International Grid Trust Federation

IGTF is the trust “glue” for Grids,

The Grid is a distributed computing paradigm and middleware that is supporting large scale, world-wide scientific research such as the LHC in physics.

IGTF is composed of 3 regional PMAs, each supporting a separate zone in the world: EUGridPMA, TAPMA, and APGridPMA.

IGTF Operations

- Commissioned: Mar 2003 (Tokyo) –
  Chartered: October 10th, 2003 at GGF 16
  (Chicago)
- Federation of European, Asian, and Western Hemisphere Policy Management Authorities
  - Focused on Identity management and authentication for Grids
- Regional Authorities:
  - EU Grid Policy Management Authority
    - GGF: Enabling Grids for E-science in Europe
  - Asian Pacific Policy Management Authority
  - APGridN: National Institute of Advanced
    Industrial Science and Technology
  - The Americas Grid PMA – newly chartered Apr 2003
    - Canada and USA (DDE, NESF): Latin American organizations soon
- Establishment of top level CA registries and related services
- Root CA certificates, CA repositories and CA publishing points
- APGrid PMA registry – de facto (CNRS:
  French National Center for Scientific Research)

Why Should Educause Care?

- Policy: Support your research and education collaborations in large scale science
- Technology: Support your technology needs and infrastructure:
  - higher education Bridge PKI
  - Grids do not support undersized mesh or “network” PKIs
  - Internet Deep Highway
  - grid PKIs are not good at dealing with “family spray” or chains of trusted CA certificates
  - Commercial CA identity provider support
  - Technical policy, and political barriers to overcome
  - Some progress on this in Europe
  - Inter-operability and certification technology
  - Many technology developments underway to bridge

The Americas Grid PMA

TAGPMA (The Americas Grid PMA) and Internet2 and Educause PKIs need to work together to make sure 12/HE PKIs can meet their customers’ needs for Grid interoperability.

Charter Members
- Dartmouth College/12/HEBCG
- Texas High Energy Grid
- Fermi National Laboratory (FNAL)
- Sandige Supercomputing Center
- TeraGrid
- Open Science Grid (OSG)
- DOEGrids (US-DOE Labs)
- CANARIE (Grid Canada)

Latin American Candidates
- Venezuela: ULA
- Cuba: CUBAENERGIA
- Chile: UTFSM, REUNA, UDEC
- Peru: SENAMI
- Mexico: UNAM
- Argentina: UNLP
- Brazil: UFRJ, CNEN, CECERJ/CEDERJ, RNP, UFF

Certificate Profiles

- Classic PKI
  - Certificate issuance
  - Certificate revocation
  - Certificate update
- Short lived certificate (SLS)
  - OGC in a subset, and analogy
  - SLS in a subset, and analogy
  - OCSP in a subset, and analogy
- Certificate Validation Service
  - Certificate trust decisions in a trusted service
  - Trust center – moderator vs. relationship, vs. relationship, vs. relationship, vs. relationship
  - Policy, we cannot support to certificate all client and sub-claims, as is the attractive
  - Services can range from registry to charging conditions
  - Delegation of validation service in a managed services model
  - situated certificate path discovery and path publication for bridge PKIs
  - Essential for both support of higher Education Bridge CA

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