

EDGeS

Synergies between Service Grids and Desktop Grids

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MTA SZTAKI**

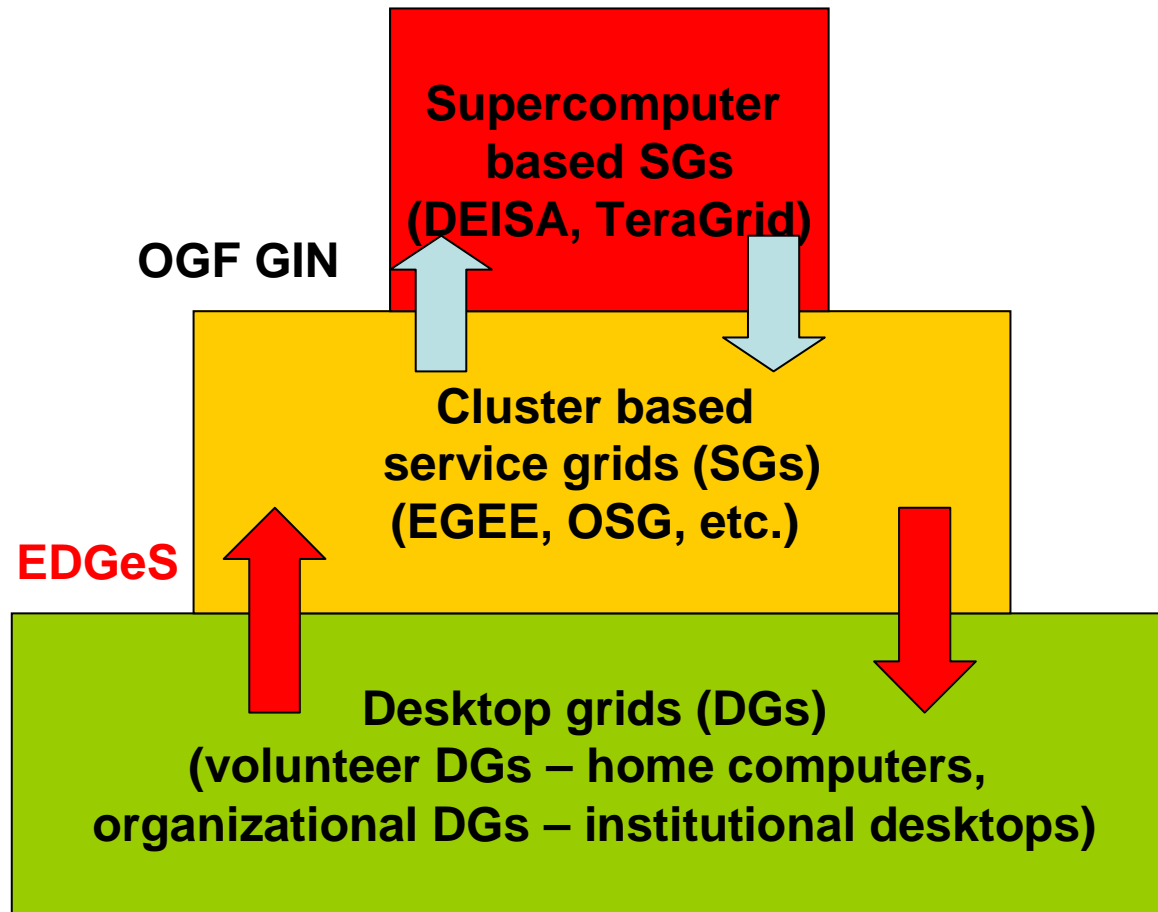


The EDGeS project receives Community research funding





The problem we address



- Very expensive,
- small number of sites and large number of CPUs
- MPI appls
- Moderately expensive,
- moderate number of sites and CPUs
- any appls
- Inexpensive,
- very large number of CPUs (~100K – 1M)
- Bag of task appls



What is EDGeS?

EDGeS: Enabling Desktop Grids for e-Science

1. EDGeS is a 2-year FP7 project started on the 1st of January 2008
 - Research on integrating (bridging) SGs and DGs
 - Creates infrastructure
 - Provides services
2. EDGeS is an infrastructure
 - EDGeS VO interconnected with various DGs
 - Application repository
3. EDGeS is a service for
 - Application porting and validation

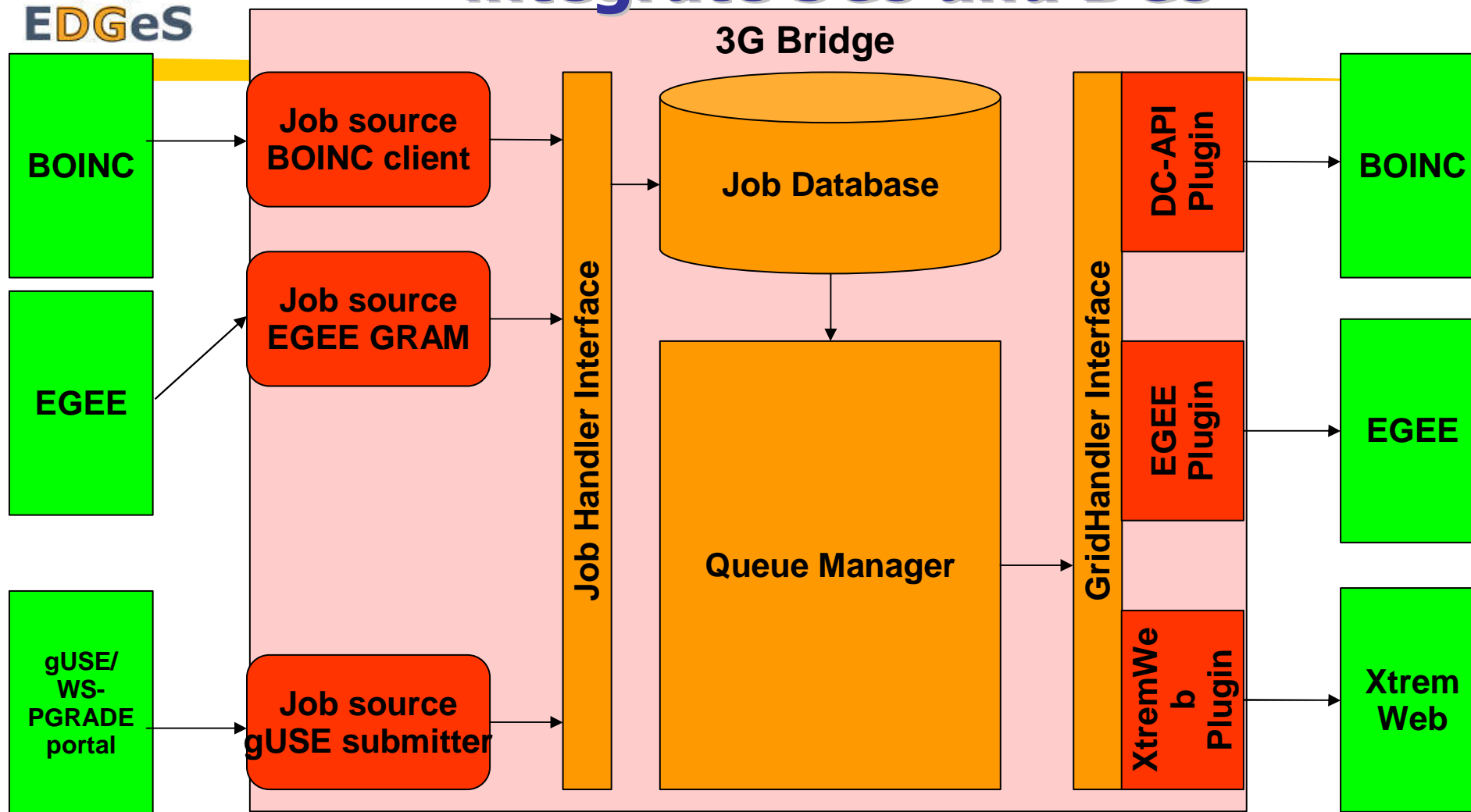


Project partners

Partic. No.	Participant name	Participant short name	Country
1	Computer and Automation Research Institute of the Hungarian Academy of Sciences	MTA SZTAKI	Hungary
2	Centro de Investigaciones Energéticas Medio Ambientales y Tecnológicas	CIEMAT	Spain
3	Foundation for the Development of Science and Technology in Extremadura	Fundecyt	Spain
4	The French National Institute for Research in Computer Science and Control	INRIA	France
5	University of Westminster	UoW	UK
6	Cardiff University	CU	UK
7	Faculty of Sciences and Technology of the University of Coimbra	FCTUC	Portugal
8	Stichting AlmereGrid	AlmereGrid	The Netherlands
9	Centre National de la Recherche Scientifique - Institut National de Physique Nucleaire et de Physique des Hautes Energies	IN2P3	France

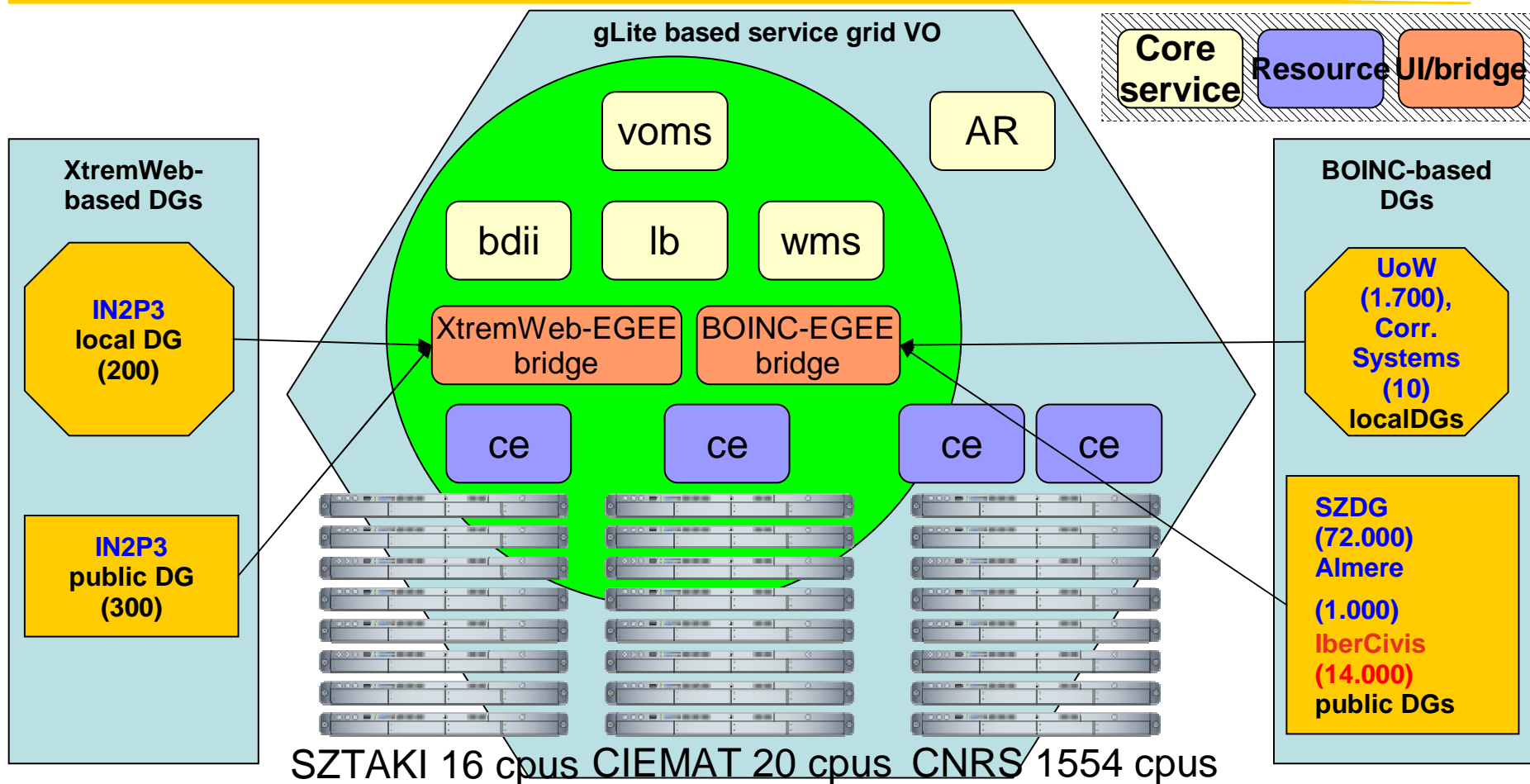


Generic Grid-Grid (3G) Bridge to integrate SGs and DGs

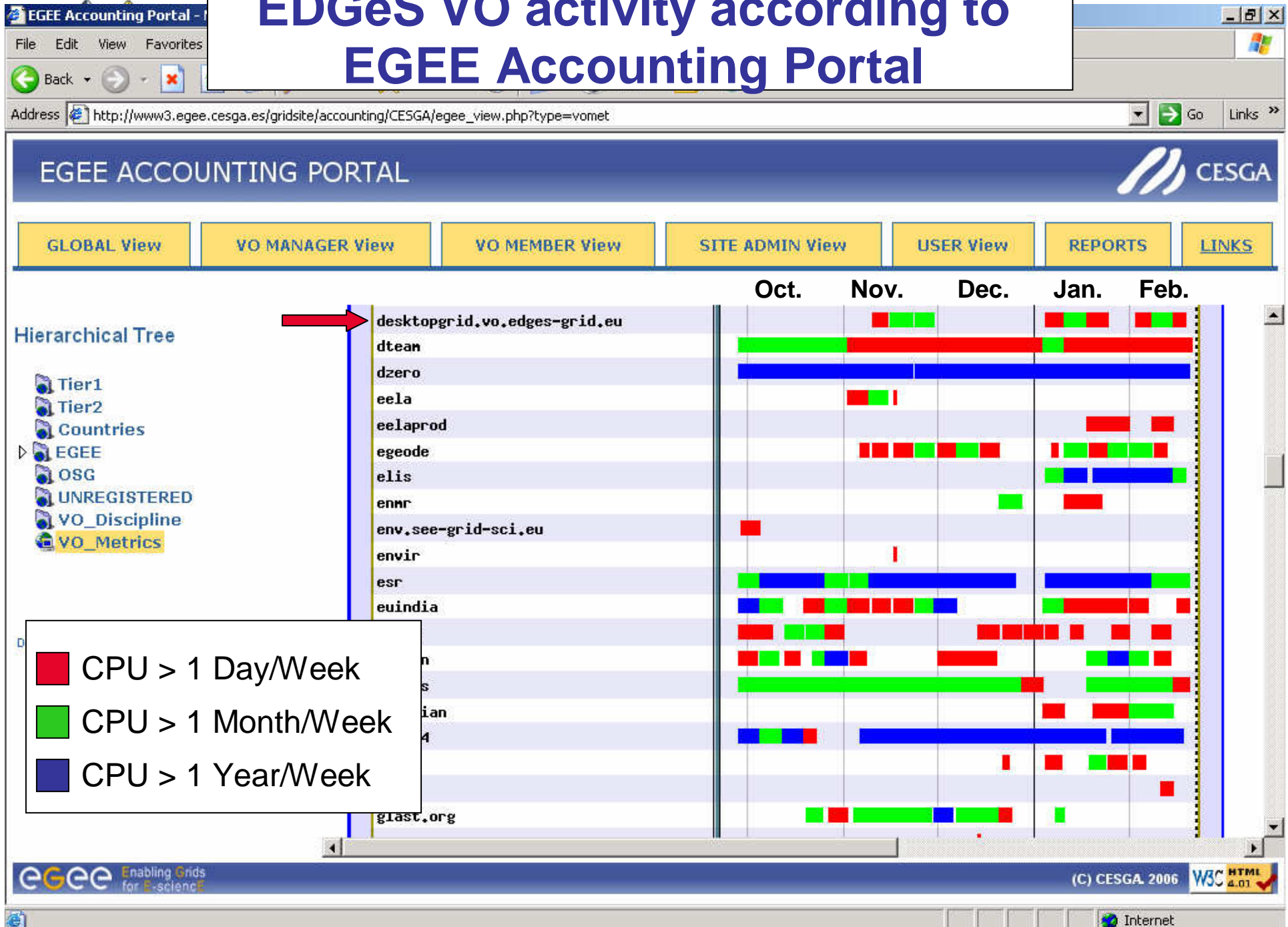




Production DG-EGEE Infrastructure



EDGeS VO activity according to EGEE Accounting Portal





Work Units bridged to EGEE from different DGs

Detailed User statistics - Boinc all project statistics - Distributed computing statistics

http://www.allprojectstats.com/showuser.php?searchstr=EDGeS+User

ALL PROJECT STATS.COM

Sponsored links from google AdSense

[Boinc statistics / Home](#) [Forum](#) [Signature](#) [Settings](#) [Team](#) [Hall of fame](#) [Info](#)

Search for user: EDGeS User [Search]

Search for team: [Search]

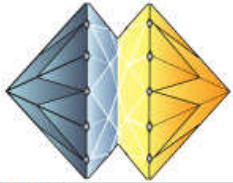
-BOINC- [Detailed host statistics] [Show]

Search results for user EDGeS User

Rank	Name	Total credit	Member of team
39,714	EDGeS User	369,582	SZDG
518,658	EDGeS User	11,238	SETI@home
873,263	EDGeS User	2,519	Quantum Monte Carlo at Home
1,596,434	EDGeS User	11	IBERCIVIS
1,599,751	EDGeS User	8	Virtual Prairie

[ecasound2.2 - Sourcecode](#)

Done



EDGeS bridge and SZDG



[Home](#) | [Your Account](#) | [Forum](#) | [Server Status](#) | [Performance graphs](#)



[Home](#) | [Your Account](#) | [Forum](#) | [Server Status](#) | [Performance graphs](#)

Rank	Name	Recent average credit	Total credit
1	whizbang	2,800.85	53,7
2	teperha	2,091.30	56,0
3	Jiri Kuchta	1,978.39	65,4
4	Beyond	1,909.26	52,0
5	KiJazz	1,510.83	3,57
6	Otter	1,271.01	26,5
7	MasterPtu	1,240.16	49,4
8	Variasi Norbert	1,195.53	76,3
9	Team Elteor Borislavj~Elteor	1,180.83	79,9
10	Utasi Robert	1,164.63	73,8

Show: [All hosts](#) | Only hosts active in past 30 days

Computer ID <small>Click for more info</small>	Rank	Recent average credit	Total credit	CPU type	Operating system	Results	Last contact
300535	1	1,107.32	25,473.35	GenuineIntel Intel(R) Xeon(R) CPU E5420 @ 2.50GHz [Family 6 Model 23 Stepping 6]	Linux 2.6.18.8- xen-3.2.1-2mdv	233	22 Feb 2009 16:29:11 UTC

Show: [All hosts](#) | Only hosts active in past 30 days

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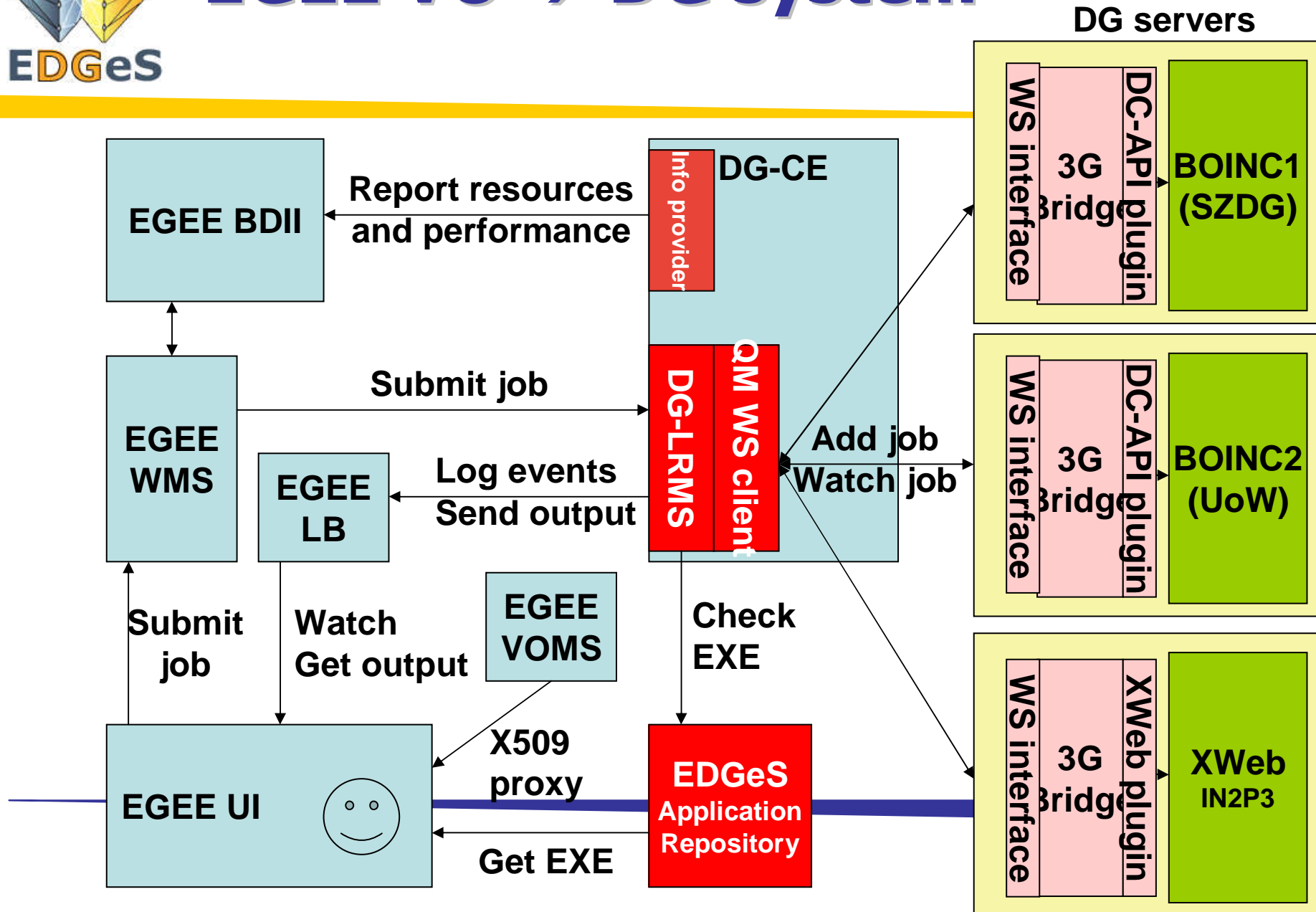
Generated 22 Feb 2009 16:41:11 UTC

http://szdg.lpbs.sztaki.hu/szdg/hosts_user.php?userid=23916&show_all=1&sort=rpc_time

11	EDGeS User	1,138.59	369,782.02	Hungary	3 Apr 2008 11:36:35 UTC
12	Badidas	1,123.94	137,038.21	Norway	28 Dec 2006 13:37:10 UTC
13	eugenj	1,030.98	36,840.34	Russia	18 Jan 2009 19:53:40 UTC
14	Szasza	1,011.69	31,195.88	Hungary	16 Dec 2008 14:17:30 UTC
15	Juhász András	907.16	569,579.79	Hungary	18 Nov 2007 11:57:13 UTC
16	Chris	821.22	32,063.19	Germany	16 Dec 2008 20:36:12 UTC

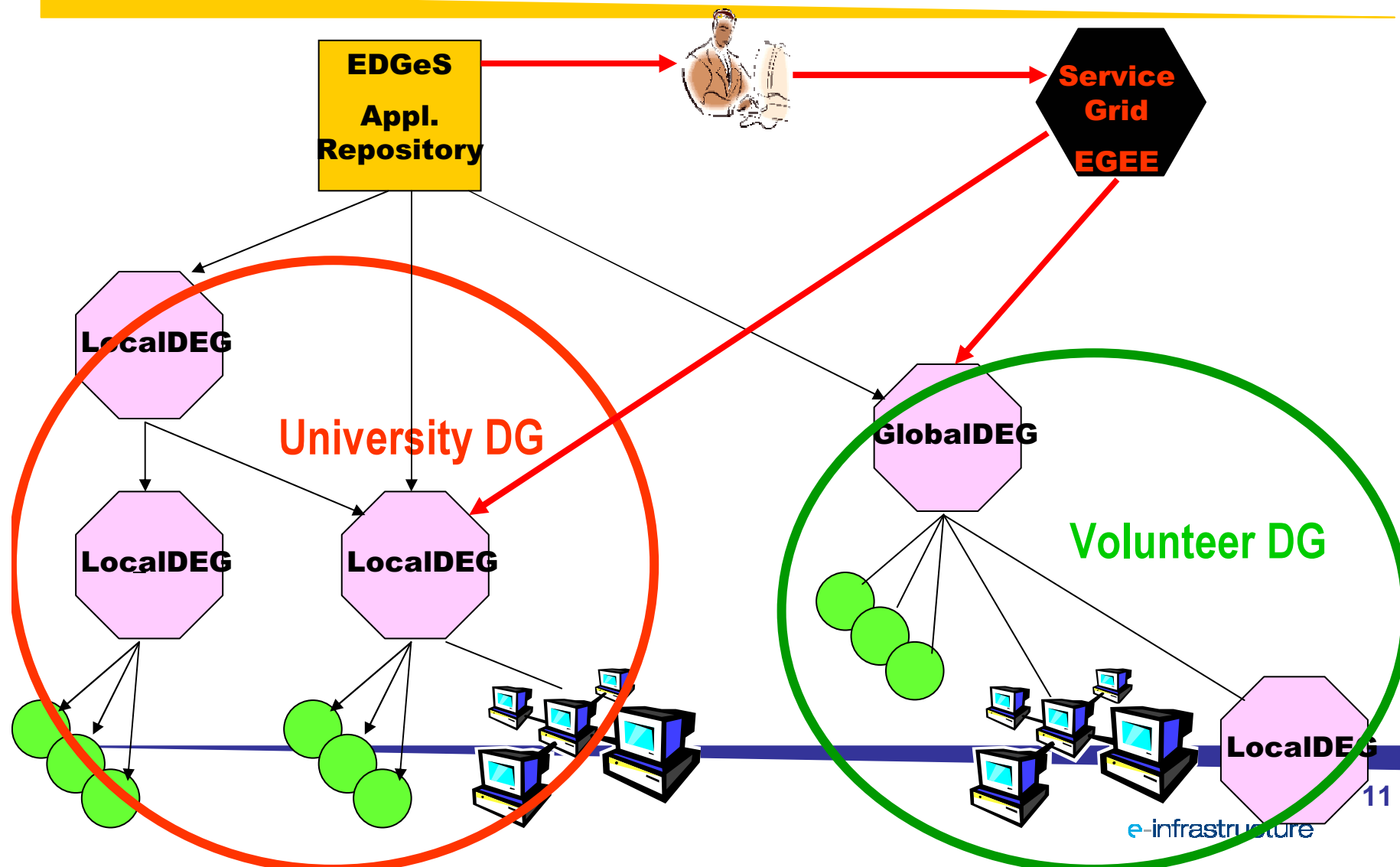


EGEE VO → DG system



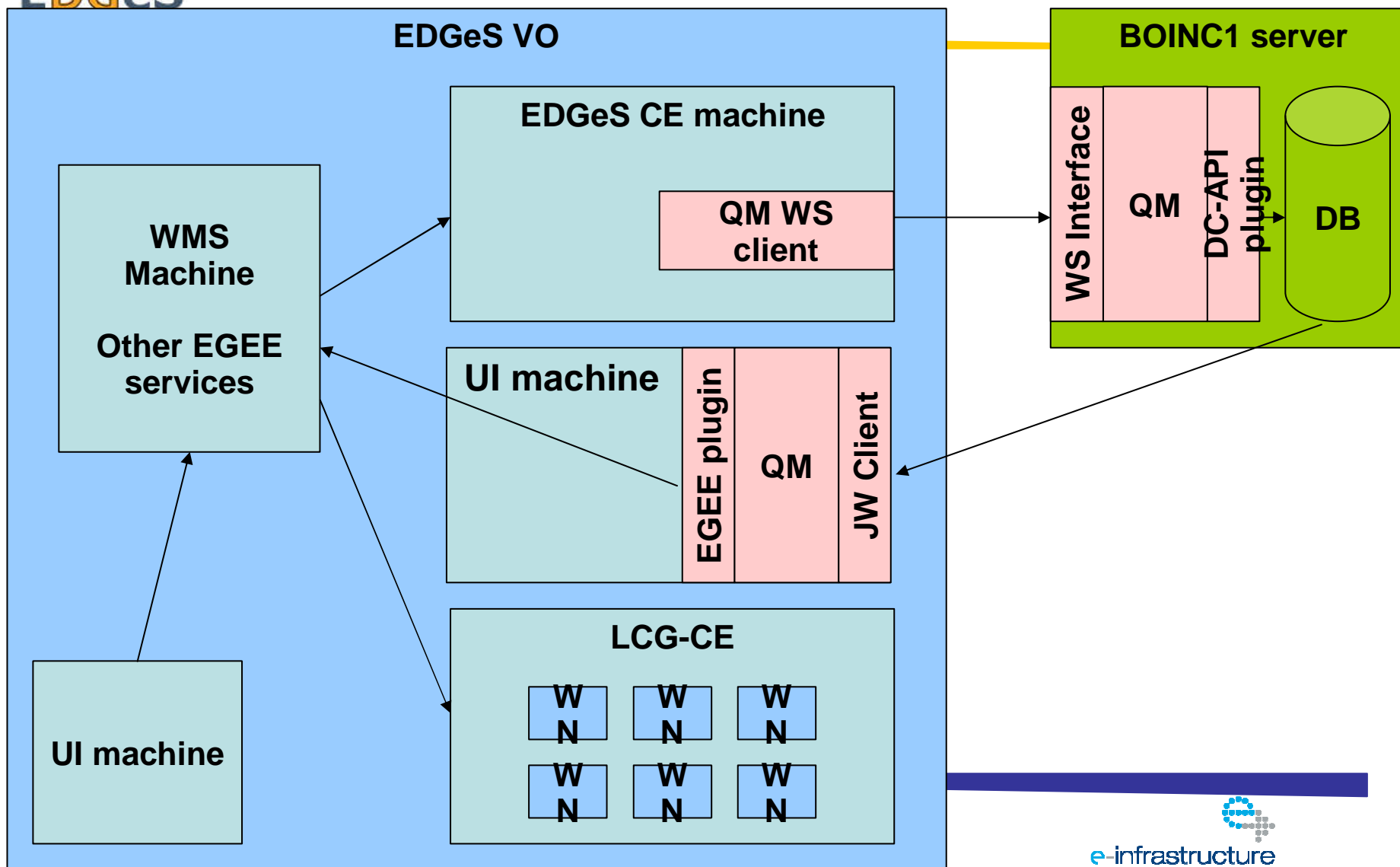


EGEE User access to various grids



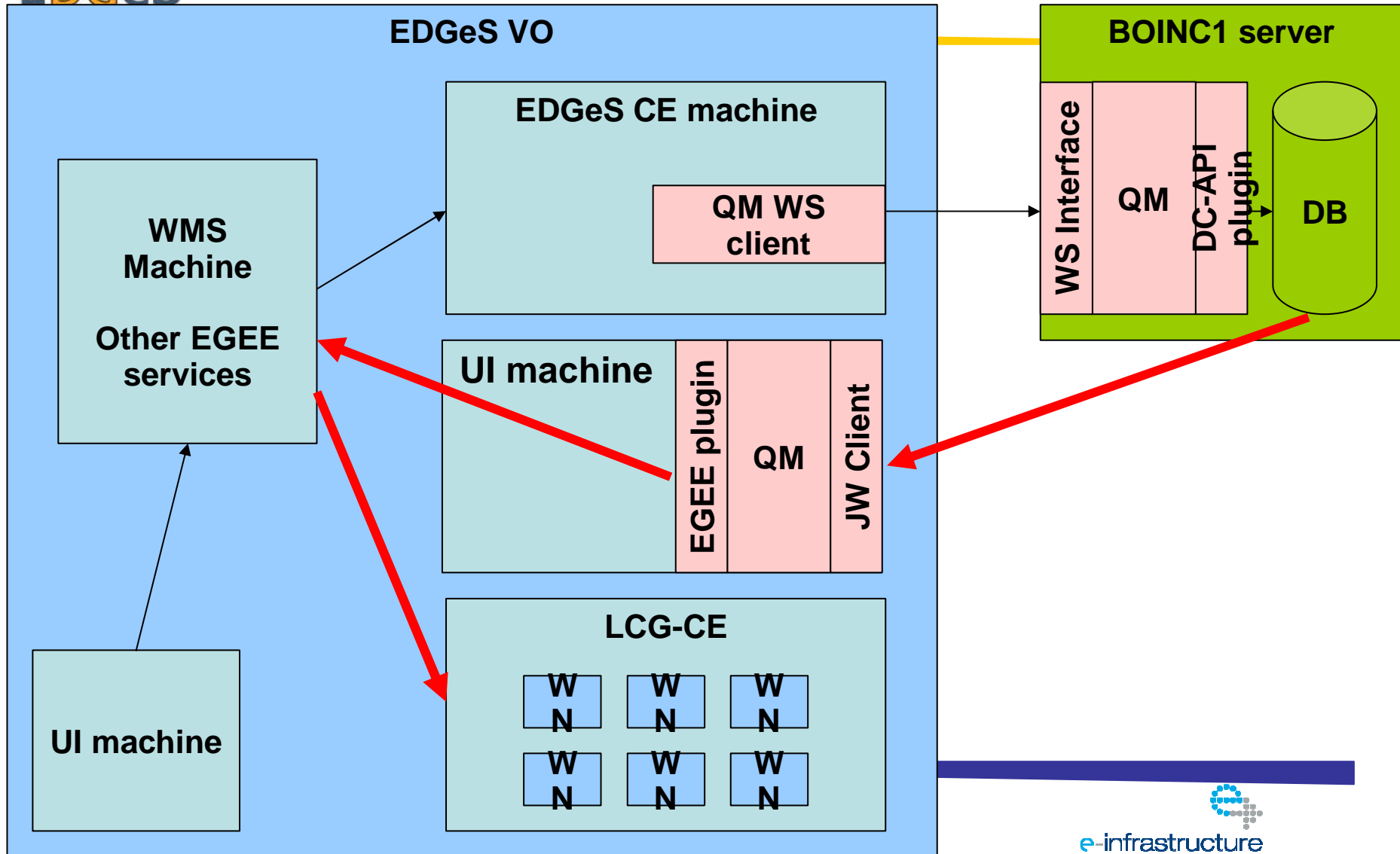


EGEE - BOINC bridge with a single DG



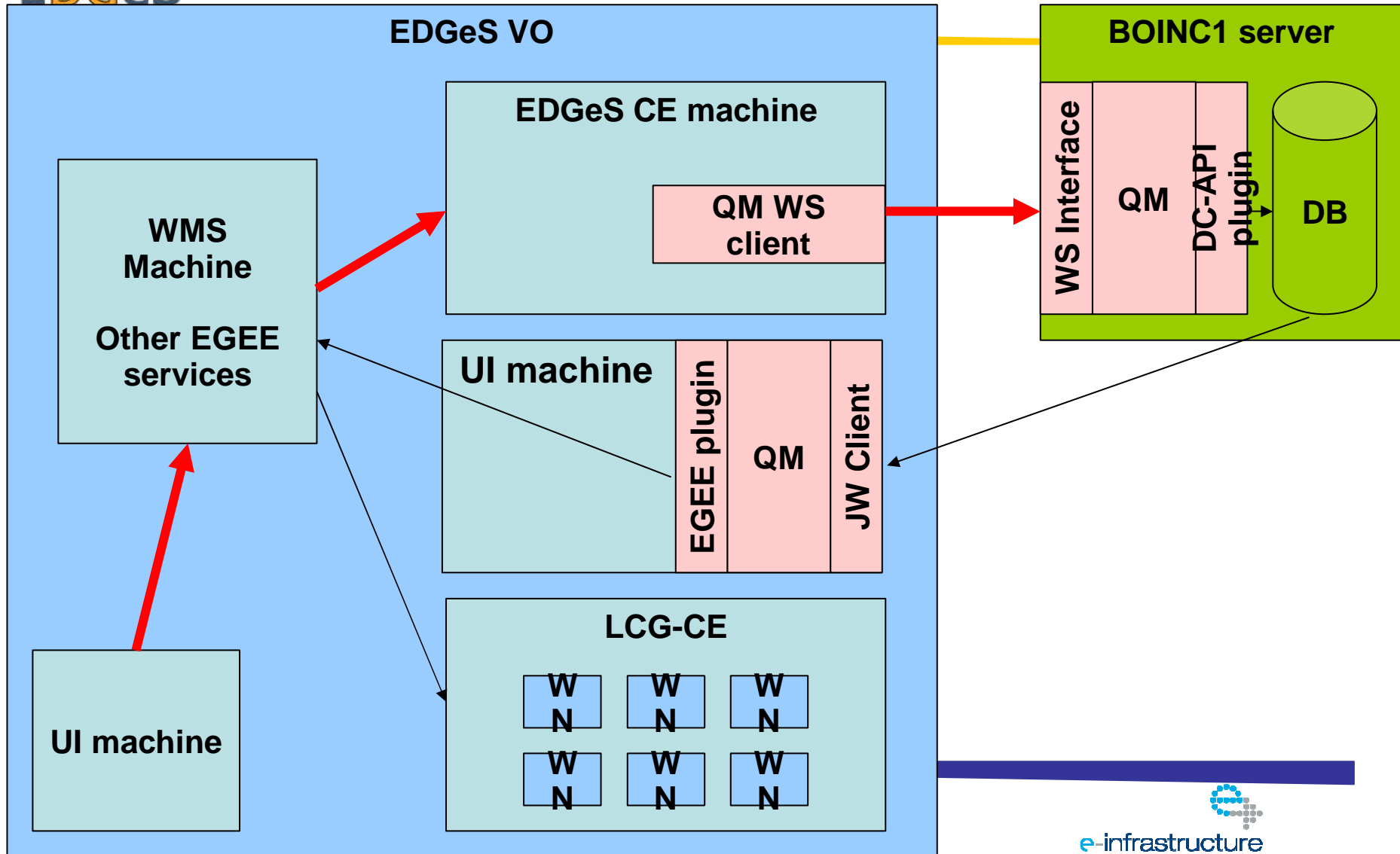


BOINC -> EGEE direction



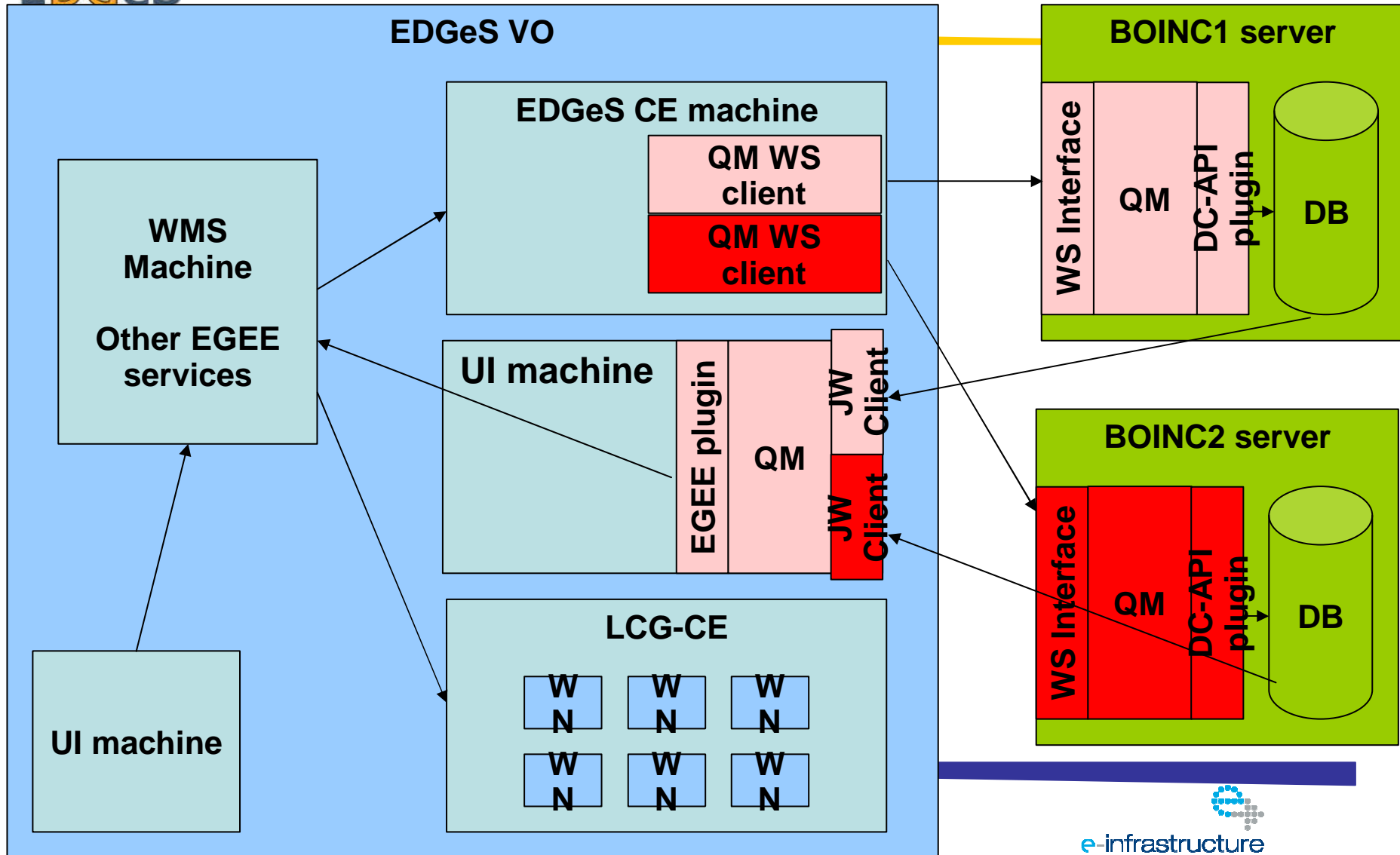


EGEE -> BOINC direction



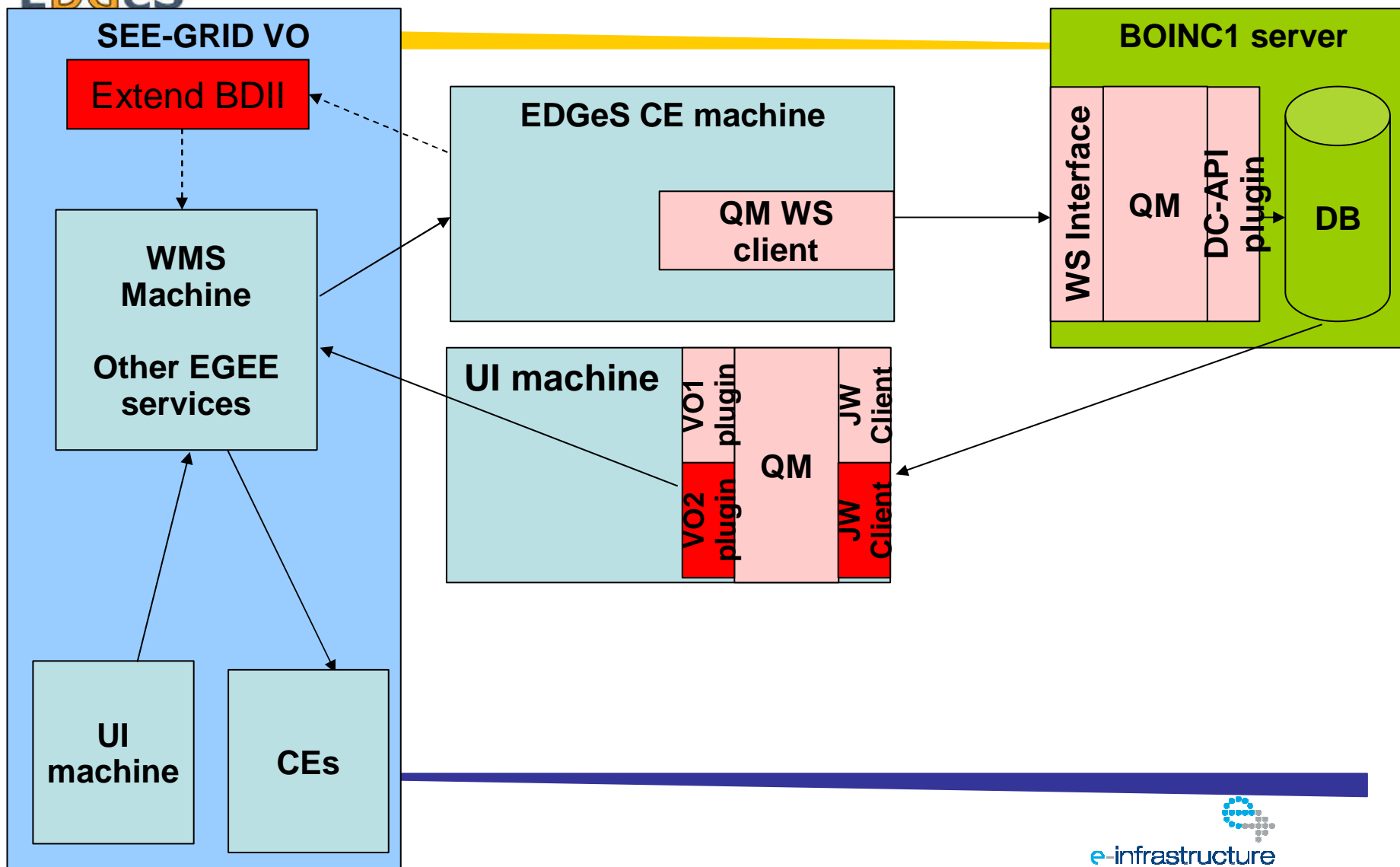


How to join by a new DG?



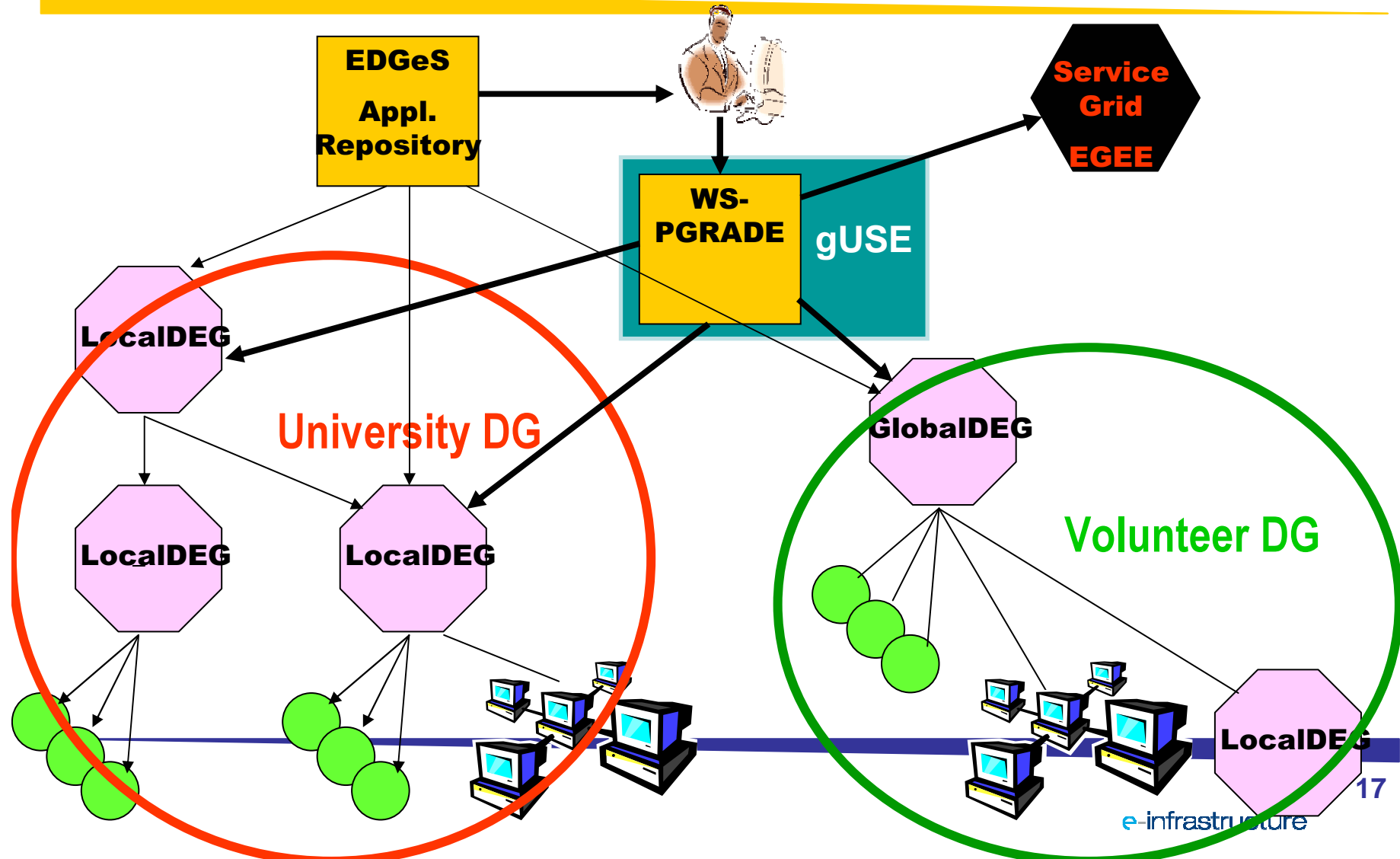


How to join by a new SG?



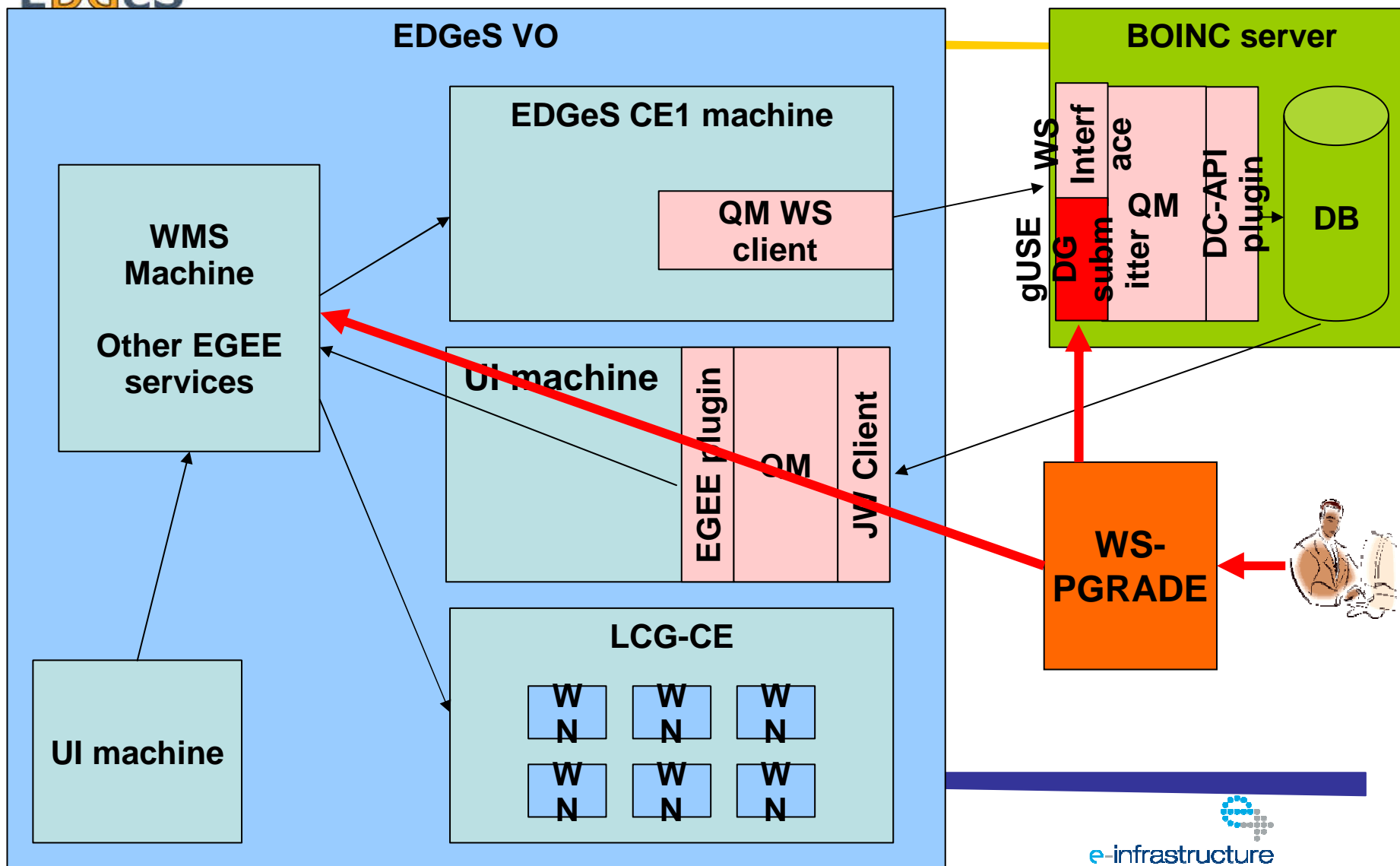


User access to various grids



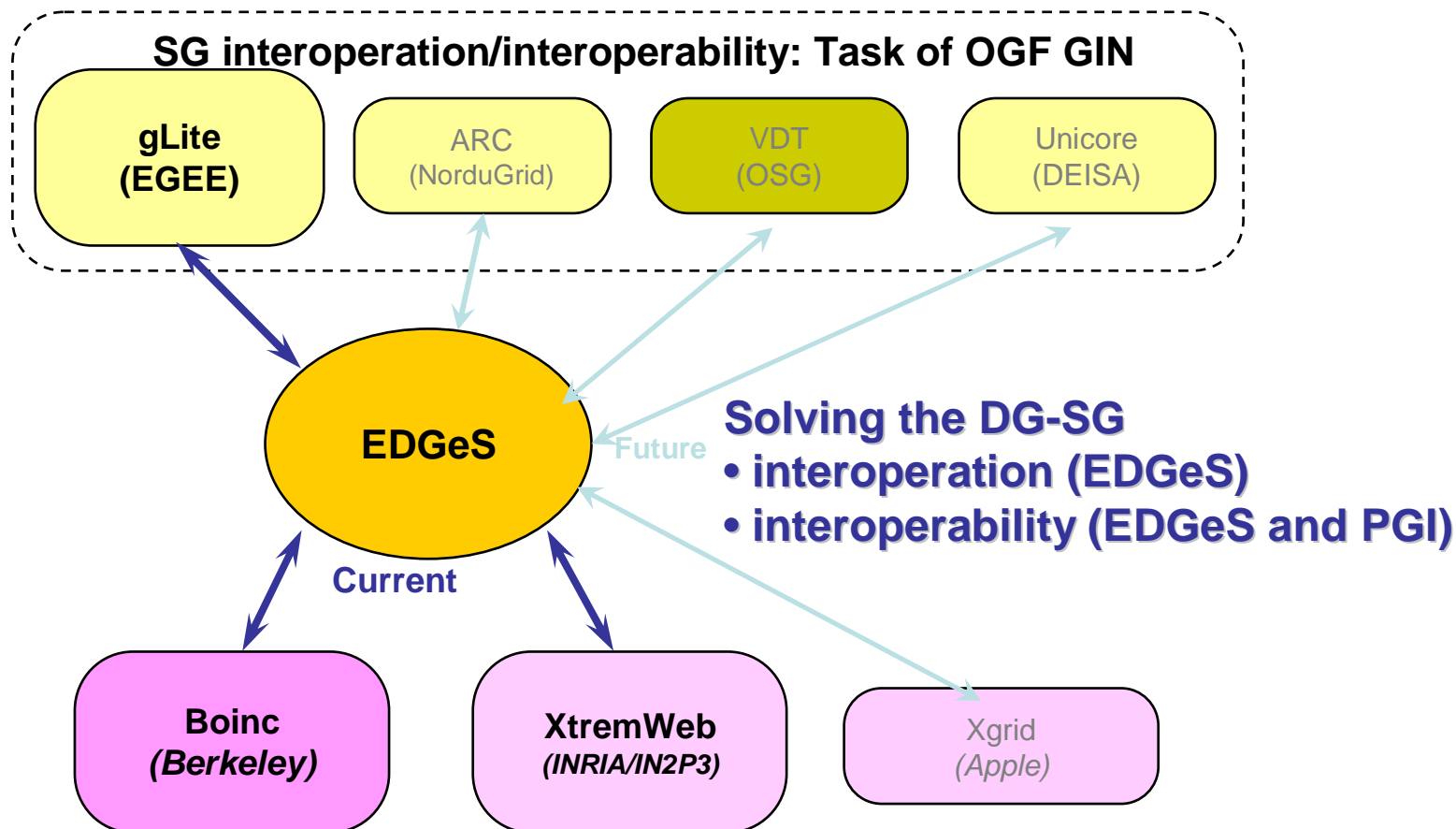


Accessing EDGeS by WS-PGRADE portal



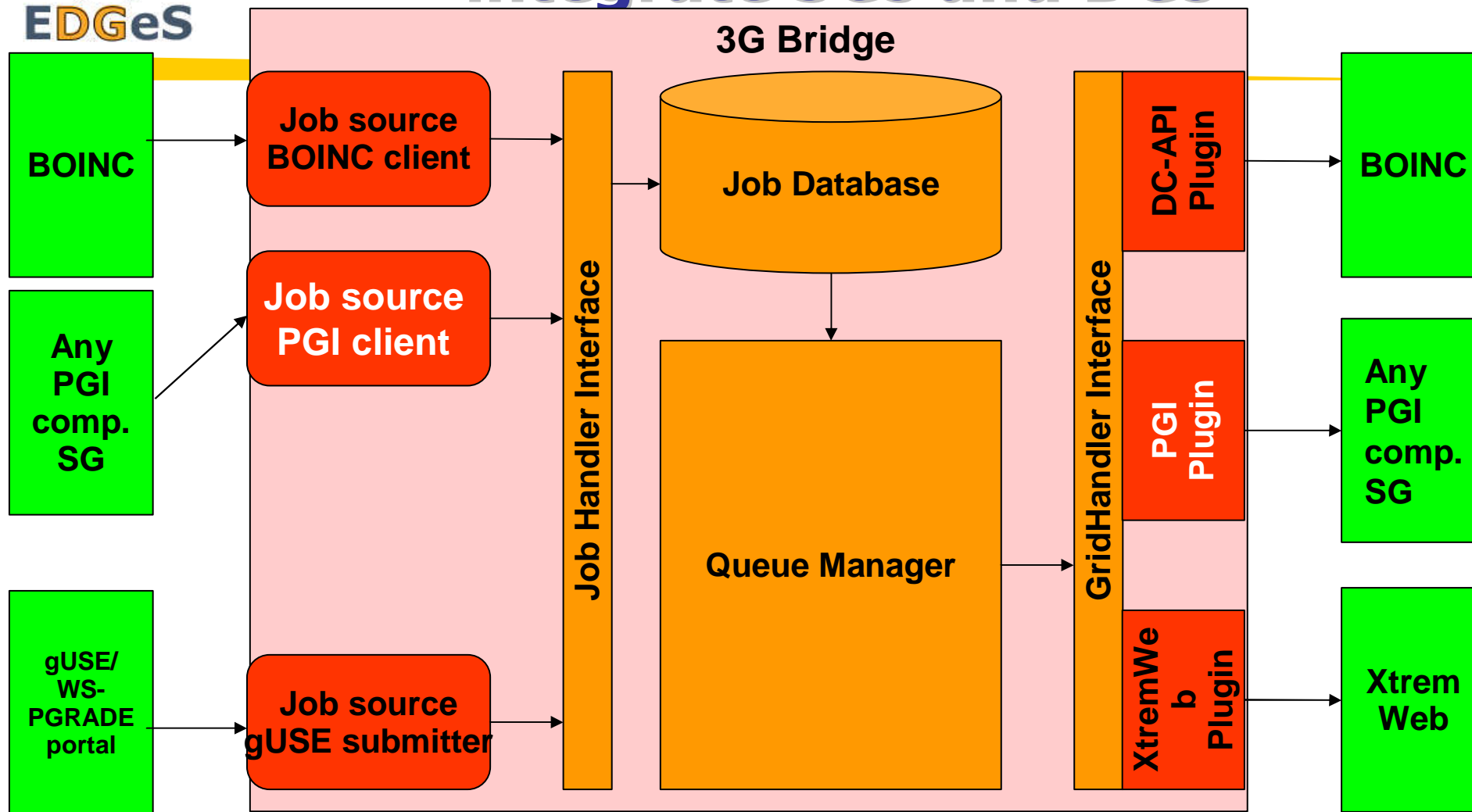


Integration of SG and DG systems





Generic Grid-Grid (3G) Bridge to integrate SGs and DGs





MoUs with other projects

- ▶ **Signed MoU with EGEE III**
 - ▶ Jointly select EGEE applications that should be migrated to EDGeS
 - ▶ Collaboration in porting apps to EDGeS
 - ▶ EGEE support for the establishment and operation of the EDGeS VO
 - ▶ Organizing joint events (summer school, user forum meetings)
- ▶ **Signed MoU with**
 - ▶ EELA-2
 - ▶ SEE-GRID-SCI
 - ▶ Russia Grid
- ▶ **Preparing MoUs with**
 - ▶ IberCivis DG
 - ▶ Univ. of Houston (Virtual Prairie DG)
 - ▶ Grid Kazakhstan





Summary

- EDGeS connects
 - BOINC or XtremWeb DGs
 - and gLite based SGs
- **EDGeS is an open infrastructure:**
 - Any BOINC or XtremWeb DG can join
 - Any gLite based SG can join
- **Any EGEE user can access EDGeS**
- **Any EGEE VO can be extended with DGs based on EDGeS bridge technology**
- **EDGeS helps any EGEE user community in porting their applications into EDGeS**



Joint EGEE and EDGeS Summer School

- Topic: Grid Application Support
- Budapest, Hungary, 29 June - 4 July 2009
- <http://www.egee.hu/grid09/>

- Learn more about EGEE and EDGeS technologies!





Thank you for your attention ...

Any
questions?



For more information please visit the EDGeS Website:

Join the EDGeS User & Industry Forum here!

<http://www.edges-grid.eu/>

Please contact us if you need support in porting your application to EDGeS!

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