

Globus Toolkit 4 hands-on

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The GT4 "service bag"

Core ontrib/ ˈ <u>review</u> i Deprecated Veb vices onents า-WS onents

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			Grid Telecontrol Protocol			Pr
	Delegation	Data Replication	Community Scheduling Framework	WebMDS	Python WS Core	W Ser Comp
	Community Authorization	Data Access & Integration	Workspace Management	Trigger	C WS Core	
	Authentication Authorization	Reliable File Transfer	Grid Resource Allocation & Management	Index	Java WS Core	
	Pre-WS Authentication Authorization	GridFTP	Pre-WS Grid Resource Alloc. & Mgmt	Pre-WS Monitoring & Discovery	C Common Libraries	Non
	Credential Mgmt	Replica Location	www.gl	bus.org	eXtensible IO (XIO)	Comp
	Security	Data Mamt	Execution Mamt	Info Services	Common Runtime	_

Mgmt

Mgmt

Services

Runtime



How to use a Grid

- Find a VO suitable to your needs national or international collaborations. (See Grid intor slides from the morning)
- Obtain a user certificate from a CA which is recognized by the VO
 - 1. Procedure is CA dependent
- 3. Register to the VO
 - 1. Procedure is VO dependent
- 4. Use client tools to interact with the Grid services involved in the VO
 - Use command line clients installed on a user interface (UI) machine
 - Use portals or other graphical tools to access the services

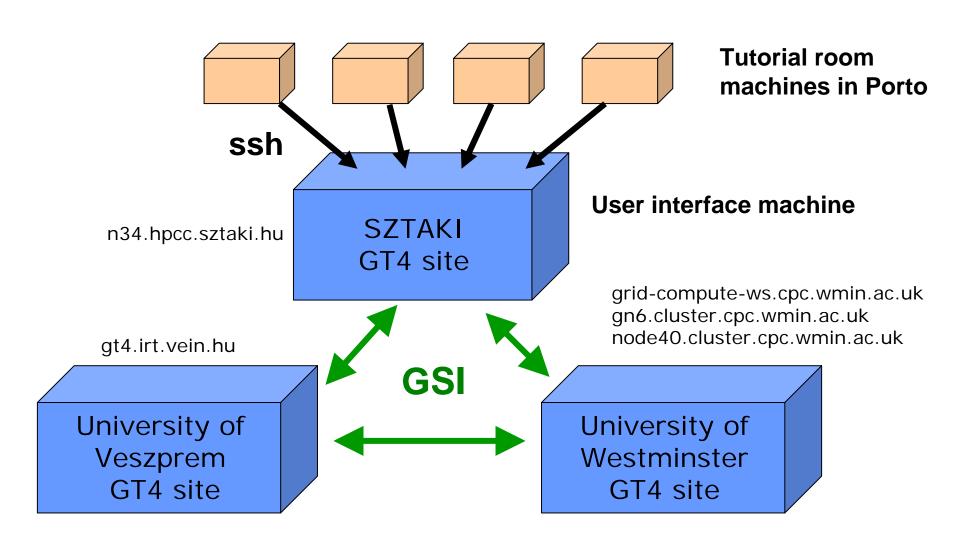


How it works today

- Our VO today is Westfocus:
 - Contains services for training and demonstration purposes
 - Grid services are located at 3 sites:
 MTA SZTAKI Budapest, Hungary
 University of Westminster London, UK
 University of Veszprem Veszprem, Hungary
- Tutors obtained training certificates for you from UK CA
 - Training certificates are valid for a few days...
- 3. Tutors registered these certs, at the 3 sites
- Command line clients are available on SZTAKI site
 - MDS4 information system
 - GridFTP
 - WS-GRAM job management with RFT (reliable file transfer)



Westfocus infrastructure



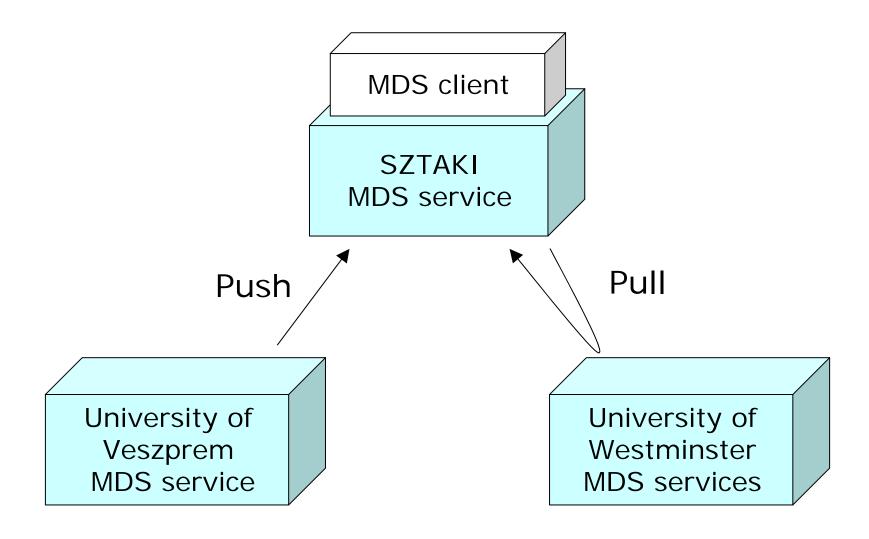


Agenda

- Get access to Westfocus:
 - Transform certificate from P12 to PEM format
 - Create proxy
- Discover Westfocus services
 - MDS query
- Managing files
 - Transfer files with GridFTP
- Manage jobs
- Manage batch jobs
- Collaborative work with GT4



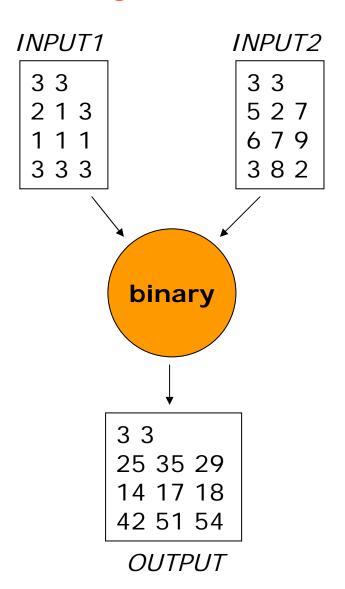
MDS4 infrastructure in Westfocus





Matrix multiplication job

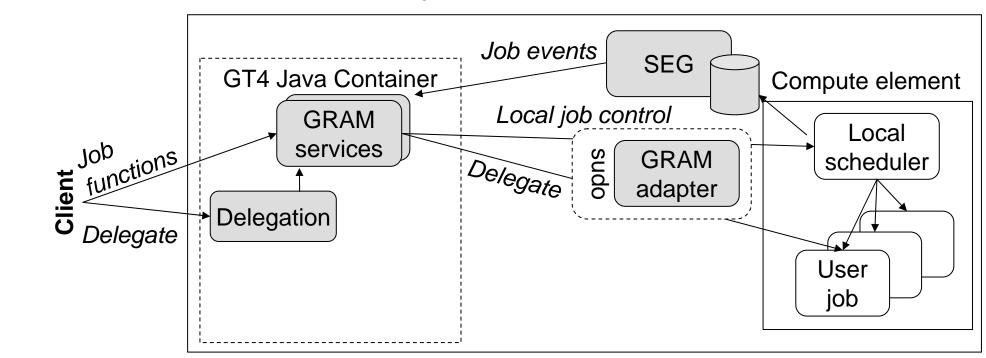
- C code
- Binary compatible with Westfocus
- Reads matrixes from INPUT1 and INPUT2 files
- Writes result matrix to OUTPUT file
- Command line parameters: M V
- ./multiply M V





Simple job submission

Target GRAM service





Job submission with file staging

Target GRAM service

