

20130206 SLAC SEECS and UNIMAS Meeting

Attendees

Invitees: Anjum*, Kashif*, Johari-, Nara, Abdullah*, Badrul1, Hanan, Fidah2, Saqib*, Les*, Raja?, Umar and Bebo2?

- Unable to attend either date

1 Confirmed can attend 1st date

2 Confirmed can attend 2nd date

? Maybe able to attend 1st date

* Confirmed can attend both dates (Feb 6 & 7 Pacific Time)

Actual attendees: Anjum, Badrul, Hanan, Saqib, Les

General

Johari is setting up a web landing site for the Malaysian collaboration. The start is at <http://pinger.unimas.my/pinger>. It will contain:

- brief history, description of the project and the objectives
- link to main SLAC page and also NUST
- list of names, contact details (email, etc), their affiliation, and they scope of job in the project
- a link to the data collected from UNIMAS and also other hosts in UM, USM, and UTM when they have their monitoring host running
- link to meeting minutes in Confluence

We need an archived email list. It does not have to be at the web site. Badrul at UM set up a Google Groups email list at pinger-my@googlegroups.com. All have been invited.

Take a peek at <http://tweetping.net> for an interesting real-time display of twitter usage worldwide.

It would help to have an MoU between SLAC and the UTM. Les will look into this.

Workshops

Johari is putting together a web site for the workshop at UNIMAS.

Johari recommended a future PingER workshop later this year. This time it would be in a Peninsular Malaysia site hosted at either UTM or UM. **Hanan at UTM has agreed to take the lead. We need to set some dates. Anjum prefers it to be out of semester time but that is not critical. Les has no constraints at the moment. Hanan may have a constraint early June. We need to get 4 or 5 universities involved. We will need travel money to fund Les. This may be associated with a thesis review or something similar.**

Funding

Johari has submitted a proposal for FRGS (Fundamental Research Grant Scheme). There are 5 members of the proposal (5 is the max). Johari decided to get 2 more people from the group in UNIMAS to join the PingER project, thus we are unable to include our counterparts in UM and UTM (Dr Abdullah and Prof Hanan). We can go for a bigger project such as the eScience or LRGS (Long-term Research Grant Scheme) which can accommodate a larger number of people, more funding and encourage cross institutions collaboration.

At a later stage the infrastructure and data can be used for research in: anomaly detection; correlation of performance across multiple routes; and for GeoLocation. Johari would like to see UM and UTM, which are research universities, strongly engaged in the next round of research proposals. Anjum mentioned a paper on [Evaluation of IP Geolocation Algorithms on PingER and PlanetLab Infrastructures](#), by Fida Gilani et. al. submitted to IEEE INFOCOM 2011 UNIMAS. This could be updated with new data and maybe submitted to a different venue. Anjum forwarded a copy of the paper to Johari, Abdullah and Hanan with copies to the team. The idea is to see whether there is interest at UTM, UM or UNIMAS. **Johari has put together a draft that has been reviewed by Anjum. It will need to be shared when closer to completion.**

UNIMAS

There is a problem with the UNIMAS traceroute. It appears pinger.unimas.my is behind a NAT that is not passing the traceroute UDP probes. Other hosts at UNIMAS are not seeing the problem, so Johari believes it may have to do with the IPTABLES in pinger.unimas.my. Traceroute using the -I option (send the probes using ICMP rather than UDP) seems to work (but needs root access). Thus it would appear not to be in the return (ICMP "time exceeded") response. The probes (when not using the -I option) are UDP packets using sequentially ports 33434 - 33465 for up to 30 hops). It is possible that ports > some number may be blocked.

Johari has set up a guest account for Anjum. Anjum logged on and reported some concerns about addresses and interfaces not matching. The traceroute/ping server is important for the TULIP trilateration project and also understanding routing within and from Malaysia.

UTM

Saqib has successfully installed [pinger2.pl](#) at UTM. It is working and we are successfully gathering data from it. The URL is http://161.139.146.158/cgi-bin/ping_data.pl. **The hosts needs to have a name (e.g. pinger.utm.my) registered in DNS.**

The traceroute server is also running. It is at: <http://161.139.146.158/cgi-bin/traceroute.pl>, however it returns:

```
1 161.139.68.250 (161.139.68.250) 0.968 ms 1.284 ms 1.511 ms
2 * * *
```

traceroute -I www.cern.ch works which suggest the UDP probes to UDP ports 33434 - 33465 are being blocked. **Saqib is working with the IT department to understand.**

The addresses assigned to the servers are:

physical ip : 161.139.68.188
external ip 1 : 161.139.146.158
external ip 2 : 161.139.194.158

<HostList> needed to be added to pinger.xml. Les forwarded a list from UNIMAS., it has been installed.

UM

Dr Nor Badrul Anuar Jumaat has installed PingER on a cloud at UM. The machines are virtualized and will be running Ubuntu Linux. **Anjum pointed out that at NUST they are having a problem with a virtual machine running pinger2.pl and the /tmp/ disk space filling up.** Anjum is exploring this in more detail, so at the moment it is just a head's up. Johari has sent Kashif's workshop presentations to Dr. Nor. **After this meeting, Badrul notified Les of the name and address of the server pinger.fsktm.um.edu.my (202.185.107.238).** The UM monitoring host has been added to the NODELIST PingER meta data base at SLAC. We will need to add the <HostList> for Malaysian and S.E Asian hosts to the pinger.xml file at UM. At the moment the only Malaysian host being monitored is the pinger.unimas.my beacon. **Les has sent a copy of the HostList from UNIMAS.** Since the traceroute is working, "we" can start to make a routing study similar to <https://confluence.slac.stanford.edu/display/IEPM/ Routing+from+UNIMAS>.

USM

Les met with Navaneethan Arjuman of USM at the TIP meeting in Hawaii. He seems interested in the research side of things. He is a researcher not an operations person and has been involved in network monitoring for 4 years. He talked of a tool they have developed called INFMON, if I heard right. He also is interested in a research proposal. He also strongly recommends we engage with MYREN. Les tried pinging www.usm.my but pings are blocked. He can ping nav6.usm.my. This host has been added to the hosts monitored from SLAC. Nava has provided an IPv6 address to monitor, however, SLAC has not enabled IPv6 yet.

NUST

From Arshad: Rector has agreed to support one person visit to SLAC. Raja has been nominated. He has sent a cv to Les and has filled out the DoE form. Les crafted the invitation and it has been sent to upper management for signature Dec 21, 2012. Les briefed the SLAC Cybersecurity person on 1/10/2013. He has also filled out another form for hosting visitors from sensitive nations. Les has taken and passed the training on hosting visitors from sensitive nations. Cybersecurity want more details on what Raja can access and Les has provided it. **SLAC CyberSecurity say they do not approve or disapprove visitors so I have requested (2/8/2013) the CIO to sign and pass to the CEO for signature. Raja has completed his paperwork and is ready to submit. As soon as Les hears the letter has been signed by the CIO (and before it is sent to Raja), Les will get back to Raja to proceed.**

The December report on Pakistani educational node connectivity has been sent to the Rector for distribution to HEC. This was posted at <http://pinger.seecs.edu.pk/monthly-report/>.

Potential projects

Ipv6

With Malaysia moving quickly to IPv6 (already Nava at USM has sent Les an IPv6 address that he recommends monitoring), converting PingER (especially the gathering, analysis) work with IPv6 is an interesting problem. Anjum believe he could provide an undergraduate to start on this.

PingER at SLAC

The IEEE Spectrum article on the Digital Divide in Africa and PingER was published in the February issue. The soft copies are available at: <http://spectrum.ieee.org/telecom/internet/how-bad-is-africas-internet> and <http://spectrum.ieee.org/telecom/internet/how-bad-is-africas-internet/a-simple-tool-for-measuring-digital-development>.

The [annual report](#) to the International Committee for Future Accelerators (ICFA) Standing Committee on Inter-regional Connectivity (SCIC) has also been completed.

TULIP

Raja has completed the MATLAB script and used it to generate some input files for Pakistan and Europe. However using the alpha values (function of both region and RTT value) found through the alpha analysis the distances were underestimates in some cases. He is working on finding the cause and possible solution.

Future meeting - Les

Next meeting Wednesday 20 February 2013 8:00pm Pacific Daylight Time, Thursday 21 February 2013 9:00am Pakistan time, Thursday 21 February 2013 12:00 noon Malaysian time.

Future agenda items:

Workshop: dates, funding, other sites

UM progress

UTM progress

UNIMAS progress

IPv6 porting

Case studies: routing, performance for Malaysia and S.E. Asia. We need someone to take the lead on this for Malaysia.

Coordinates:

Institute	name and Email	Skype ID
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