

20100930 - SEECS SLAC Meeting

Agenda for SEECS/SLAC meeting Sept 30th 2010.

Pakistani case study – Fahad, Anjum

No progress

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

No progress

1. Fahad will integrate the Smokeping graphs into the MAGGIE version.
2. 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.
3. 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 effort, e.g. full time person for several months. Installing perfSONAR is still a work in progress.

table.pl - Zafar

table.pl modified to conform to perl warnings and tainting mode. **[Pending]** deploy @ SEECS.

TULIP

1. **[Resolved by Les and Zafar]** Loss of PlanetLab nodes. The planetLab web site has been down so this may account for some of the problem. This problem was solved. Apparently there were quite a lot of small problems with reflector, however there was one in particular where the reflector makes an HTTP Get request for every landmark. The function previously used register method of the HTTP::Request package. This method was failing for PlanetLab and PingER nodes. However the PerfSONAR landmarks weren't failing as they were added later and were using request method instead of register method. Replacing register with request resolved the issue.
2. **[Done by Les]** Pinger machine's trsrontab was also modified to use -d (days) 1 instead of -d 3. This is to enable handle landmarks that go on and off more often than expected.
3. **[Done by Zafar]** Pakistani nodes were being deleted from TULIP database. Culprit: create_sites-xml.pl script is using insert_sites-xml.pl script which deleted all nodes that matched criterion: serviceInterfaceType="PingER" and tulipTier="2". Since the only nodes matching this criterion were newly added Pakistani nodes, they were therefore getting deleted. I didn't change the script but changed the tulipTier of newly added Pakistani nodes to 1.
4. **[Done by Zafar]** reflector.pl wasn't working, TULIP map showed 0 active nodes. This has been resolved by re-running the cronjob tasks.
5. **[Done by Les]** Improved reflector gives the ability to select landmarks. This speeds up the process.
6. **[Done by Faisal]** TULIP fixed for SLAC reflector to allow ability parameter.
7. **[Pending - Zafar]** 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". Work on this is subject to access to reflector.
8. 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. We are giving up on Trilateration and will focus on CBG via MatLab server.

TULIP GUI - Faisal

1. Live GUI:
 - a. Needs refactorization.
 - b. **[Pending - Faisal]** Adding other geolocation estimates to GeoIPTools (GeoTools, IPLocationTools, whois, shortest ping ...) to come. Some things are ready to be installed when the trilateration & apollonius work.

Possible project

No progress

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
3. This awaits Anjum's return
4. **Imran Bajwa is an undergraduate student in his senior year. He may be interested.**

Paper - Umar, Fida, Zafar

1. We still don't believe in TULIP trilateration results. We will give upon it.
2. **[Pending - Umar]** SVN for paper, **Umar has set it up and it is working, Umar will send out the accounts.**
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. Struggling whether to focus on Apollonius or comparative analysis. He is comfortable with Zafar's storyline. Fida will put together a paragraph on financial side for the motivation.
4. **[Pending - Fida and Umar]** **Do we go with comparative analysis, if we do then do we include Apollonius, if we do how we include it. Need to identify where we are useful. Mobility scenarios: mobility, routers, database does not have up to date info, e.g. mobile nodes moving country to country, do well if target is close to a landmark.**
5. **Need to identify other papers to quote how the 5 parameters we use affect the result,**
 - 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.

Tentative roadmap:

1. We are focusing on extending Geolocation coverage with relevance to the financial aspect of Geolocation. We claim that this is going to be the best service of coming year. We need some facts and figures in order to justify this claim (Action by Fida).
2. Possible question: Why are we using IP geolocation to extend geolocation coverage in new regions? Why not DB based approach? We know that DB based geolocation has some inherent problems. But we need some real world examples with references to nail down this issue. (Action by Zafar & Co).
3. We claim that four infrastructural attributes affect the performance of Geolocation techniques. We need to find some published research material that have emphasized these parameters together or individually. So that nobody can argue that why are you using these parameters and why not other parameters.

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. Zafar returns to Pakistan at the end of October.
2. There is a possibility of extending his visit to SLAC. **He will need to return first.**
3. Can the funding from perfSONAR be used for the student? **Les is working with SLAC HR to see about hiring a student.**
4. Meanwhile Anjum will take the lead on funding from NUST side.

Future meeting time - Les

8pm Thursday 7th October will be the next formal meeting.