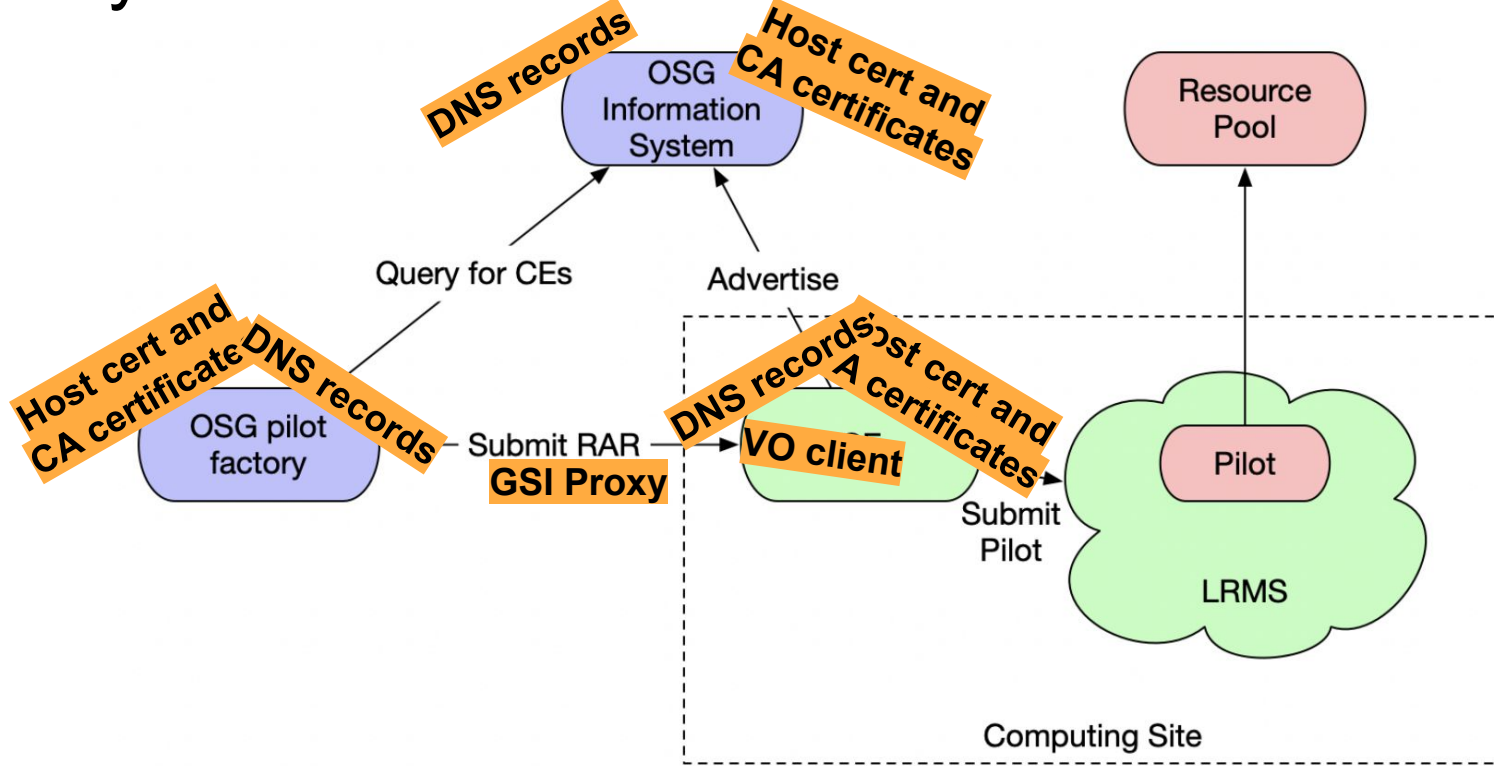
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Re-imagining Grid Trust: HTCondor-CE Registry

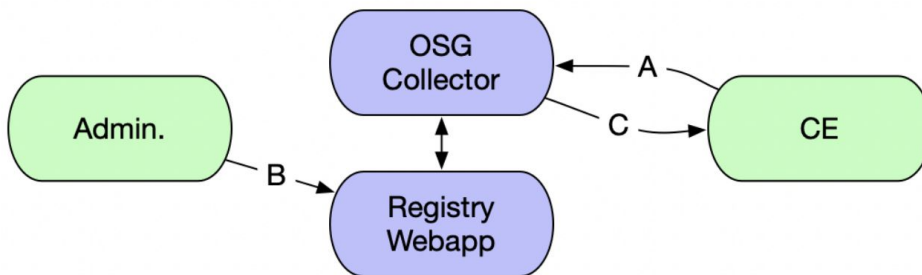
Establishing trust without host or CA certificates (or even a public IP!):

0. Admin registers new CE in a grid service + contact database (approved by grid operators)

A. Admin runs command from the CE to start registration flow, gets Registry URL

B. Admin visits Registry URL to validate the registration; HTCondor-CE Registry verifies admin identity and cross-checks identity + request with database in **0**.

C. Upon validation, the HTCondor-CE Central Collector issues an IDTOKEN for the HTCondor-CE



Re-imagining Grid Trust: HTCondor-CE Registry

Using the HTCondor-CE Central Collector as a trusted intermediary, a pilot job factory will exchange a **VO SciToken** with the CE (**A. + B.**) receiving an **IDTOKEN** in response (**C. + D.**)

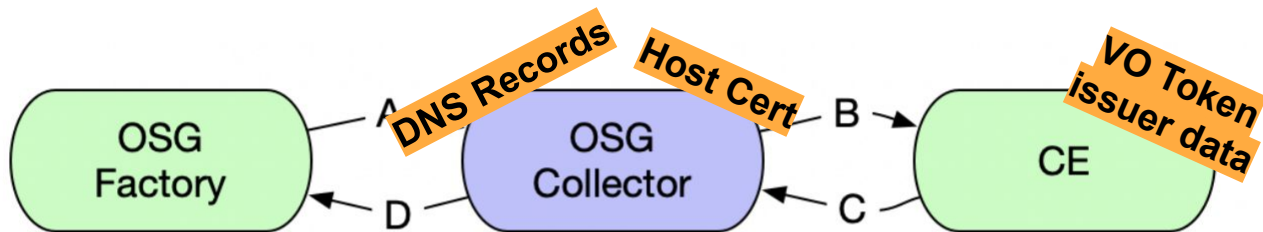
Resultant **IDTOKEN** is narrowly scoped to job submission from this factory on behalf of the original VO to this CE!



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Improved Job Router Configuration Syntax

- HTCondor-CE uses the old job transform style for Job Router configuration
- Old-style evaluation order of ClassAd verbs is limiting and confusing!
- HTCondor-CE will use the new style transform available in HTCondor 9.0
- New style transforms have many more features (see TJ's talk yesterday)!

New Job transform syntax in 9.0

Native syntax is similar to config/submit syntax

- Statements evaluated in declaration order
- Temporary variables
- If/then/else
- Rename and Delete by attribute name pattern

Transforms are converted from ClassAd syntax on load

Additional Resources

Have question, issues, or comments?

- HTCondor-CE experts are active on htcondor-users@cs.wisc.edu!
- Contact the HTCondor-CE experts directly: htcondor-users@cs.wisc.edu.
- Submit an issue: <https://github.com/htcondor/htcondor-ce/issues>.
- Or better yet, a pull request: <https://github.com/htcondor/htcondor-ce/pulls>!