

Future Network Testbed Federation Using PlanetLab in APAN countries

Future Network Testbed Meeting
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Joint Work With

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Emerging Testbeds

- PlanetLab
- (Mobile) EmuLab

- Characteristics
 - Open to public
 - Large scale
 - Low entry cost

“Enabling” Technology

- Services to try out at a scale like never before
- Disruptive approaches allowed
- All layers of network architecture experimented (yet to come!)

- Spread like wild fire

Adoption in Asia

- Mostly in academia
- Slow adoption in industry/research labs
 - Firewall policies
 - High membership fee
- PlanetLab Consortium (PLC) members
 - CJK, Taiwan, Hong Kong, India, Singapore, New Zealand, Australia, Mongolia (?)
 - Many countries still left out

Status Quo of PlanetLab Testbeds in APAN countries

- Private Planetlab Testbeds
 - China
 - Japan
 - Korea

China - 6PlanetLab

- IPv6 support
- User-Oriented Addressing
 - Assign IP addresses to users
- 52 nodes over 25 sites
 - Status check: <http://202.38.118.4>

Japan - CORE, the Private PlanetLab

- CORE = Collaborative Overlay Research Environment
- 50 nodes in 10 sites
 - <http://www.planet-lab-jp.org/>

Korea - PlanetLab Korea

- Yet to be built
 - 10 nodes in 4 sites in 2008
 - KAIST, GIST, NIA, KT on KOREN
- Enrollment policy
 - Open to public

Benefits of Private PlanetLab

- Independent membership policy
 - Can accommodate small businesses/labs
 - Can accommodate *anyone*
- Independent roll-out/upgrade
 - e.g. 6PlanetLab

Limitations of Private PlanetLab

- Coverage
 - Hard to reach global scale
- Diversity
 - Access/Backbone B/W
 - End hosts

Push for PlanetLab CJK/Asia

- Overcome limitations
 - Add diversity and expand coverage
- Build a basis for global federation
- Form a core group of technical expertise
 - In parallel to OneLab and PLC

Factors That Weighed In

- Integrate goals of individual country's PL's and leave room for future participation
 - C+J+K +??
- Funding
 - Independent sources
- Operational O/H
 - No common funding = no centralized admin

Past Roadmap

- 2004
 - PlanetLab BoF at 18th APAN in Cairns
 - 1st PlanetLab Asia Workshop in Seoul
- 2006
 - PlanetLab BoF at 23rd APAN in Tokyo
 - Overlay Network Workshop in Tokyo
- 2008
 - PlanetLab BoF at CFI in Seoul
 - Future Network Testbed TF at 26th APAN in Queenstown

Announcements

- PAM 2009
 - Wed, 4/1 to Fri, 4/3 at SNU Hoam Faculty Club
 - Submission deadline: Oct. 1st
- ROADS 2008 and 2009
 - Co-located with Co-NEXT 2008 in Madrid
 - Submission deadline: Sept. 12th
 - ROADS 2009 to come to Japan in June 2009

Future Roadmap

- Federated PlanetLab Asia
 - Up and running by 2009/2010?
- PlanetLab Asia + ???
 - After 2010?
 - ??? = other private testbed