Certificate Authorities
WP6 Meeting
EDG Barcelona, 12 May 2003

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Introduction

- The WP6 CA group
  - CA managers of the national CA's (and others)
  - Includes EU CrossGrid, US DOE, Canada, …(LCG)
- Defines best practice and min. standards for acceptable CA's
  - Maintains list of approved CA's
  - Acceptance and Feature Matrix (tool to help)
- New CA's make presentation to a meeting
  - Interim approval possible via e-mail
- Approved CA details (public key, signing policy, etc)
  - Included in the WP6 distribution
- CNRS acts as the "catch all" CA
  - subject to satisfactory Registration procedures
- See http://marianne.in2p3.fr/datagrid/ca/

CA group meetings

- Only one meeting since the EDG Budapest meeting
  - 12/13 December 2002 at CERN
  - 19 people attended (two via video link to FNAL)
- Next meeting
  - 12/13 June 2003 (CERN)

Agenda: 12/13 Dec 02

- 5 new CA's
  - Canada, Cyprus, Greece, Poland, Slovakia
- 3 updated CA's (Ireland, UK, US DOE)
- All above were approved (Cyprus at end of Jan 03)
- First discussion of online CA's and repositories
  - FNAL Kerberos CA
  - SLAC Virtual Smart Card
  - Need to define an "online CA" and understand risks
- Directory – publishing certificates (for VOMS)
- X.509 Certificate Extensions
- Naming practices (to easily derive and locate CA services)
- Future organisation of CA management
  - GGF and regional PMA's

The approved CA's

18 on the trusted list (today)

- Canada, CERN, Cyprus, Czech Republic, France, Germany, Greece, Ireland, Italy, Netherlands, Nordic, Poland, Portugal, Russia, Slovakia, Spain, UK, USA
- "Catch-all" operated by CNRS/France

Under development/consideration

- Belgium, FNAL (KCA), Hungary, Israel, Japan, Taiwan, (Austria?)
- FNAL and Taiwan the furthest down the road

Application Testbed Users

VO	Users
CMS	106
WP6	87
ALICE	63
ATLAS	55
Earth Obs.	29
BaBar	29
LHCb	28
ITeam	22
Genomic	22
TSTG	16
Medical Img.	6
DO	3

Certificate Authorities Group

- Evaluates & approves new CAs
- 16 currently approved.
- Collaborating w/ other grid proj.
- More on the way…
  - Cyprus
  - US FNAL (KCA)
  - Belgium
  - Taiwan

Virtual Organizations

- Also for Storage Elements
- Guidelines (EDG rules)

Course-grained Authorization.

CA	Users
INFN (IT)	113
CNRS (FR)	71
UK	58
CERN (CH)	44
NIKHEF (NL)	19
Russia	15
US DOE	10
Spain	8
FZK (D)	5
Czech Rep.	3
Portugal	3
NorduGrid	2
Poland	1
Canada	0
Greece	0
Slovakia	0
TOTAL	352

2nd EU Review (Loomis)

DataGrid CAs

Status at May 6th 2003

CA	Country	Project	Certificates issued
Total			2146
DOES	US	EDG, PPDG, iVDGL, ESG	800
CNRS	France, Catch-all	EDG	468
IFAE	Spain	EDG, CrossGrid, IrisGrid	263
NorduGrid	Scandinavian Countries	EDG, NorduGrid	232
CERN	CERN	EDG, LCG	230
German-Grid	Germany	EDG, CrossGrid	81
Grid-Ireland	Ireland	EDG	72
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CNRS CA, DataGrid Catch-All CA

Status at May 6th 2003

Country	Institute	# Certificate
Total		**468**
France	CNRS, CEA/DAPNIA, CS, Ecole Centrale Paris, Universities, ESRF, CNG, GridXpert	**192**
EDG Tutorials		**177**
Total Others		**99**
Taiwan	Academia of Sinica, National Central University	22
Italy	ESA/ESRIN, ITC-irst, CNR	20
Israel	Weizmann Institute	10
Austria	University of Innsbruck	9
Belgium	Louvain and Brussel Universities	7
Hungary	SZTAKI, RITPMS, KFKI-RMKI	8
Slovakia	University of Paul Joseph Safarik	8
Korean	Korean Center for High Energy Physics	3
Japan	University of Tokyo	3
China	Nanjing University	2
Switzerland	Swiss Institute of Bioinformatics	2
Croatia	University of Zagreb	2
India	Department of Atomic Energie	2
Germany	Technische Universitaet Dresden	1

Future Plans

- Life after DataGrid?
  - LHC Computing Grid (LCG)
  - EU FP6 (EGEE)
- Many of the national CA's serve a community larger than just DataGrid (and its applications)
- Sensible to manage the CA requirements and best practices in a broad forum
  - GGF now working on this
  - We (the various CA's) are major players
- Online CA's and certificate repositories
  - Need more work to understand and manage risks and responsibilities
- Relying parties (projects, sites) need to be able to define a "trusted" list according to their requirements
  - Tools could help a lot (like the Acceptance matrix)

VO Management

- Change of subject but a concern for WP6!
- I have always pointed out that Authorization (AuthZ) is just as important as Authentication
  - We need to check carefully before registering users in VO
- LCG discussing/planning how to manage User registration
- For Production Grid on a very large scale
  - Site managers/security officers require robust registration procedures
- Initial thoughts (for LCG)
  - Distributed VO registration authorities (for AuthZ) based on National Tier1/2 contacts
- LCG now considering RA's based on the Experiment VO's
  - EDG and LCG should work together on this (now)
  - To make more robust than current procedures