## NECTEC GRID CA

Sornthep Vannarat NECTEC

### **About NECTEC**

- National Electronics and Computer Technology Center
- Government Research Institute
- Under National Science and Technology Development Agency (NSTDA), Ministry of Science and Technology
- Missions:
  - Research, development, design, and engineering of Electronics and ICT technologies
  - Technology transfer to industries
  - Human resources development for Electronics and ICT technologies
  - Technology-related infrastructure and policy development



# Grid Computing in Thailand

- □ Thai Grid Group
  - Started Dec. 2000
  - Build researcher community for Grid applications
  - Create Grid Computing infrastructure
  - Lead by Kasetsart University and members include NECTEC
- National Grid Project

INFORMATION GRID

- Proposed by KU's HPCNC to Min. of ICT. in 2004
- Approved with ~ \$US 5.5 M in 3 yrs
- Starting October 2005
- NECTEC as a committee member



















### **NECTEC Grid Infrastructure**

- Main Cluster Computer
  - 32 node Rocks Cluster
  - 3.2 TB storage
  - ~200 GFlobs
- ☐ Grid supporting systems
  - MDS (GT4 starting in Jan 2006)
  - Resource Broker (Starting in Apr 2006)
  - CA system (Started in July 2005)
- Access Grid System
  - Venue server
  - Bridge server
  - Mobile Clients





## Assumptions

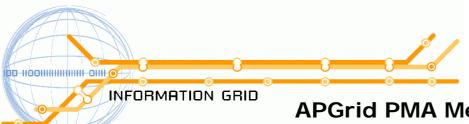
- ☐ Grid Computing Sites ~10x
- □ Number of users: ~100 or 5/month
- Number of transactions: 5/week



## **NECTEC-Grid CA Team**

- □ Piyawut Srichaikul (Division Director)
  - Sornthep Vannarat
    - □ Supakit Prueksaaroon
    - Suriya Uruekolan (main CA developer)
    - □ Pitsanu Laosangpha

		Roles					
Staff	PMA	User	RA	IA	OS	Help	
		Admin.				Desk	
Piyawut	Х	Х					
Sornthep	Х	Х	Х			Х	
Suriya		Х	Х	Х	Х	Х	
Supakit					Х		
Pitsanu					Х		

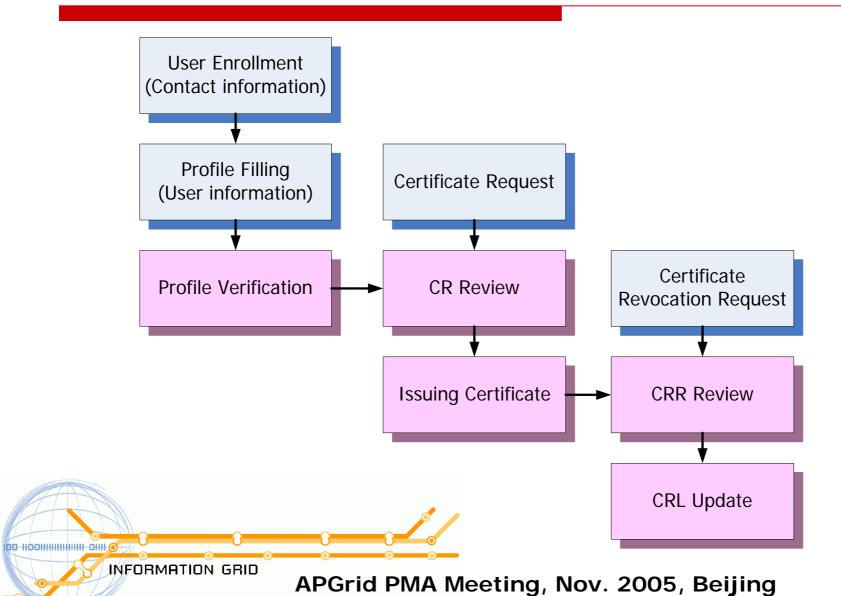


## Hardware & Software Stack

- Pentium4 3.0GHz, RAM 512MB, RAID1 SATA 120GB
- □ Slackware 10.1
- OpenSSL 0.9.7e
- ☐ MySQL 4
- □ PHP5 + CMS
- Logging systems
  - Unix Log is recorded in a separated system
  - MySQL + Apache logging system to be developed
- Backup system to be developed



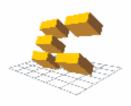
## RA+CA Operation



### Current status

- CA is relatively developed
- □ RA still need significant improvement
  - User information verification and management
  - User official document management





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#### Welcome to NECTEC-GRID Certificate Authority

NECTEC-GRID Certificate Authority provides X.509 certificates to support GRID Computing Research and Development.



#### We issue:

- Grid Computing Certificates
- Access Grid Certificates

NECTEC-GRID Certificate Authority is operated by Computing Research and Development Division ,National Electronics and Computer Technology Center.

Last Updated ( Thursday, 24 November 2005 )



#### **NECTEC-GRID Certificate Authority**

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All fields are required. Support Host and Service Certificate (eg.FTP or LDAP).

Grid Service Certificate Request Form				
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Organization :				
Certificate Type :	⊙ Host Certificate			
	C Service Certificate			
Submit Request				

