



Grid2Win: Porting of gLite middleware to Windows XP platform

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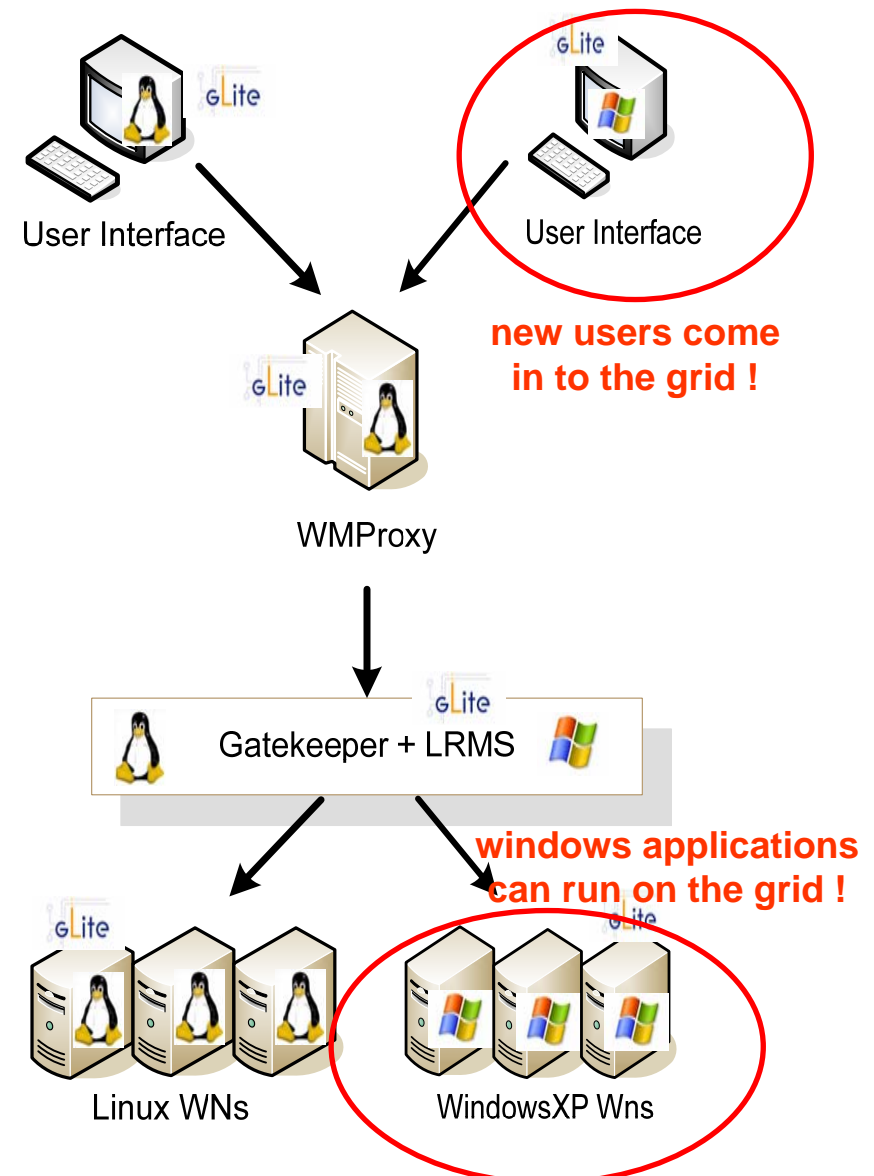
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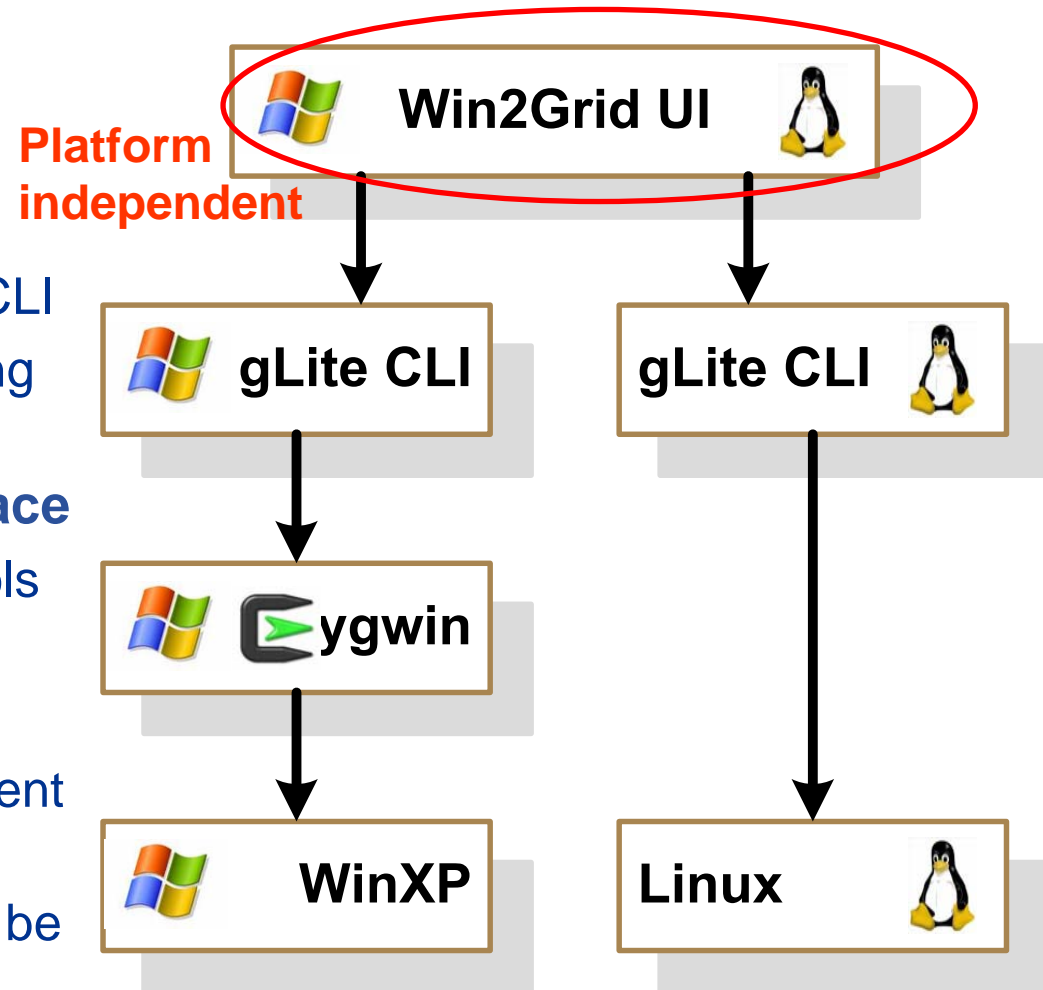
FESR

- **Presently on gLite**
 - Grid users use the gLite middleware from Linux-based User Interfaces via CLI
 - (almost) All gLite resources are Linux-based
 - **This implies**
 - Grid users need to be trained
 - Only Linux-based applications can be deployed onto the Grid
- ↓
- **Porting of gLite to Windows**
 - User Interface
 - Computing Element (farm)



Grid2Win Graphical UI Prototype

- **Grid2Win GUI**
 - wxWindows
 - Cross platform
 - Open source
 - Independent of underlying CLI
 - Installer 11Mbytes (including the cygwin DLL)
- **gLite Command Line Interface**
 - Recompiled via Cygwin tools under Windows XP
- **Cygwin**
 - Emulates POSIX environment on Windows
 - Only the Cygwin DLL must be installed

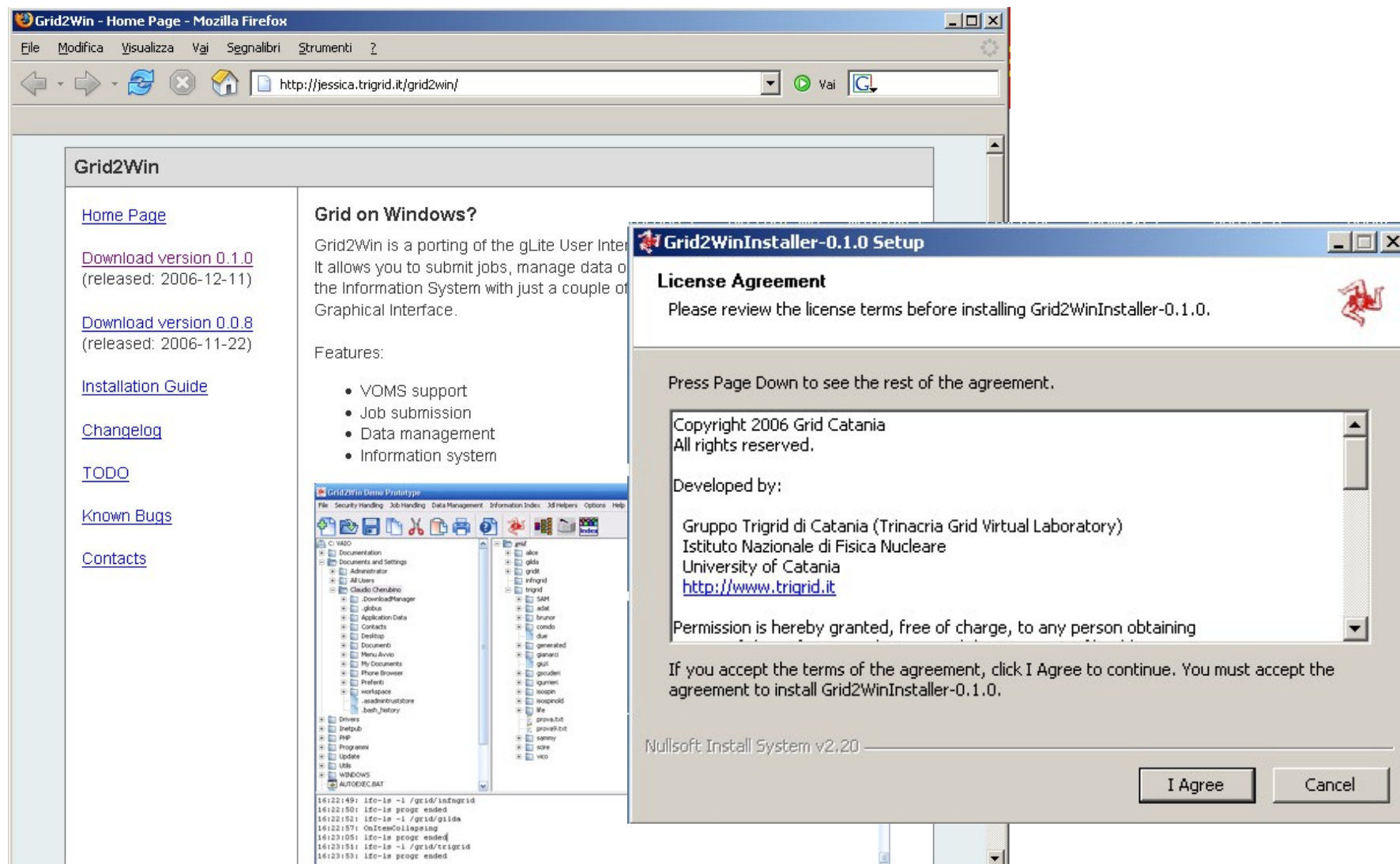




gLite Services Already Working on WinXP

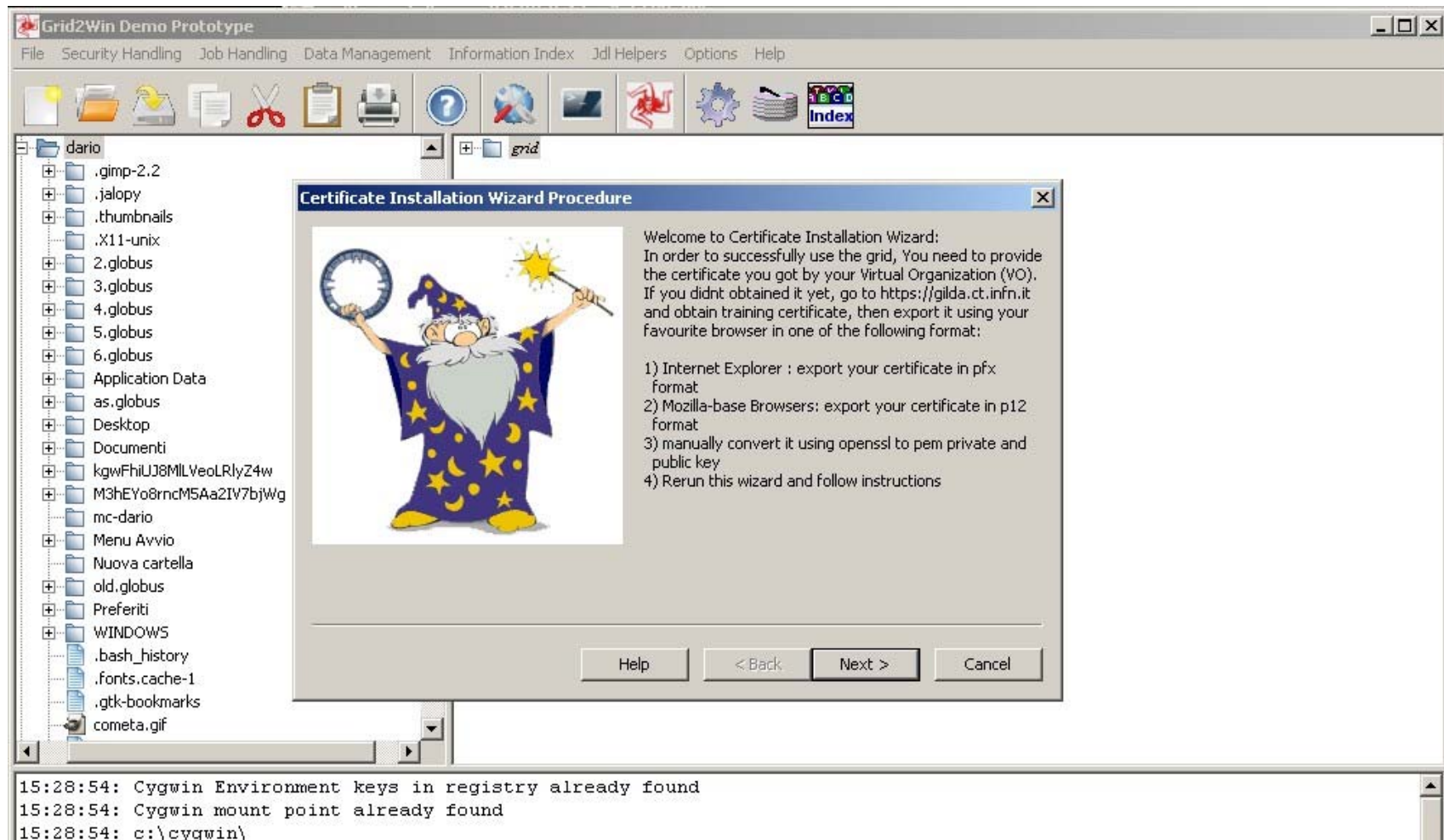
- **Grid Security Infrastructure**
 - Credentials management with VOMS extensions
 - voms-proxy-* commands
- **Workload Management**
 - Job submissions and output retrieving
 - glite-wms-job-* commands
- **File Transfer**
 - Secure transfer with credential management
 - globus-url-copy
 - RFIO commands (rf*)
- **Data Management**
 - File Catalogue Browsing
 - lfc-* command
 - Data Movement and Replication
 - lcg-* commands
- **Information System**
 - lcg-info
 - lcg-infosites
 - LDAP Explorer integrated within Grid2Win GUI

- Download beta from <http://jessica.trigrigrid.it/grid2win/>



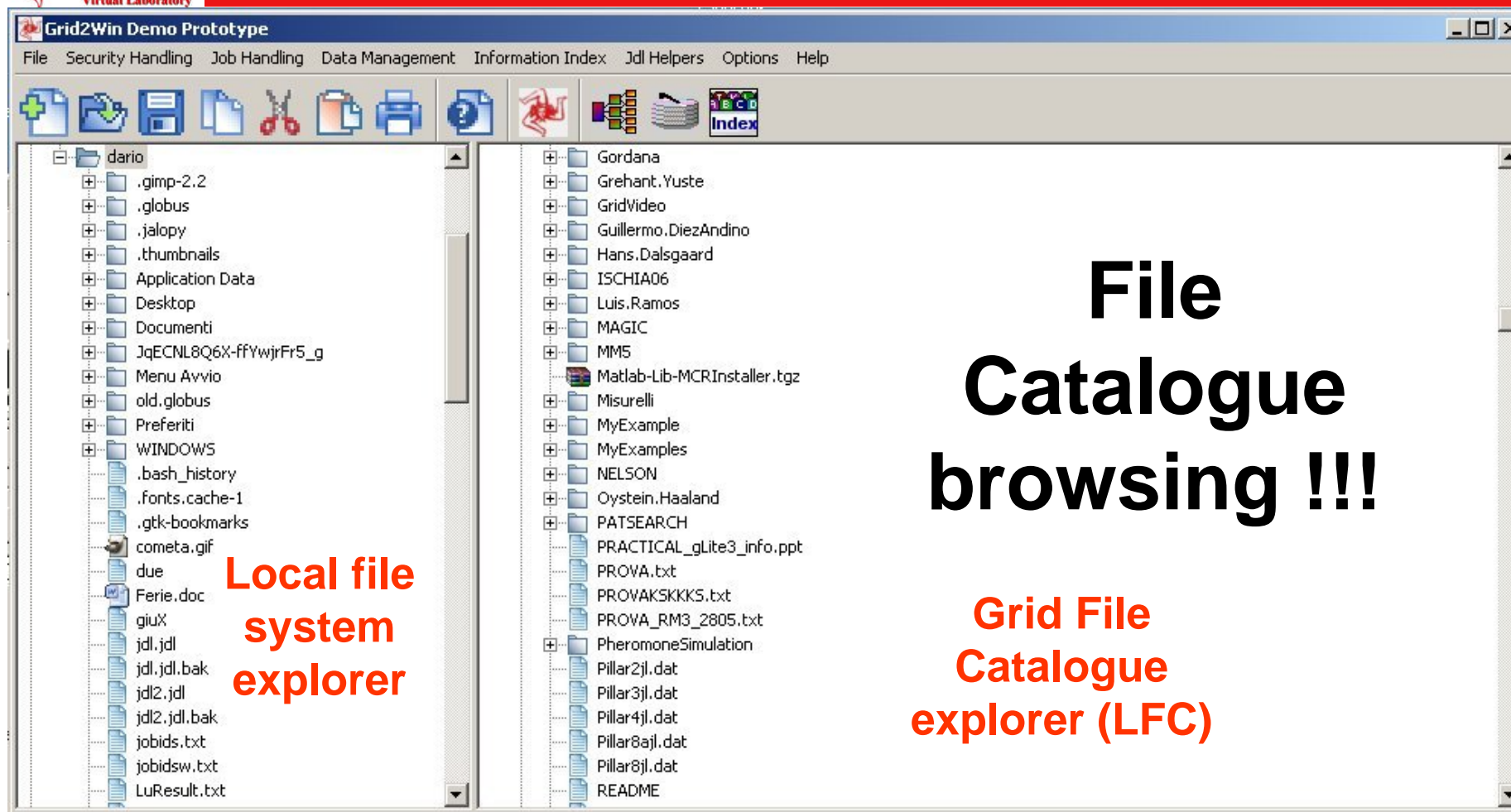
The screenshot shows a Mozilla Firefox browser window displaying the Grid2Win Home Page. The page includes a navigation menu with links for Home Page, Download version 0.1.0 (released: 2006-12-11), Download version 0.0.8 (released: 2006-11-22), Installation Guide, Changelog, TODO, Known Bugs, and Contacts. The main content area is titled "Grid on Windows?" and describes Grid2Win as a porting of the gLite User Interface. It lists features: VOMS support, Job submission, Data management, and Information system. Below the text is a "Grid2Win Demo Prototype" window showing a file explorer view of the C:\VADO directory. A "Grid2WinInstaller-0.1.0 Setup" dialog box is overlaid on the browser, displaying a "License Agreement". The agreement text includes: "Please review the license terms before installing Grid2WinInstaller-0.1.0.", "Press Page Down to see the rest of the agreement.", "Copyright 2006 Grid Catania", "All rights reserved.", "Developed by: Gruppo Trigrigrid di Catania (Trinacria Grid Virtual Laboratory), Istituto Nazionale di Fisica Nucleare, University of Catania, http://www.trigrigrid.it", and "Permission is hereby granted, free of charge, to any person obtaining". At the bottom of the dialog box are "I Agree" and "Cancel" buttons.

- Wizard driven: Browser certificates autoimport, Jdl build wizard (in development), etc

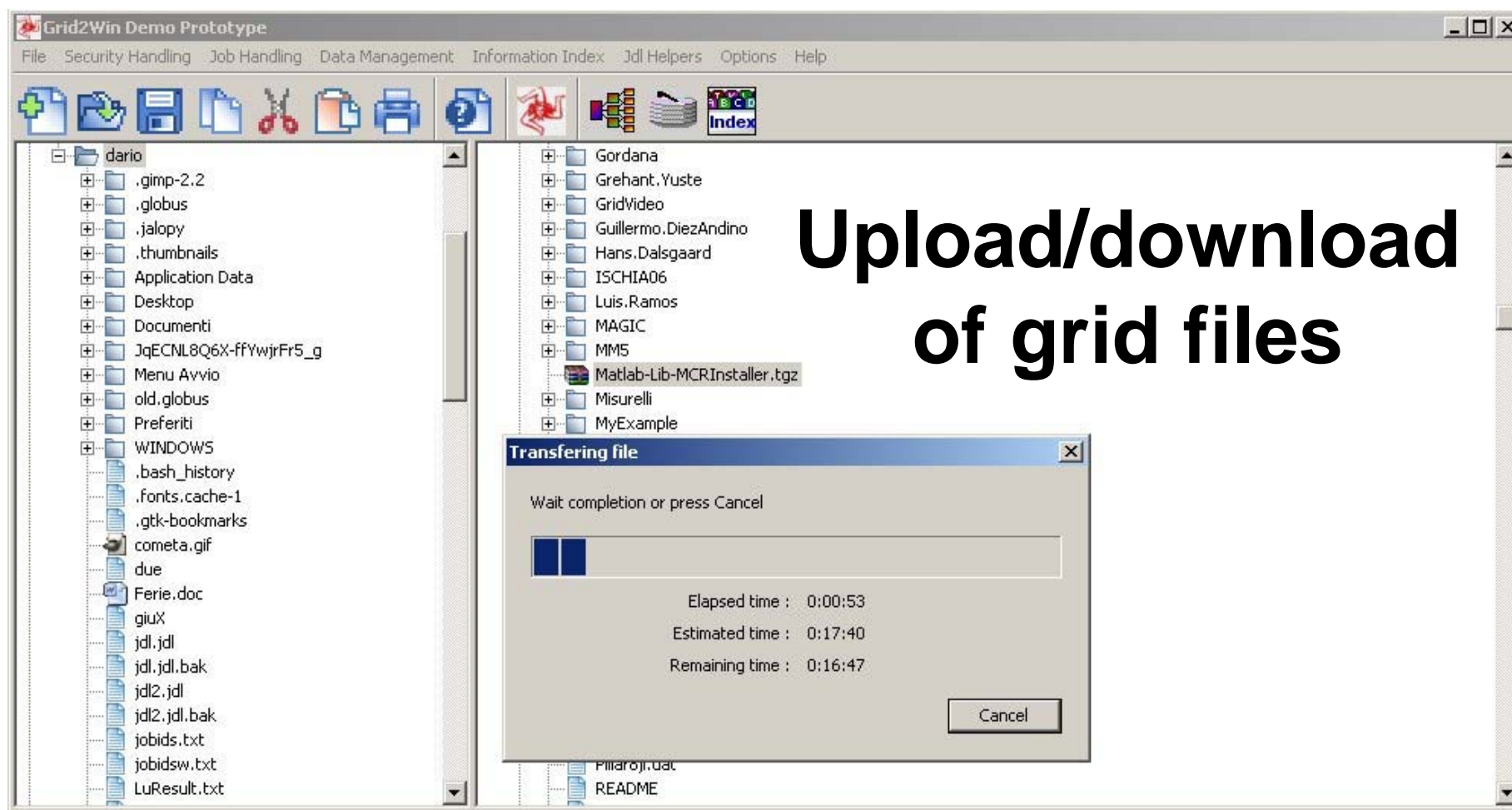


- **GSI credentials**
 - Auto detection of the validity of the stored proxy
 - Generation of a new stored proxy via the insertion of the passphrase
 - Virtual Organization Membership Service (VOMS) extensions support

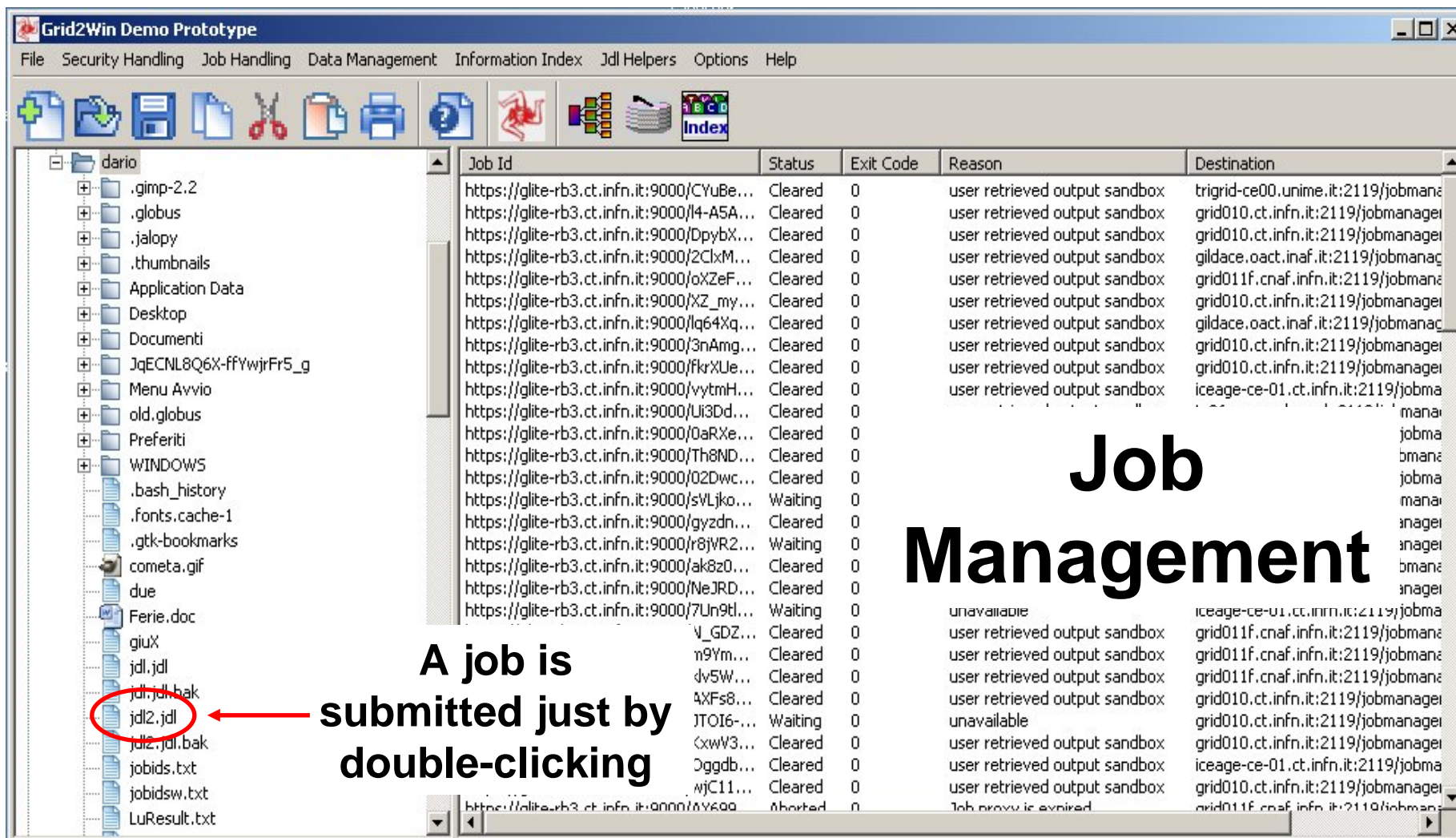
```
15:32:01: Process 3948 (voms-proxy-info --all ) launched.
15:32:02: subject   : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN/CN=Dario Russo/Email=dario.russo@ct.infn.it/CN=proxy
15:32:02: issuer    : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN/CN=Dario Russo/Email=dario.russo@ct.infn.it
15:32:02: identity  : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN/CN=Dario Russo/Email=dario.russo@ct.infn.it
15:32:02: type     : proxy
15:32:02: strength  : 512 bits
15:32:02: path     : C:\Documents and Settings\dario/.globus/x509up_u400
15:32:02: timeleft  : 7:14:40
```



You can navigate the remote Grid File Catalogue as it was local !!!



You can copy and paste a file from the local explorer to the catalogue browser and viceversa. Drag & drop is under development !!!

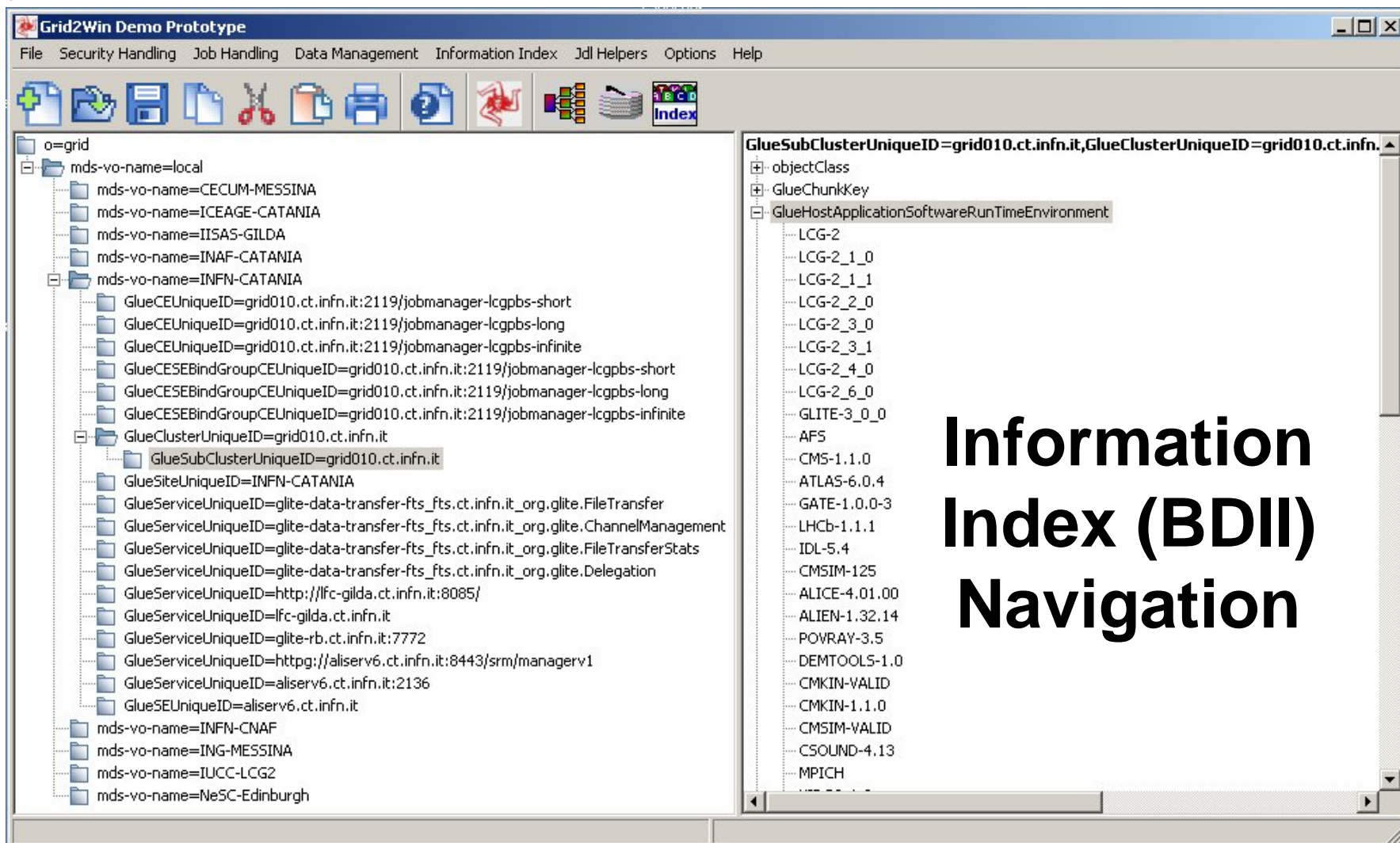


Job Management

Job Id	Status	Exit Code	Reason	Destination
https://glite-rb3.ct.infn.it:9000/CYuBe...	Cleared	0	user retrieved output sandbox	trigrig-ce00.unime.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/I4-ASA...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/DpybX...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/2ClxM...	Cleared	0	user retrieved output sandbox	gildace.oact.inaf.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/oXZeF...	Cleared	0	user retrieved output sandbox	grid011f.cnaf.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/XZ_my...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/lq64Xq...	Cleared	0	user retrieved output sandbox	gildace.oact.inaf.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/3nAmg...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/fkrXUe...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/vytmH...	Cleared	0	user retrieved output sandbox	iceage-ce-01.ct.infn.it:2119/jobma
https://glite-rb3.ct.infn.it:9000/Ui3Dd...	Cleared	0		
https://glite-rb3.ct.infn.it:9000/OaRXe...	Cleared	0		jobma
https://glite-rb3.ct.infn.it:9000/Th8ND...	Cleared	0		mana
https://glite-rb3.ct.infn.it:9000/02Dwc...	Cleared	0		jobma
https://glite-rb3.ct.infn.it:9000/sVLjko...	Waiting	0		mana
https://glite-rb3.ct.infn.it:9000/gyzdn...	Cleared	0		inaget
https://glite-rb3.ct.infn.it:9000/r8jVR2...	Waiting	0		inaget
https://glite-rb3.ct.infn.it:9000/ak8z0...	Cleared	0		mana
https://glite-rb3.ct.infn.it:9000/NeJRD...	Cleared	0		inaget
https://glite-rb3.ct.infn.it:9000/7Un9tl...	Waiting	0	unavailable	iceage-ce-01.ct.infn.it:2119/jobma
V_GDZ...	Cleared	0	user retrieved output sandbox	grid011f.cnaf.infn.it:2119/jobmana
n9Ym...	Cleared	0	user retrieved output sandbox	grid011f.cnaf.infn.it:2119/jobmana
dv5W...	Cleared	0	user retrieved output sandbox	grid011f.cnaf.infn.it:2119/jobmana
4XFs8...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
JTOI6-...	Waiting	0	unavailable	grid010.ct.infn.it:2119/jobmana
<xwV3...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
Oggdb...	Cleared	0	user retrieved output sandbox	iceage-ce-01.ct.infn.it:2119/jobma
wjC11...	Cleared	0	user retrieved output sandbox	grid010.ct.infn.it:2119/jobmana
https://glite-rb3.ct.infn.it:9000/AY699...	Aborted	0	Job proxy is expired	grid011f.cnaf.infn.it:2119/jobmana

A job is submitted just by double-clicking

You can check job status and download job's output just by double-clicking on the Job Identifier !!!



The screenshot shows the Grid2Win Demo Prototype application window. The title bar reads "Grid2Win Demo Prototype". The menu bar includes "File", "Security Handling", "Job Handling", "Data Management", "Information Index", "Jdl Helpers", "Options", and "Help". The toolbar contains icons for file operations and a specific "Index" icon. The main window is divided into two panes. The left pane displays a hierarchical tree structure under the root "o=grid", with several "mds-vo-name" folders expanded to show various "Glue" service and cluster entries. The right pane shows a detailed view of a selected "GlueSubClusterUniqueID=grid010.ct.infn.it", listing various object classes and software environments such as "LCG-2", "GLITE-3_0_0", "AFS", "CMS-1.1.0", "ALICE-4.01.00", etc.

Information Index (BDII) Navigation

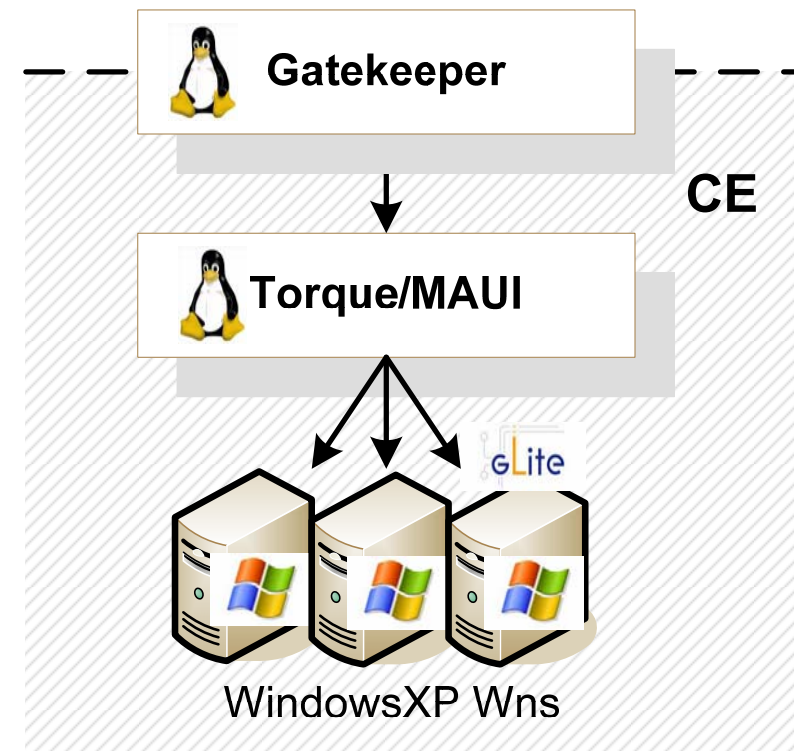
You can navigate the remote Information Index (II) as you navigate any other local information tree !!!



Windows Computing farms

- **Currently Ported Local schedulers:**
 - PBS (Torque/Maui), IN PRODUCTION ON GILDA SITE!
 - Microsoft CCS: Exited alpha stage, going in production really soon.

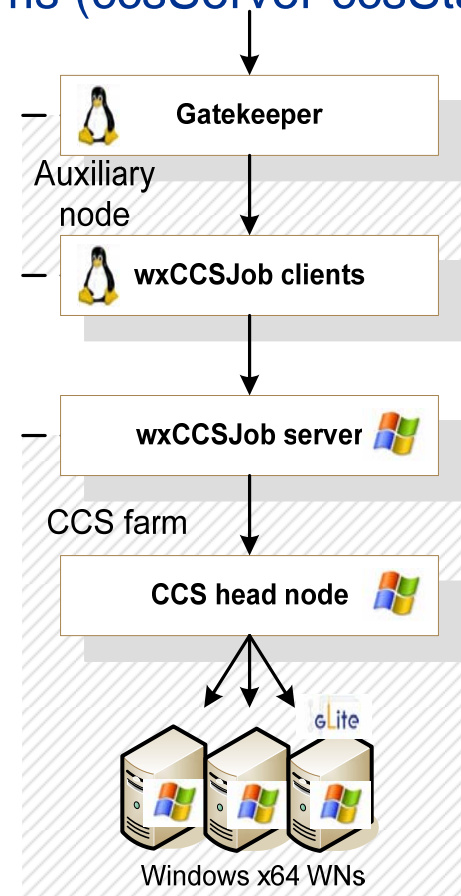
- PBS (Torque/Maui), version 2.1.12.
 - Server-side on CE linux and windows Client (pbs_mom.exe) on Windows. All gLite middleware present on Worker Node plus Log-bookeeper communication clients to and globus gass-cache exports



Microsoft Computing Cluster Server Local Scheduler:

CE splitted on 2 platforms: gLite middleware on classic CE linux (slightly modified), CCS on Windows 2003 Server x64 Headnode (Master) communicating through client-server programs (ccsServer ccsStat ccsSub etc)

Exiting Alpha Stage, Working Prototype





GridIce CE monitoring

INFN - GridICE - Grid Monitoring Service - Mozilla Firefox

File Modifica Visualizza Vai Segnalibri Strumenti ?

http://alifarm7.ct.infn.it:50080/gridice/site/site.php

GridICE the eyes of the Grid

Geo view Site view VO view Help About

GILDA GRID INFN LABORATORY for DISSEMINATION ACTIVITIES

GridICE >> Site::ALL

General **Gris** Host Job Charts Network XML

Overview Computing Management

Computing Resources Storage Resources

Site	Region	GK#	Q#	RunJob	WaitJob	JobLoad	Power	WN#	CPU#	CPULoad	Available	Total	%	MH#
CNR-ROMA	Italy	1	3	0	0	0%	0	4	8	1%	-	-	-	7
DIST-GENOVA	Italy	1	3	2	3	67%	0	3	6	0%	119.9 GB	132.3 GB	9%	5
GILDA-CECUM-MESSINA	Italy	1	3	0	1	-	-	-	-	-	-	-	-	-
GILDA-INFN-CATANIA	Italy	1	3	0	5	0%	0	18	36	0%	2.2 TB	3.6 TB	88%	18
GILDA-ING-MESSINA	Italy	1	3	0	3	100%	0	2	4	1%	154.7 GB	173.7 GB	11%	4
GOS-CATANIA	Italy	1	1916	0	0	-	-	-	-	-	-	-	-	-
ICEAGE-CATANIA	Italy	1	3	1	2	9%	65K	14	56	0%	52.5 GB	55.3 GB	5%	16
IISAS-GILDA	CentralEu	1	8611	315	0	-	0	0	0	-	27.1 GB	28.9 GB	6%	7
INFN-CATANIA-WIN	Italy	1	3	0	2	0%	0	1	4	0%	-	-	-	1
INFN-CNAF	Italy	1	3	2	0	0%	0	6	12	0%	87.5 GB	100.4 GB	13%	8
IUCC-LCG2	SEE	1	3	2	0	4%	0	5	10	0%	856.9 GB	870.1 GB	2%	7
NeSC-Edinburgh	UKI	1	3	0	0	-	0	0	0	-	138.5 GB	141.3 GB	2%	3
SZTAKI	CentralEu	1	2	0	9	-	-	-	-	-	18 GB	18.7 GB	4%	-
USP_SAOPAULO	World	-	-	-	-	-	-	-	-	-	60.8 GB	69.4 GB	12%	-
TOTAL: 14	6	5	13	10559	322	26%	65K	53	136	0%	3.7 TB	5.1 TB	10%	76

Trova: Trova successivo Trova precedente Evidenzia Maiuscole/minuscole

Completato

Pg 2 Sez 1

Start Posta in arrivo... Grid2Win_ETN... 2 Firefox 212.189.144... Rappelz 2 Skype Th... 2 gimp-2.2 13.28

- **Grid Group Activity, INFN - Catania**
 - <http://grid.ct.infn.it>
- **CCS HeadNode Demo**
 - [Download a live demo of a CCS headnode executing a gLite job](#)
 - ([Camtasia player](#))
- **Grid2Win Project**
 - [Download of the 0.1.0 version available](#)
- **TriGrid Project**
 - <http://www.trigrd.it>
- **EGEE project**
 - <http://www.eu-egee.org>
- **gLite Middleware**
 - <http://www.glite.org>

Any questions ?

