TW LCG Network Status Update

Academia Sinica Grid Computing Centre
Plan for Taiwan Tier-1 Network

- Backup Path to T0
- Primary Path to T0 (will install 10GE in 2006)
Taiwan Status

- ASNet* runs one STM16 IPLC(2.5G) from Taipei to Amsterdam, plan to upgrade to 10G in Q1, 2007.
- 2 GE Local loop from Amsterdam to Geneva (via NetherLight LightPath Service)
- ASCC LCG facilities now have multiple GE uplinks to ASNet’s core router
- ASNet connects (10GE*N + STM64*n) to domestic backbone, a.k.a. TANet/TWAREN joint backbone, to reach T2’s in Taiwan.
- Every T2 in Taiwan has it’s own 10GE link to the domestic backbone

* ASNet (Academic Services Network, as#9264) is the network division and is also the network name that registered in APNIC.
TANet International Backbone in 2006

- TANet
- Sinica
- NCHC
- Internet
- UUNET
- TWGate
- Asia-Pacific

Connections:
- Gigabit Ethernet x 2 from TANet to Sinica
- Gigabit Ethernet from TANet to NCHC
- STM-16/OC48 from TANet to Internet
- Gigabit Ethernet from Internet to UUNET
- Gigabit Ethernet x 2 from TWGate to Asia-Pacific

Co-location in Palo Alto

Update: Feb 16, 2006
International R&E Network from Taiwan

Japan

US-West

APAN

622M

Peering by PAIX

2.5G

TWAREN=5G
TAnet=2.5G
ASnet=1.2G

US-East

STARLIGHT

622M

NL-Amsterdam

Hong Kong

Advantage

Singapore

155M

ACRC

Singapore

SingAREN

Academia Sinica Grid Computing
Taiwan Domestic High-speed Research Links

- NCTU 交通大學
- NTHU 清華大學
- 中興大學 NCHU
- 暨南大學
- CCU 中正大學
- NCKU 成功大學
- 中山大學 NSYSU
- NTU 台灣大學
- NCU 中央大學

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green: 10GE
blue: STM-64
Asia Pacific Link Status

• Taipei – Tokyo
  • STM-4 IPLC
  • 2*GE to APAN-JP (for J P Universities)
  • Will have GE to SiNet/SuperSiNet (for KEK)
  • IPLC should be increased before LCG production run.

• Taipei – Singapore
  • STM-1 IPLC to SingAREN (National Grid Office of Singapore)
Asia Pacific Link Status

- Taipei – Hong Kong
  - STM-4 IPLC
  - GE link to CERnet, GE link to CSTnet
    - CERnet : China Education and Research network
    - CSTnet : China Science and Technology network
  - Maybe have GE link with KOREA (still work with KOREN engineer)
ASNet StarLight Link (2005/07/14)

Note:
1. The 2*GE between ASnet router and StarLight switch are bonded by 802.3ad
2. IP MTU = 9174 Byte (Jumbo Frame)
3. There is no information about the location of ESnet router