

20110120 SLAC SEECS meeting

Agenda for SEECS/SLAC meeting January 20th 2011.

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

Future

- Les is trying to clear space to visit SEECS in February. Current plans are to arrive 2/13/2011, and leave the on the 2/22/2011. Les has sent in his visa request (for Pakistan).
- **The draft letters of invitation for Sadia and Amber have been submitted to upper management at SLAC.**
- Sadia, Amber and Bilal have their SLAC computer and Wiki accounts
- Zafar received his DS-2019 on Dec 10 (Fri). Applied for visa on Dec 13 (Mon). Interview date was Jan 3, it has been delayed to 24 Jan.
- Arshad is at SLAC. He met SLAC's director, OCIO and team, communications people, Yee, Faisal, & Les. Everybody agrees that both parties will continue supporting each other.

Pakistani case study - Zafar, Anjum

- [Node Wise details.](#)
- Amber is working on the Pakistani Case study.
 - Zafar has started taking and archiving traceroutes between Pakistani monitoring hosts on a daily bases.
 - There is an explanation for differences at the end of the year. A summary of the case study will go in the ICFA report.
- Large RTTs seen between Islamabad and UETTaxila. See (<https://confluence.slac.stanford.edu/display/IEPM/SEECS+to+UET+Taxila+link>)20110120 SLAC SEECS meeting. Amber making 24-30 Dec 14 plotsoverlay the daily information. She has sent new spreadsheet including all remaining metrics. Uploaded on wiki.
 - This is based on running long series of pings (1 week, 3 pings every 10 minutes). Amber will generate graphs to uncover the trends. Zafar has written some script and has some data, he needs to put into a format for Amber.
 - Average RTT decreased since the nodes shifted to PERN network but the packet loss increased. This is usually apparent for Peshawar and Quetta. One major reason is the shift of these nodes to PERN network. Since PERN is a federated network and due to the shift of nodes, traffic on the network increased (PERN is up to its maximum utilization). Due to this though the RTTs decreased (since it is a federated environment), the packet loss increased due to congestion. Another possible reasons could be increase of nodes (especially in Peshawar region), due to which network congestion increases and thus packet loss increases.
- Amber will need to get up to speed on Linux.
- Need to get TCP configuration parameters for transmit and receive buffer lengths at end sites, and also at edge routers. Adnan talking to Zeeshan to get an update to see if he has talked to people.
- Need table of monitors vs remote sites for Pakistan. Do for a typical month, e.g. November. **Amber will include this in the case study.**
- Need a trend plot Jun-Dec 2010. - PROGRESS?
- Need number of hosts etc, see (<https://confluence.slac.stanford.edu/display/IEPM/Pakistani+Case+Study+2010-2011>). This will be added to the Pakistani case study.
- Look at NUST trends over last year, which sites have improved
- Sadia is looking at adding MOS and alpha into pingtable.

ICFA Report

- **Progress on ICFA Report 2011, next steps - Zafar**
- Les needs to review.

PingER

- I have extended ping_data.pl to provide more debugging capabilities, based on experience with UERJ, AMPATH and ACME.
- No progress on a monitor in Sarawak. It was using Linux selinux that blocks pings & traceroutes. That has been disabled. Now the webserver is down.
- 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.**
- PingER archive site: Ghulam and Farhan couldn't discuss database architecture with Umar Kalim. They have however created two ERDs. One is a simple design (relatively inefficient) and another is a complex design (relatively efficient though it might introduce some redundancy). They have created MySQL databases following both ERDs and will start work on stress testing it as soon as they are free from exams. Zafar has discussed stress testing with them already and they have a fair idea of what to do.

Visualization pinger map - Faisal

1. Colors for connected links
2. Range and Colors configuration
3. Layout revamp to provide more space for map

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.**
- 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 sent the reflector/eventhandler, tulip-viz.cgi, & Faisal sent the Java code to Zafar. A student was given a task. Zafar needs to answer where we are, and the progress. Adnan will get back to us in a day or so to tell progress. There will be exams in the coming week, so progress may be stalled for a while. May be an issue with the MatLab

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.
 - a. Arrows for tracerouts being implemented by Faisal.
 - b. Working with Yee to get Lat long of perfSONAR host corrected.
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!
3. Internet2 Joint Techs meeting at the end of Jan. Can Pak PerfSONAR nodes be up by then?

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 ideas 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. Sadia and Zafar are looking at this. It requires changes to pingtable.pl and analyzs*.pl scripts.
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 occur. 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** [[display/IEPM/Make+PingER+IPv6+compliant](https://confluence.slac.stanford.edu/display/IEPM/Make+PingER+IPv6+compliant)]. 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 the 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 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.
6. **Look at RRD event detection based on thresholds and how to extend, maybe adding plateau algorithm. Umar's algorithm did not work in a predictable manner.**

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, Ali Khayam did not come to pass due to Adnan being sick. It is believed we need a re-write, the technical details are OK. Adnan will get to more rigorously.

AOB

Future meeting time - Les

The next meeting in **Wednesday 26th January 2011** for people in US and 27th January for people in Pakistan.