20100909 - SEECS SLAC Meeting

Agenda for SEECS/SLAC meeting Sept 9th 2010.

Pakistani case study – Fahad, Anjum

1. PERN is now up for last 10 days
2. pinger.nwfpuet.edu.pk down for last 5 days (see http://www-iepm.slac.stanford.edu/monitoring/checkdata/) they have solved that.
3. uetaxila down 15 days
4. aup, uob uet also down could be down due to holidays
5. Full matrix in Pakistan (UOB, others? do not have full set of Pakistani beacons). The Pakistani monitoring nodes are supposed to get the beacon list from SEECS. LSE, UOB, UTAXILA, UET in need of help (see matrix) – Anjum has a student who can fix but need password so they can fix the nodes so they get the list from the SEECS server. Unsure of how long to fix. Fahad is busy these days. We may be getting additional nodes. We need to get the information so we can enter into the TULIP and PingER databases. Zafar will update our databases. There will be 21 monitors in Pakistan.
6. Kashif Sataar of SEECS is managing the hosts and contacts host contacts in case of problems.

ping_data.pl - Les, Fahad

1. ping_data.pl: new version with improved diagnostics installed at SLAC and SPRACE, Brazil (see http://pinger.sprace.org.br/cgi-bin/ping_data.pl? and look at Log) - Les
2. Fahad will integrate the Smokeping graphs into the MAGGIE version.

PERN asked about the pingER data, what confidence can we tell the universities about the data, Umar took a stab at it. This is a representation of the user experience and what is possible, there are other tools such as NetFlow that would be more useful for understanding the backbone. There is information that points to the indirectness of routing coming from the min-RTT. This data is extremely valuable for identifying last mile problems. PTCL was offering 400ms on average between Karachi and Islamabad. This is very bad. We urge Anjum to get PERN to monitor the backbone routers at each city.

Can we install perfSONAR services on host in PERN network. can PERN install netflow monitoring. Netflow would need a netflow connector to be installed at the PERN node. This would be good to look at utilization of the backbone. This is a fairly large effor, e.g. full time person for several months. Installing perfSONAR is still a work in progress.

TULIP

1. Added perfSONAR landmarks, made changes to reflector.cgi, Zafar has fixed TULIP database so filtering (tulip-tuning.pl)) works - Zafar
2. Also added more Pakistani PingER landmarks to TULIP database
3. TULIP map looking good (see map) - Faisal
4. Using MySQL client for mysql TULIP database - Faisal
5. Add shortest ping as estimate think about if other estimates fail (e.g. inscribed circle) or outside d'=min_RTT*100km then use shortest ping landmark coords - Faisal
6. Should add ability (to reflector.cgi) to ignore landmarks which are within a specified "short" distance of one that has already been used. Mark such landmarks as "dups" - Zafar
7. Big problem with integrated version of Apollonius and Tri-Lateration not working in TULIP Live - Faisal
    a. Integrated Code doesn't work with Reflector at SLAC
    b. Trilateration doesn't give correct estimates in integrated code.

TULIP GUI - Faisal

1. Working on the summary:
    - It needs a refactorization. It is done.
2. Live GUI:
    - Needs refactorization.
    - Adding other geolocation estimates to GeoIPTools (GeoTools, IPLocationTools, whois, shortest ping ...) to come. Some things are ready to be installed when the trlat & apollonius work

Possible project

1. Add traceroute & ping to my host and to selected host
    - Build on TULIP map
2. The advantage compared to other traceroute maps is that the laundering keeps only good servers

Why does Apollonius fail - Farrah

1. Apollonius fails in 55 out 171 cases why?
2. Zafar will send email to Umar specifying the concern, then Umar will talk to Farrah at length

MatLab - Zafar

1. Can't convert MatLab code to Java in an automated fashion.
2. Zafar tried a tool (Matlab Builder JA) to do this.
3. Alternate solutions, rewrite the selected MatLab code, or use a MatLab server. We decided that this is not feasible.
4. Might ssh to a Linux Matlab machine and not implement the MatLab code again.

5. Get a license for Matlab machine. Emailed Kay Ganapathi (SLAC employee handling licenses) - Zafar

Paper - Umar, Fida, Zafar

1. Google waves alternate or update on status - Umar
2. SVN for paper, Umar will set up
3. Where do we go from here, do we await INFOCOM comments?
   - Do we rewrite with a new story, rewrite the introduction explaining what we are trying to sell, focus on comparative analysis, global extension, dependence on landmarks, tool. Put together a bulleted points of what the story line is. Umar, Fida, Zafar, Les will put together story line bullets. For the next meeting in a week. We need to identify where it is being submitted to determine what to focus on. Two possible venues are PAM (paper Oct 9, abstract Oct 2nd) and IMC-- Umar is looking at
   - How much time can Umar spend on it?
   - Fall semester starts Monday so Umar cannot drive.
   - Need a person to drive the paper, in particular the first few pages with the storyline.
   - Ideally the person to re-write is Fida, he wants to do it, but with 3 courses and assignments but cannot be the driving force. Can Zafar take the reins. Zafar is volunteering to re-write the story line. Made a few changes to the Introduction part last week. Added a few lines about infrastructure. Feedback and guidelines required. Fida and Zafar are prepared to respond to comments/questions in 24-48 hours.
   - 1st step put together a story line in Google wave.

PingER metric motion charts - Zafar

1. Done see http://www-iepm.slac.stanford.edu/pinger/pinger-metrics-motion-chart.html

Future - Les

Funded for $100K for each of 2 years for Yee and me to work on making perfSONAR measurements more easily accessible, easily navigable etc, plus access to end site data. We would like to free up some of SEECS resources (Faisal or Zafar) to get involved with this research. Umar has yet to talk at length with Anjum.

1. This is good news.
2. Zafar returns to Pakistan at the end of October.
3. Zafar will apply for entrance to Stanford in 2011.
4. There is a possibility of extending his visit to SLAC. He would most probably need to return first.
5. Can the funding from perfSONAR be used for the student?
6. Meanwhile Anjum will take the lead on funding from NUST side.

Future meeting time - Les

1. Is 8pm Thursday evening OK?