

# 20101229 SLAC SEECS meeting

## Agenda for SEECS/SLAC meeting December 29th 2010.

**Bold face, topics for coming meeting that we need to address**

### Pakistani case study - Zafar, Anjum

- **The HEC report for Sep-Oct was sent in last Monday. Next report will be after 4 months.**
- **Updated** Pakistani PingER monitoring nodes status [2010/12/22](#) and [2010/12/29](#) from Zeeshan and from Amber
- Les added an extra line to <http://www-iepm.slac.stanford.edu/monitoring/checkdata/index.html> to indicate the number of Pakistani monitors and their state. The current line reads:

```
Pakistani monitors: good=18, partial_data=1, no_data=9, total=28, problems=10,
```

That's an amazing number of monitors and most of them working. Great job guys. Now we need to extract the nuggets of information it tells us and then get the right message to the right people in Pakistan. A

- **Progress on ICFA Report 2011 - Zafar**
- **Amber is working on the Pakistani Case study. Can't backtrack to get the traceroutes earlier so its hard to understand the high values of RTT early in the year. There is an explanation for differences at the end of the year. A summary of the case study will go in the ICFA report.**
- **We are trying to understand the large RTTs seen between Islamabad and UET Taxila.** It looks like congestion but not directly associated with day night changes. The RTTs do go down with the Eids holiday. Anjum is going to contact PERN to find the link speed on the last mile to UET Taxila. One possibility for the cause of congestion maybe the transfer of large amounts of data between UET Taxila and NCP related to the LHC. These are intermittent and may cause bad congestion.

### PingER

- I am still working on a monitor in Sarawak. It was using Linux selinux that blocks pings & traceroutes. That has been disabled. Now the webserver is down.
- [<http://www-wanmon.slac.stanford.edu/cgi-wrap/reflector.cgi?PD=set&PE=set&function=landmarks&out=csv>]<http://www-wanmon.slac.stanford.edu/cgi-wrap/reflector.cgi?PD=set&PE=set&function=landmarks&out=csv> has been **modified by Zafar to allow the use of tsv instead of csv** since there may be commas in the city field.
- **Zafar fixed the bug in the SEECS table.pl** that was messing up the hostname.
- Sadia, Amber and Zafar have found differences in the values reported by table.pl and pingtable for a given archive site, and in the values reported by pingtable.pl at SEECS and SLAC. **This has been explained and documented, see <https://confluence.slac.stanford.edu/display/IEPM/Anomalies>**
- Fahad made some small changes to <http://www-wanmon.slac.stanford.edu/cgi-wrap/checkremote.cgi>. He will add some help and also an allyearly tick. **It looks quite useful.**
- **I modified pinger\_country\_metrics.pl** at <http://www-iepm.slac.stanford.edu/pinger/pcm.html> to enable it to **use the allyearly data**. This helps throughput calculations since losses are more accurately measured
- I am putting together a talk on "Quantifying the digital Divide: the emergence of Africa" for the American Physical Society in April.

### Added Features for pinger map - Faisal

1. Faisal showed a demo at <http://www-wanmon.slac.stanford.edu/wan-mon/viper/pinger-coverage-gmap.html>. He has the paths with coloring.
2. Next he will add a control panel showing the color assignments and the ability to customize the colors.

### TULIP

- With the move to the new host Faisal had to get a new cookie to allow scriptroute to run scripts on the PlanetLab infrastructure. **Still needs testing.**
- Traceroute.pl versions earlier than 5.0 have XSS vulnerability. It has been fixed. I have written a script ([node-contacts.pl](#)) to read the list of landmarks created by [reflector.cgi](#) then use an updated version of [dbprac.pl](#) to get contacts and dataserver from the database. Then extract the email addresses and using the CPAN sendmail.pm module be able to send an email to the contacts telling them of the need to upgrade. **I have notified the contact for all active PingER traceroute sites apart from the Pakistani landmarks that I will leave to SEECS. Zeeshan is doing this.**
- Get the MatLab license at SEECS and put up a CGB server using it. Do not have license for MatLab will do on own machines to test and will migrate when have license. Zafar will contact Arshad and Ali. Basically the client will call the reflector with the target. The reflector will return the landmarks and RTTs. The client will then call the CBG/MatLab server with the relevant RTTs, lat/longs etc. **Bilal has read the TULIP architecture. He has a moderate understanding of how it works. He is modifying CBG code. Now it is ready for integration with TULIP. I will send the reflector/eventhandler, tulip-viz.cgi, Faisal will send the Java code to Zafar.**
- Les spotted an error in reflector.cgi when using function=landmarks and requesting a csv file. **Zafar has fixed.**

### PerfSONAR

Problems were fixed. NTP servers were causing considerable clock delay. Added close-by Stratum 1 NTP servers to solve the problem. Nodes were updated to PerfSONAR version 3.2 (Fedora distro). Nodes however are offline since they were disrupting normal traffic. We are waiting for 10 Mbps dedicated connection to switch the nodes back on.

1. Faisal is working with Yee. **No Progress**
  - a. Looking at how to display multiple nodes at a single lat/long or close lat/longs, a grouping problem. Looking at how to handle identical lat/longs. Looked at MonALISA, and other implementations. This has been solved.
  - b. Added Zoom in based on selection feature. User can select a specific region of a map by holding shift key and dragging through the bounds. Will add to the PingER maps.
  - c. For displaying links between hosts, Faisal is using poly-lines to represent great circle routes, rather than just straight lines to present the actual shortest path. Lot of mathematical formulas. Study on implementing Bézier curves which may help better to separate paths.
  - d. Representation of data in XML for links and paths. Writing an API so can get data from perfSONAR and provide to the client.
2. Zafar - deploy PerfSONAR nodes at SEECS. Second step is to find whether the same can be done at HEC on PERN's network. It is working, congratulations!

## Possible projects

See [<https://confluence.slac.stanford.edu/display/IEPM/Future+Projects>]. Zafar will talk to the students about these projects.

1. Extend the NODEDETAILS data base to allow entry support for whether the host is currently pingable.
2. Extend Checkdata to provide emails automatically, see [<https://confluence.slac.stanford.edu/display/IEPM/Extend+checkdata+to+make+it+more+useful>]. Many of the ides in the script node-contacts.pl are a step in this direction.
3. Add **MOS and alpha to pingtable.pl** see [<https://confluence.slac.stanford.edu/display/IEPM/Add+Mean+Opinion+Score+%28MOS%29+to+pingtable.pl+metrics>] Sadia will start work on it when done with HEC report, writing thesis. **When should we expect progress, don't forget alpha? No started yet.**
4. Improve the PingER2 installation procedures to make it more robust. This might be something for the person(s) in Pakistan who are responsible for installing PingER2 at the Pakistani monitoring sites. They probably have found where the failures occurs. Also look at the FAQ, and ping\_data.pl which has been improved to assist in debugging, could it be further improved (e.g. provide access to the httpd.conf file so one can see if it properly configured)? There are 2 students working on the PingER archive. \*Is this something they could work on?\*
5. **Fix PingER archiving/analysis package to be IPv6 conformant.** Will build a proposal for an IPv6 testbed. They will try various transition techniques. **A proposal has been prepared and that has been submitted to PTA. Adnan is a co PI. It is being evaluated today. A small testbed has been established in SEECS and thve plan to shift some of the network to IPv6. Bilal is part of 3 students involved with PingER and they will be involved with IPv6. They are porting the PingER archive site site to using a database. They have redeveloped the archive site using Umar's documentation. They have set up a small test archive site. They have gathering, archiving, analysis. They will design a new database. They will also try a port of PingER to IPv6.**

## FutureDr Adnan Kianai

- Les is trying to clear space to visit SEECS in February.
- The invitation letters for Amber and Sadia have been sent. **The account request have been received at SLAC, they will be submitted after Jan 3rd, 2011. Les also the has forms for Bilal's account, they will be submitted early next year.**
  1. They need to learn Perl. Zafar explained PingER and PerfSONAR projects in a nutshell to Amber and Sadia.
- Zafar received his DS-2019 on Dec 10 (Fri). Applied for visa on Dec 13 (Mon). Interview date is Jan 3.
- Adnan Kiani has just been introduced to the PingER project. He completed his PhD degree this year in communications at Brunel University. He will be taking over the liaison at SEECS from Anjum.&
- Arshad coming to SLAC in Jan, to start his daughter at Foothill. Faisal looking for a place for them

## Paper - Umar, Fida, Zafar

1. SVN for paper, Umar has set it up and it is working. Umar will send out the accounts. Not critical at the moment.
2. Umar will take as the main/first author of the paper. Ali Khayam has put together an introduction identifying the main points. Umar will send in the first draft and put together with feedback from Ali. Umar hopes to be done by Mid December. Umar is currently overwhelmed. Zero progress 11/10/2011. Umar has to submit a camera ready copy in the next couple of days.
3. Adnan is also interested in working on the paper and will talk to Umar.
4. Umar sent draft to Adnan. Umar will be in Pakistan later this month and will get together with Adnan. Fida will be available after December 16th.
5. Fida will send review comment to Adnan
6. **Meeting between Adnan, Umar, Khayam this coming Tuesday then Adnan will start start to work on re-writing the paper.**

## AOB

## Future meeting time - Les

The next meeting in **Wednesday 5th January 2011** for people in US and 6th January for people in Pakistan