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**GLOBUS-BASED TECHNOLOGIES FOR SUPPORTING  
ADVANCED E-SCIENCE WORKFLOWS  
- AN IGE PERSPECTIVE -**





- Objectives
  - **Coordination of European Globus activities**
    - e.g. European Globus Community Forum
  - **Bundle European input to Globus**
  - Introduce **adjustments critical for Europe into Globus code base**
  - Act as **Globus service provider for European Grids like EGI and PRACE**
  - **Standardization, training, promotion, and documentation**
  - **Packaging and certification of Globus Toolkit 5**
  - **Software adaptations to Globus Toolkit 5**





## Capabilities Addressed by IGE Software

- File access (GridFTP server & client)
- File transfer (GridFTP server & client)
- Interactive job management (Globus GSISsh)
- Job execution capability (Globus GRAM5 server & client)
- Job scheduling capability (GridWay)
- Some already made available to the European users via EGI or from ige-project.eu directly

separate packages for client-side development → simplified exploitation

- Existing WMS/environments using **GT4 technology**: WS-VLAM, P-GRADE, myExperiment etc.

migration to GT5/new devs adopting GT5 → IGE could help





## IGE Software Adaptations - Examples

- GridWay
  - OGSA-BES interface
  - CREAM driver for gLite
  - Support for Condor DAGMAN workflows
- OGSA-DAI
  - Re-design to use RESTful service API
- GridSAM
  - Mappings from JSDL to Globus RSL for resource allocation parameters
- OGSA-BES for GRAM

Interoperability in heterogeneous environments

Integration of data sources with modern API (REST)

Generic job specs (JSDL)

workflow tasks → JSDL → common submission tool → uniform monitoring



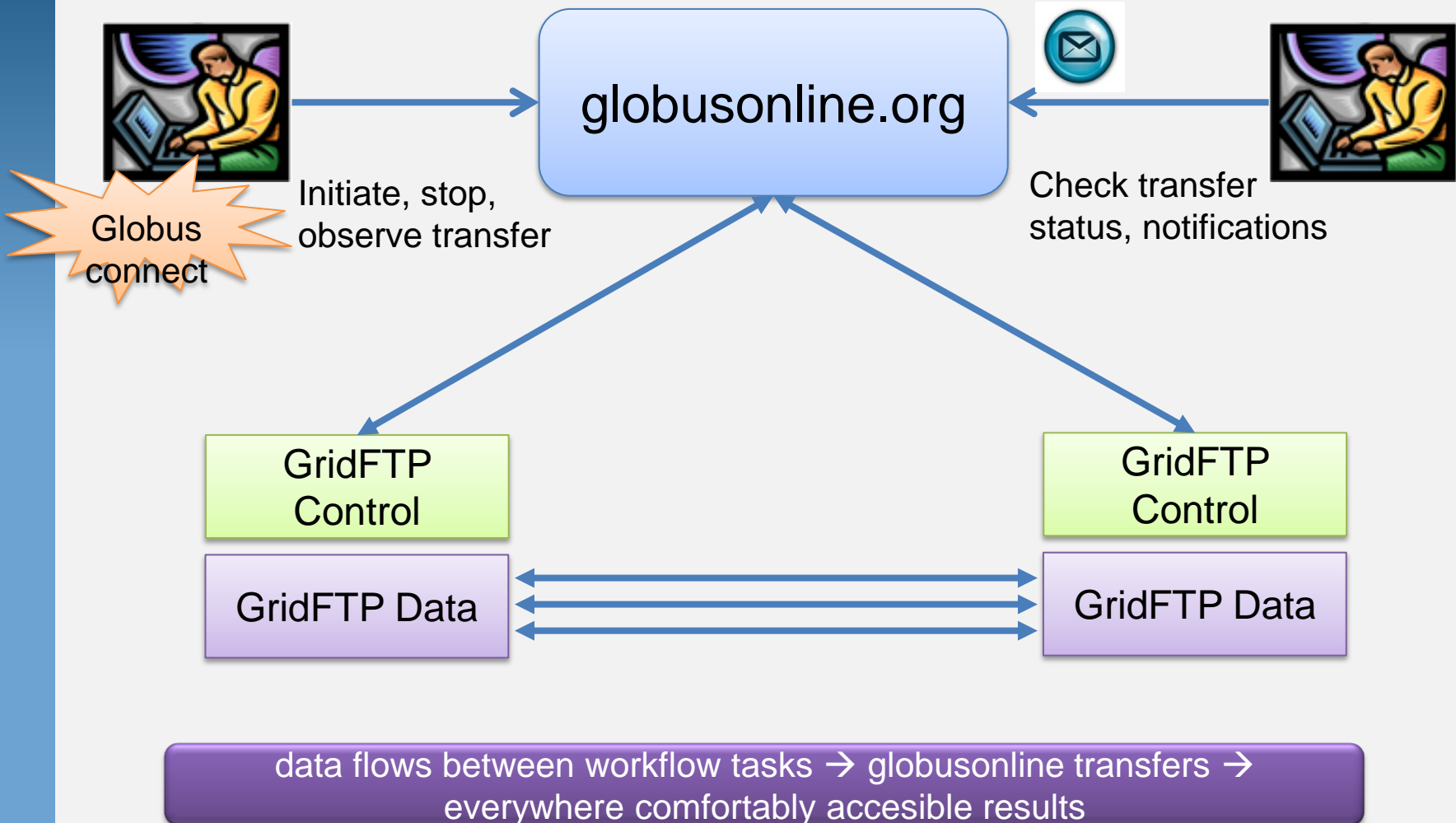


- Globus Online – SaaS Data Movement
  - Reliable, high-performance, secure file transfer
  - Uses GSI (x.509 proxies) but also other identity providers (e.g. Google)
  - Comfortable usage
- **Web application** (from browser)
  - Works also from private networks!
- Or **scriptable CLI** (batch processing)

The screenshot shows the Globus Online web interface for transferring files. The top bar includes the Globus logo, the text 'globus online', a 'Go To: Start Transfer' dropdown, the user name 'muntean', and a 'Sign Out' button. The main area is titled 'Transfer Files' and contains a search bar with the text 'source overwrites files on destination'. Below this, there are two panels for source and destination. The source panel has an endpoint of 'muntean#lapacal05' and a path of '/Downloads/creamclient/'. The destination panel has the same endpoint and a path of '/Music/'. Below the panels, there are two file lists. The source list shows a folder named 'java-cli-20080606'. The destination list shows folders named 'Playlists' and 'desktop.ini'. A diagram with two red rounded rectangles is overlaid on the interface. The left rectangle is labeled 'Source (endpoint, server)' and the right one is labeled 'Dest. (server, endpoint)'. Arrows indicate the flow of data from the source to the destination. Below the diagram, the text 'folders or files' is written. At the bottom of the interface, there is a 'Label This Transfer' field with the value 'myClientLibs' and a 'Get Globus Connect' button.



# Third-Party File Transfers with the Globus Online Service





- IGE collects requirements related to Globus software
  - IGE request tracker ([www.ige-project.eu/hub/rt](http://www.ige-project.eu/hub/rt))
  - European Globus Community Forum ([www.egcf.eu](http://www.egcf.eu))
  - Direct contact (just place an email to anyone you know in IGE) or to [info@ige-project.eu](mailto:info@ige-project.eu)
- Of potential interest to this workshop
  - CREAM execution driver for GridWay (interop with gLite)
    - completed
  - LoadLeveler adaptor to GT5 – completed
  - GT5 adaptor for the SHIWA's DCI Bridge – in work
  - REST API for OGSA-DAI – in work
  - BES frontend to GRAM – in work



[www.ige-project.eu](http://www.ige-project.eu)

**THANK YOU FOR YOUR ATTENTION!**

