20110921 SLAC SEECS Meeting

Agenda for SEECS-SLAC Meeting September 21, 2011.

- Dr. Anjum will lead the meeting.
- Les will be away in South Africa, Congo and a couple of other countries for the month of September. **He will be back in the meetings from the first week of October.**

Upcoming

IP address has been assigned to IPV6 but machine has yet not been set up. IP will be active after 10th September. Update?

SLAC now has an IP project with a project manager just hired. Things may start to happen soon.

Future & Publicity

- Amber has put together an email list of PingER contacts to send the video to. We need to use it to announce motion metrics
- Public Data Explorer next Gen Motioncharts is working.
- **Documentation of Pinger Data Explorer is available.**

Pakistani case study - Amber, Anjum

1. **Host count has reached 52 in Pakistan.**
2. **Amber prepared analysis of PoP and Non-PoP nodes for HEC for the month of August. Has the report sent? Any further requirement?**

Status of Pakistani PingER hosts

As updated on 9/21/2011.

Responsible person: Joun Muhammad

Node	Status	Description
pinger.ustb.edu.pk	UP	Pinging by another IP. Data not collected.
monitor.niit.edu.pk	UP	Changing IP. Troubleshooting in progress. Shifting this node to PERN IP in headquarters
pinger.giki.edu.pk	Down	Troubleshooting in progress.
pnec.seecs.edu.pk	Down	Will be up soon.
sau.seecs.edu.pk	Down	Network and Power issue.
buitms.seecs.edu.pk	Down	OS crashed, concerned person is on leave, will be up after Eid.
nukhimain.seecs.edu.pk	Down	Power issue, will be up soon.
pingermtn.pern.edu.pk	Down	Power issue, will be up soon.
pinger.uob.edu.pk	Down	IP pool has been changed by HEC, will be up soon with new IP.

PingER Management

Zafar, Bilal, Ghulam and Sadia will be having a meeting on traceroute archive site documentation on Saturday 24th September 9am PCT. (i.e 9pm PST).

PingER traceroute archive site

- Traceroute.cgi still needs to be tested because it requires cgi wrap directory which is currently not accessible to Sadia. It now passes the laugh test of Tainting warning and strict. It will be moved to a production place and then Les will get it moved to the web cgi-wrap space.**Sent to Dr.Les for uploading on cgi directory.**

PingER archive site - FYP (Ghulam, Farhan, Zafar)

- The archive site based on relational database is complete and is ready to be deployed on the server.
- The results are fast if they have a cache copy of these databases. This can be done by running a query (cron job) for having a cache copy. Sadia needs to have a meeting with Zafar so as to check the progress of Ghulam and Frahan at this. **Update?**
- Some comparisons between flat files and relational database were made for daily , monthly and yearly analysis. Farhan will send these results to Zafar and Dr. Les.
- ***Live IP has been provided. The node is internally accessible, however it is not accessible through live IP***.
- Next step is to port to SLAC.

Adding MOS and Alpha to pingtable.pl

- Analysis scripts to add Mean Opinion Score and Alpha, some things need to be correctly configured. It has been deployed athttp://pinger.seecs.edu.pk/cgi-bin/pingtable.pl for testing.
- Alpha and MOS to be implemented at SLAC site. Sadia will be doing this with the help of Zafar. Currently Ghulam and Farhan are working on synchronizing the SLAC and SEECS scripts.

TULIP

- TULIP (reflector.cgi) is faster since Zafar added some more parallelism. There are a couple of errors being reported which Zafar will look at. **Update?**

CBG TULIP Integration -- FYP (Bilal)

- Reflector results are better than reflex because reflex does not show anything related to timing.
- **Bilal will send Les an email to get this timing related help and Les will be looking into it. Update?**
- TULIP setup on maggie2 server and CBG is running on PERN machine.
- CBG is modified to talk to TULIP. TULIP is modified for integration. (Email Bilal to know the update. And ask him to)
- CBG TULIP integration is almost done. user request will be forwarded to the server(clients java code not server), and then it goes back to CBG code and displays the result in CBG browser.
- Bestline requires much larger data and the data remains same for one week, so to speed up tulip using bestline we are trying to save the data separately (not picking the data runtime). Once this is done, it will speed up the TULIP.
- **Matlab licence is here; Sadia, Les, Nick and Justus need to meet to discuss the installation issues. Where are we with this?**

PerfSONAR (Pakistan)

- **PerfSONAR at SEECS:** PerfSONAR throughput and latency nodes are now up and running at SEECS. Hostnames and corresponding IP adresses are:** throughput measurement node: http://psbw.seecs.edu.pk/ (http:115.186.132.154/toolkit/)
    - latency measurement node: http://psla.seecs.edu.pk/ (http://115.186.132.155/toolkit/)
- Select options under "Service Graphs" to view throughput or latency graphs. Added 5 Stratum 1 NTP servers to cater for clock delay and everything seems to work fine.
- There are some interesting one-way latency graphs at 115.186.132.155 (SEECS PerfSONAR Latency node). **Dst to Src (e.g MIT to SEECS) latency is less than Src to Dst (e.g SEECS to MIT) latency**. This might uncover some trends in outbound network traffic from Pakistan.

Possible projects

- The problem is that many hosts do not give high priority to pings and many block it. This results in high RTT for pings. It is a big difference for closer hosts than far hosts. Note the response time of pings vs HTTP hosts from slac to other hosts.
- There can be a paper kind of talking on Pinger if we could just find the right conference. MCN, ICC and Globecomm do provide network monitoring topics. We can talk of GEO-Location experiences. For example within Pakistan it works fine, however as we go within regions or continents this gets worse. We can publish some stats on that for example. We are yet not ready for Tulip paper.
- See [https://confluence.slac.stanford.edu/display/IEPM/Future+Projects].
- Extend the NODEDETAILS data base to allow entry support for whether the host is currenty pingable.
- 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.
- 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?
- [Fix PingER archiving/analysis package to be IPv6 conformant|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 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.
- 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.
- Provide near realtime plots of current pinger data using getdata_all.pl/wget. It will work as a CGI script with a form to select the host, the ping size, and the time frame to plot. It will use wget or getdata_all.pl to get the relevant data and possibly RRD/smokeping to display the data.

Future meeting time - Les

1. **Next meeting on Wednesday 28th September at 8:00 pm in US and Thursday 29th September at 8:00am in Pakistan.**