Support for the WLCG JWT Profile and other Token Types

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IAM for Research Collaborations

CiLogon: 10+ year sustained effort to enable secure logon to scientific cyberinfrastructure (CI) for seamless identity and access management (IAM) using federated identities (SAML, OIDC, OAuth, JWT, X.509, LDAP, SSH, etc.) so researchers log on with their existing credentials from their home organization supporting 15,000+ active users from 400+ organizations around the world with onboarding/offboarding/attributes/groups/roles managed consistently across multiple applications
supporting access to science applications on HPC clusters, in Jupyter notebooks, using Globus, via REST APIs, and many other interfaces

using existing identity providers from the researcher’s home organization (SAML/ADFS) or external sources (Google, ORCID, GitHub)
AARC Blueprint Architecture

USER IDENTITY

Step up AUTHN

National federations (eduGAK)
X.509
OIDC
Social ID
eGov ID
Comm ID
Other

ACCESS PROTOCOL TRANSLATION

User inform

Discovery Service
Proxy
User inform
Token Translation Service

END SERVICES

SAML
X.509
OIDC
OUP
Comm
Other
SAML
Proxy
Other

COMMUNITY ATTRIBUTE SERVICES

Reputation Service
AUP
AA: Other
AA: OIDC
AA: SAML
Attribute Authorities

AUTHORIZATION

Community Authorization Policy Repository

https://aarc-community.org/architecture/
Support for Tokens

OpenID Connect (OIDC) ID Tokens (e.g., SCiMMA) containing user attributes and group memberships from the research community (via COmanage) and from the researcher's home institution (via InCommon)

SciTokens (e.g., LIGO) containing authorization scope values determined by per client/subscriber policy

WLCG Tokens (e.g., Fermilab) support for wlcg.groups and storage.*|compute.* scopes

GA4GH Passports (e.g., Australian BioCommons) support for AffiliationAndRole, AcceptedTermsAndPolicies, ResearcherStatus, ControlledAccessGrants, and LinkedIdentities
Workshop Discussion Topics

How do we manage trust in multiple token issuers?
  3 CILogon X.509 CAs → 20+ CILogon token issuers
  peer assessments / token issuer practice statements

How do levels of assurance apply to tokens?
  authentication strength + identity vetting + token issuer + token properties

How do we ensure token interoperability?
  IGTF X.509 technical profiles → WLCG Token Profiles

Do we have a common threat model?
  OAuth 2.0 Threat Model (RFC 6819) / Trusted CI's OSCRP

Are we getting input from the stakeholders?
  workshops / IGTF / WLCG / OSG / ...
Thanks!

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