“Login with XSEDE”

Globus Auth on Jetstream and XSEDE

XSEDE
Extreme Science and Engineering Discovery Environment
XSEDE and Jetstream

- XSEDE is NSF’s front door/lobby for its national computing services (HPC, cloud, data)
  - User sign-up/registration
  - Allocation requests
  - System information and user support

- Jetstream is one of NSF’s Infrastructure-as-a-Service providers, and the first to have a browser-based user interface
  - Use is allocated via XSEDE
  - Self-service VMs and storage volumes
  - Sized for scientific applications
XSEDE is an identity provider (IDP)

• XSEDE has a user database that’s been around for more than a decade and has >30,000 registered users
  – SQL user database + Kerberos auth realm
  – High visibility -> rigorous security

• First step was to add an XSEDE OIDC service
  – Provides OAuth2/OpenID Connect interface between XSEDE and Globus
  – Intended solely for use by Globus
XSEDE and Jetstream are both resource providers

• More than a dozen unique systems (for users or for staff) that require authentication
  
  **Examples:** User portal, community software repository, single sign-on hub, Confluence, JIRA, Qualtrics, financial portal, etc.

• More than a dozen federated services (managed by others) that are required to recognize XSEDE identities

  **Examples:** Jetstream, Stampede, Bridges, Comet, Wrangler, XStream, SuperMIC, etc.
Globus-enabled logins

• XSEDE’s public sites
  – XSEDE user portal (www.xsede.org)
  – Jetstream cloud services (use.jetstream-cloud.org)
  – Community Software Repository (CSR)
  – Training sites
• XSEDE’s staff services
  – Staff wiki
  – Staff activity tracking & planning
**OAuth & OIDC plugins and modules are plentiful!**

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Globus Auth client configuration

• Most XSEDE clients require an XSEDE identity
  – People can use any identity to login, but to succeed, an XSEDE identity must be linked
  – If there isn’t a linked XSEDE identity, Globus prompts to link or create an XSEDE identity
  – If the XSEDE identity hasn’t been seen before by Globus, Globus automatically creates an identity

• XSEDE clients see the XSEDE identity as primary
  – XSEDE clients always see the username@xsede.org identity as primary
  – Keeps things simple for client-side accounting
Jetstream and Globus Auth

Globus Auth made it *really* easy to enable XSEDE logins to Jetstream’s web UI. (*)

- Much simpler than XSEDE’s older methods
- Python Oauth2client module available
- Campus, Google, ORCID logins came for free!

* Still need to map to a Jetstream/XSEDE “allocation” (project)
XSEDE and Globus Auth – more, more, more!

• We’re working on documentation and support for science gateways
  – Allow gateways to offer “Login with XSEDE”
• We’re reaching out to other public XSEDE services
  – XD Metrics on Demand (XDMoD)
  – Two other user training services
• We’ll update more staff services as needed
Our reach will forever exceed our grasp, but, in stretching our horizon, we forever improve our world.