Agenda

➢ Delivered Services/Software
➢ Active Integration Projects
➢ XSEDE 2 (July 2016 and beyond)
Delivered Services/Software

Remote Job Execution (UCCAN 1.0)
- UNICORE 6 / EMS
- Genesis II
- Karnak job prediction service (karnak.xsede.org)
- xdusage (displays gateway user information)
- Science gateway user count (gateway_submit_attributes)
- UNICORE 6 Airavata provider pilot

Data Movement (UCCAN 2.0, UCDM 4.0, UCSGW 2.0)
- Globus Transfer Service
- Globus Connect Server (streamlined GridFTP endpoint deployment)
- GridFTP server packages

Remote File Access (UCCAN 3.0)
- Genesis II GFFS (including Campuses)
- XWFS (on L1-2 SPs); will be discontinued in XSEDE2

Interactive Login (UCCAN 4.0)
- SSO Hub (login.xsede.org)
- GSI OpenSSH server packages
- Phase 1 two factor authentication for SPs
Delivered Services/Software

Federated Identity and Group Management (UCCAN 6.0, 9.0, UCCB 1.0)
- MyProxy (myproxy.xsede.org)
- CI Login (http://www.cilogon.org/xsede)
- MyProxy OAuth (https://oa4mp.xsede.org/oauth/)

Resource Information Management (UCCAN 7.0, 8.0, 11.0, 12.0)
- Legacy information services (info.xsede.org)

Miscellaneous
- Globus client packages
- JGlobus 1.x phase out guidance

Engineering Support
- Software distribution repositories for SPs, campuses, gateways (software.xsede.org)
- Engineering activity management (jira.xsede.org)
- XSEDE source repository (https://software.xsede.org/svn/)
Agenda

➢ Delivered Services/Software
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➢ XSEDE 2 (July 2016 and beyond)
PY5 Activities by Use Case

- **Run a Remote Job** — UCCAN 1.0
- **Data Movement** - UCCAN 2.0, UCDM 4.0, UCSGW 2.0
- **Interactive Login** — UCCAN 4.0
- **User and Allocations Management** - UCCAN 5.0, UCCAN 9.0
- **Federated Identity and Group Management** - UCCAN 6.0, 9.0, UCCB 1.0
- **Resource Information Management** - UCCAN 7.0, 8.0, 11.0, 12.0
- **Workflows** - UCCB 5.0, UCHPC 3.0, UCSW 1.1, 2.0
- **Share data repository with community** - UCDM 1.0

Use Case Registry has information on individual Use Cases:
- [https://software.xsede.org/registry-dev/index.php](https://software.xsede.org/registry-dev/index.php)
Run a Remote Job – UCCAN 1.0

• Continuing activities from PY4
  – Improved GRAM5 packaging and customization (SDIACT-32) - In Testing
  – Deliver Shared Virtual Compute Facility using Global Queues for Campus Bridging (SDIACT-177) - In Testing

• Relevant PY5 Activities
  – UNICORE maintenance (SDIACT-205, SDIACT-236, SDIACT-221)
  – Enhance Resource Prediction Service showing where jobs would run first (SDIACT-234)
  – Enhance gateway_submit_attributes
Data Movement - UCCAN 2.0, UCDM 4.0, UCSGW 2.0

- **Continuing activities from PY4**
  - Deliver Globus Transfer REST API (SDIACT-106)

- **Relevant PY5 activities**
  - Improve many small file transfer performance with GridFTP (SDIACT-201)
  - Improve data transfer performance with a central logging and transfer analysis service (SDIACT-200)
  - Provide XSEDE service client coding examples (SDIACT-230)
    - Authentication via Globus IdM, MyProxy, OAuth, and CILogon
    - Submit/monitor jobs with UNICORE, Genesis II, and GRAM5
    - Move data with Globus Transfer, GridFTP, and Genesis II
    - Discover resources via pub/sub and RESTfull queries
  - Assist Science Gateways adopting XSEDE's Globus Transfer and Sharing services (SDIACT-053)
Federated Identity and Group Management - UCCAN 6.0, 9.0, UCCB 1.0

• Continuing activities from PY4
  – Deliver new XSEDE Identity management (SDIACT-196, SDIACT-190, SDIACT-191, SDIACT-192)
  – Document single sign-on using federated identity across XSEDE services (SDIACT-67, SDIACT-68)

• Relevant PY5 Activities
  – Phase II deployment of user two factor authentication (SDIACT-181)
  – Update oa4mp.xsede.org to support OAuth 2.0 (SDIACT-203)
  – Unified and extensible group management service for XSEDE users and staff (SDIACT-109); likely delayed to XSEDE2
Resource Information Management
UCCAN 7/8/11/12.0

• **Continuing activities from PY4**

• **Relevant PY5 Activities**
  – Improved (phase 2) Resource Description Information Management (SDIACT-212); possibly describe Gateways?
  
  – Enhance views and interfaces to Information Services Warehouse (SDIACT-213, SDIACT-214, SDIACT-218)

  – Enable subscribing to XSEDE monitoring information from Inca and Nagios (SDIACT-159)

  – Document how to subscribe to job state changes (SDIACT-232)
Workflows - UCCB 5.0, UCHPC 3.0, UCSW 1.1, 2.0

- Relevant PY5 Activities
  - Evaluate alternatives and produce an XSEDE supported workflow roadmap (SDIACT-145)
  - Pilot Pegasus DAGMAN workflow engine that works with UNICORE and Genesis II for LIGO (SDIACT-146)
  - Deliver Kepler workflow support on XSEDE (SDIACT-226, SDIACT-227, SDIACT-228)
Share data repository with community - UCDM 1.0

• Continuing activities from PY4
  – Enable data sharing using Globus Sharing (SDIACT-27)

• Relevant PY5 Activities
  – Survey and recommend Data Integrity mechanisms that could be supported by XSEDE (SDIACT-008)
Agenda

➢ Delivered Services/Software
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XSEDE 2

- **L2 XSEDE Community Infrastructure “XCI”**
  - Merges TIS, A&D, SD&I, parts of Operations, and Campus Bridging
  - Much smaller budget
  - Use Cases moved to L2 Community Engagements and Education “CEE”

- **Shift from XSEDE developed/integrated capabilities, to XSEDE facilitated partner/community integration**
  - XSEDE 1 examples: Kepler

- **Shift from XSEDE funded software/service provider staff to software subscriptions (Globus)**

- **Simpler streamlined engineering process**
  - Use Cases are still key
  - ROI driven by real use
Our reach will forever exceed our grasp, but, in stretching our horizon, we forever improve our world.