

# 20190611 PingER Team Meeting

## Time & date

This meeting: **July 11th 10 pm Pacific time; a day later 10:00 am Pakistan time; 10:30 am India time; 1:00 pm Malaysian & Guangzhou time; 12:00 pm Thailand time; 7:00 am Jordan and 6:00am Turkey.**

Doodle poll invites sent 5/27/2019.

## Format

New items and updates are in boldface.

## Coordinates of team members:

Mailing list: [pinger-my@googlegroups.com](mailto:pinger-my@googlegroups.com) for membership see <https://groups.google.com>.

- **Saif A. Kazakzeh** ([xsaifahmadx@gmail.com](mailto:xsaifahmadx@gmail.com)) of Jordan added.

## Attendees

### Invitees:

**Wajahat Hussain+ (SEECs), Saqib+ (GZHU); Johari+ (UNIMAS); Adib (Turkey); Dr. Charnsak Srisawatsakul (Ubru), Eyad Ayoubi (Jordan), Baraa Muslmani+ ( Jordan), Dr. Shadi Jawarneh (Jordan), Bebo White+, Umar Kalim, Les Cottrell+**

- + Responded via Doodle can attend; - Responded, but unable to attend on this date; ? extra email sent asking if attending
- Email addresses (all the following are in pinger-my).
  - [cottrell@slac.stanford.edu](mailto:cottrell@slac.stanford.edu); [wajahat.hussain@seecs.edu.pk](mailto:wajahat.hussain@seecs.edu.pk); [saqibutm@outlook.com](mailto:saqibutm@outlook.com); [johari.abdullah@gmail.com](mailto:johari.abdullah@gmail.com); [adibhabbal@karabuk.edu.tr](mailto:adibhabbal@karabuk.edu.tr); [charnsak.s@ubru.ac.th](mailto:charnsak.s@ubru.ac.th); [eyadayoubi@gmail.com](mailto:eyadayoubi@gmail.com); [b.muslmani@yahoo.com](mailto:b.muslmani@yahoo.com); [shadi.jawarneh@yahoo.com](mailto:shadi.jawarneh@yahoo.com); [bebo@slac.stanford.edu](mailto:bebo@slac.stanford.edu); [umar.kalim@gmail.com](mailto:umar.kalim@gmail.com); [xsaifahmadx@gmail.com](mailto:xsaifahmadx@gmail.com)

### Actual Attendees

**Saqib, Wajahat, Les**

### Others

## Administration

- **Dr. Umar Kalim** has left SLAC to join Amazon. He will continue to be in the Bay Area. He will continue to be involved in the PingER project.
- **Bebo's SLAC account expires March 2020.** He will not be able to renew it, since he will no longer be a SLAC employee. As a result Bebo will likely let his participation in PingER lapse.
- This meeting was scheduled with the aid of a Doodle poll.

## Use of Zoom

**IMPORTANT NOTE:** The meeting is set up to record automatically. By joining the meeting you are agreeing to be recorded (see [details](#))

**What:** PingER Standing Meeting

**When:** June 11, 2019 10:00 PM Pacific Time (US and Canada)

**Where:** Join from PC, Mac, Linux, iOS or Android: <https://stanford.zoom.us/j/936251711>

### How to set up and use Zoom:

To use the software, you would have to download the Zoom client (and installed if prompted). The instructions to do so are listed here: [https://zoom.us/download#client\\_4meeting](https://zoom.us/download#client_4meeting)

The instructions about setting up the software are listed at the URL below. You may want to create an account if you do not have one already. If you are invited to a meeting (i.e., you are not hosting the meeting), you are not required to create an account; you can simply join the meeting using the meeting ID.

<https://support.zoom.us/hc/en-us/articles/201362033-Getting-Started-on-PC-and-Mac>

## Exit plan for PingER - Discussion Topic

Time to start thinking about this. Do we need one?

- Les retired, still active.
- Bebo's SLAC account expires early 2020, he will bow out then.
- Topher busy getting funding etc.
- Umar has left SLAC, but still involved.
- In the over two decades since PingER started, the Internet and wide area networking have changed dramatically
  - Speeds, deployment, reliability, number of users and applications have improved exponentially
  - There are lots of other monitoring tools nowadays: perfSONAR, ISP monitoring, Akamai

What does it affect?

- Pakistan monitoring - Wajahat
  - What is the commitment from Pakistan?
- China - monitoring; big data, blockchain - Saqib
  - Is the current historical data sufficient?
- ePingER on Android - Amity, Bebo, Topher
  - This is new, Amity would need to take leadership
  - Topher is very busy with getting funding and other projects
  - Bebo less interested partially due to loss of SLAC account early next year
- Three PingER analysis projects - Amity
  - Title (tentative): Correlation Analysis between network performance and GDP of a country using PingER data. Abstract (tentative):
  - Title (tentative): Comparison of network performance of India and Pakistan using PingER data. Abstract (tentative):
  - Title (tentative): Data packets loss prediction due to environmental factors.
  - Is the current historical data sufficient?
- Compare IPv4 with IPv6 and ICMP versus UDP versus TCP pings - Umar
  - Umar in new job may not have resources/time
  - Measurements probably do not rely on PingER project, rather they can be made ad hoc.
- Monthly meetings - Les, Umar
  - Scheduling with doodle - Les
  - Making up agenda and current status - Les
  - Invitation via Zoom - Umar
  - Attending - all

Possible scenarios

- Hard stop
- Soft stop:
  - Continue running monitors, gathering data, archiving and presenting as long as SLAC provides storage (1TB) and [pinger.slac.stanford.edu](http://pinger.slac.stanford.edu) VM
    - Give up on monitors after email prompt and no resolution
    - Do not add any extra functions
  - Keep historical data publicly available as long as SLAC provides storage (1TB) and [pinger.slac.stanford.edu](http://pinger.slac.stanford.edu) VM
- In either case explore what role the Internet Archive might play in maintaining/storing PingER data.
- Meet with Amity, Topher, Bebo, Les to get their input to
  - Access to PingER historical data
  - their taking leading role
  - ePinger Android futures

## Jordan (Updated 4/25/2019)

- Baraa is interested in monitoring other Jordanian hosts.
  - There are 4 other existing targets in Jordan.
    - <http://www.slac.stanford.edu/cgi-wrap/dbprc.pl?alias=JO.EDU.GJU.WWW&monalias=EDU.SLAC.STANFORD.PINGER>
    - <http://www.slac.stanford.edu/cgi-wrap/dbprc.pl?alias=JO.GOV.CBJ.WWW.N1&monalias=EDU.SLAC.STANFORD.PINGER>
    - <http://www.slac.stanford.edu/cgi-wrap/dbprc.pl?alias=JO.JUST.EDU.N1&monalias=EDU.SLAC.STANFORD.PINGER>
    - <http://www.slac.stanford.edu/cgi-wrap/dbprc.pl?alias=JO.NEXT.WWW&monalias=EDU.SLAC.STANFORD.PINGER>
    - If there are other sites in Jordan that should be monitored from say SLAC and Jordan please let me know the details and you can add them to the PingER Oracle NODEDETAILS database, so they are monitored from SLAC. If they are to be monitored from Telephonics then they will need to be added to the <HostList> stanza of the Telephonics pinger.xml.
  - Sent email 4/18/2019: *E.g. say you wanted to add alias=JO.EDU.GJU.WWW then click on the above link and you will get information like:*
    - NODENAME: www.gju.edu.jo IPADDRESS: 87.236.233.242 SITENAME: gju.edu.jo NICKNAME: JO.EDU.GJU.WWW FULLNAME: German Jordanian University LOCATION: German Jordanian University, Amman Madaba Street, Amman, Jordan COUNTRY: Jordan CONTINENT: Middle East LATANDLONG: 31.7769 35.8 PROJECTTYPE: NOT-SET PINGSERVER: NOT-SET TRACESERVER: NOT-SET DATASERVER: NOT-SET URL: <http://www.gju.edu.jo/> CONTACTS: Google COMMENTS: Add by Cottrell 5/17/2018.

Following this information you will need to edit pinger.xml to add a stanza in <HostList></HostList> of the form:

<HostList>

<Host>	
	<EnableDNSCache>false</EnableDNSCache>
	<IP>87.236.233.242</IP>

	<Name> <a href="http://www.gju.edu.jo">www.gju.edu.jo</a> </Name>
</Host>	

</HostList>

- Baraa responded 4/18/2019: "Sorry for this delay we have finished our mid term exams, I gathered a set of host and will filter them according to the given criteria by this weekend. In Jordan the weekend is Friday and Saturday."
- Baraa asked what the criteria are for choosing targets, emailed him (4/4/2019) about [Finding PingER Hosts](#).
- Baraa provided details of 4 sites apparently in Jordan. However, only two had RTTs of > 80ms as seen from SLAC. Thus the others are probably proxies in North America. Unfortunately, the remaining two have RTTs from Jordan of 80ms which probably means they are proxies in Europe.

## Turkey (Updated 4/25/2019)

Eyad emailed: "I have gathered some information about how to have a public IP address and it seems it is not complicated, just a subscription with the ISP, I will discuss in the next meeting". Sent email requesting update 5/26/2019. Eyad responded no progress yet.

We also received an unsolicited email:

"We are employing PingER in Hasan Kalyoncu University, in Turkey, for the purpose of conducting researches on the Internet performance in Turkey.

Actually, we have collected data in our node, so we would like our collected data to be retrieved by the archival site at SLAC. Below are the details information on our monitoring node.

- DNS: [pinger.hku](#)
- Public IP: 10.15.2.146
- Node Coordinates
- Latitude: 37.014764 Longitude: 37.205743
- Node Location: ahinbey Mahallesi, Havaliman Yolu 8.Km, 27000 ahinbey/Gaziantep
- Contact Person:
- Name: Mohammed Madi
- Designation: Assistant Professor in Computer Engineering Department
- Contact Number: 00905537717593
- Email address: [mohammed.madi@hku.edu.tr](mailto:mohammed.madi@hku.edu.tr)

Thank you in advance, looking forward to hearing from you"

Unfortunately, this appears to be a [private IP address](#) so is not accessible. Les sent an email 4/19/2019 to Mohammed. Mohammed provided a public IP address (95.0.84.5), however, it is not pingable and the URL does not respond. Sent another email 4/24/2019, 4/28/2019, 5/7/2019, 5/26/2019.

Also sent email to Adib (who is in Turkey) and Eyad in case they know the person or site. Adib responded 4/20/2019: "Yes, I know Mohammed, he graduated from UUM (Malaysia), and we worked together at the same department. He is a good researcher. I think, he can contribute to PingER project."

## Amity (Updated 4/25/2019).

Amity team photo:



Android progress:

- Instructions from Aayush to load the application are at [ePingER Functional prototype](#) (for Androids only)
  - They sent a new copy of the app 4/6/2019, see [ePingER Functional prototype](#)
    - The information has been passed to Topher, who plans to install on an Android. The ball is now in our court
    - There is a discussion between Les and Aayush on how to format the raw data records, in particular with respect to the lat/long. Sent a reminder 4/18/2019.

- We (SLAC) an email to Aayush asking how we gather the raw data from the cloud. Sent reminder 4/18/2019.

- Aayish responded 4/18/2019:

*Yes, we have modified the app to write the semi-colon to the file as a separator.*

*However, at this point we suggest you to not make any changes to the pinger project yet.*

*Let us see and run in this parallel to what is already setup at Amity MA. This will allow us to compare the quality of results by both the systems – one at present which does not utilize the app, and the new one which requires an app for data collection.*

*We send the data from the app to the firebase cloud service as JSON objects via a REST API.*

*On the cloud-server side, we intend to build a compute-service that automatically converts the json data to a txt format, for consumption by data researcher team at amity (because they are already used to running analysis on the txt files; but seem to be open to working with JSON data as well). [For the SLAC gatherer we would at least initially prefer the data to be retrieved/available in txt form. This way the changes to the gatherer are minimized and more consistent with current practice.]*

*So once the team finds that the results are significant enough, then we can formally propose to include lat /long data in the Pinger gathering, archiving and analysis.*

*For now, it would be best that we do not disturb the current Amity MA, and that the android project runs parallel to this."*

- Topher is back, Bebo is contacting him. Bebo's thoughts were that:
  - If the Amity app is robust (i.e. it does not noticeably impact the other services, power, networking, security etc) make it part of the standard Rainforest installation;
  - Topher's package knows the GPS location, so it should be available to PingER for recording.
- PingER will need a fixed name for each Android MA. Since the Android may be mobile the IP address may be dynamic. There is a DNS name to dynamic IP address service that may be useful. Maybe there is another unique fixed identifier in an Android that could be used such as a serial number or SIM ID.

## Adib (Updated 3/3/2019)

- Adib is wondering about
  1. *Journal of Computer Information Systems* <https://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=ucis20>
  2. *The Information Society* <https://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=utis20>

Bebo reviewed and responded to Adib suggesting the second one is a better choice. Adib submitted it to the 2nd journal. He sent email 4/20/2019: "*we received an unfavorable response from the information society. So sad that this paper does not get enough attention from journal editors. But I will keep trying, let's pray for the best.*"

It has been submitted with the title: **Submission title: Socio-economic Development Indices and Their Reflection on Internet Performance in ASEAN Countries to Engineering Science and Technology**, an International Journal. They have requested a re-submission "*Please apply "author template" which can be found in "guide for authors" page. We declare in our Guide for Authors page that: All authors are requested to use the Author Template and prepare their articles as the editorial board of the journal has decided to limit all published pages within 10 pages. Therefore, we do not proceed with the peer-review process if authors do not submit their articles using the Author Template and limit the manuscript to 10 pages including all content.*"

Kind regards,

JESTECH Editor

Engineering Science and Technology, an International Journal

Corresponding author: Dr Adib Habbal

Listed co-author(s): Mr Faisal Zulhumadi, Mr Emmanuel Mkpojiogu, Professor Suhaidi Hassan, Professor Bebo White, Dr Les Cottrell

## NUST (Updated 4/25/2019)

Wajahat suggested a letter to the higher-ups at NUST about PingER would assist. Les worked with Wajahat to craft such a letter. It was sent to Wajahat by email 4/3/2019. It was sent by paper mail 4/4/2019 to Principal SEECs.

- Wajahat said the letter has been received and a written response is being drafted.
- They (NUST) would also be interested in other collaborations with SLAC
  - Since Les is no longer an employee of SLAC but rather an emeritus this may complicate things.
  - A possibility might be in high-speed data transfer. It would need a champion from NUST, and a plan and funding to provide access to 100Gbps

#### IPv6 host at NUST:

Wajahat has requested Hasan to install PingER on an IPv6 host at NUST, Saqib has contacted Hasan to tell him where to find and upload the code. There is not a host name for the MA yet. Hopefully, this will be available by next month's meeting.

Wajahat has 2 students, he will propose some PingER related projects to them.

Wajahat said that contacts at some sites are not very interested in PingER and wonder why there are so many pings. Thus he believes we need new sites representing the regions of Pakistan that have willing collaborators. Thus we should give up on sites such as CAE and ISRA that have not had any data to gather for a year or so. Les has since disabled these sites.

We have not been able to gather data from maggie1.seecs.edu.pk since March 2019. Sent email to Wajahat, he responded that it may be an IPv6 host. Tried accessing using IPv6 but no success.

## UAF (University of Agriculture, Faisalabad)/GHZU (Updated 3/3/2019)

Saqib joined the University of Agriculture in Faisalabad. He plans to pursue the blockchain paper.

## Thailand, Charnsak

Charnsak is looking at a host in Champasak University, Chan Parsa province in Laos as a potential site for a PingER MA. Charnsak just got approved to make contact with the Champasak University. He expects to set up the MA in the next 4-5 months (say towards end 2018). It also depends on the partner university, and there may be a lot of paperwork. **4/9/2019 Charnsak said we need to drop this.**

## UNIMAS

Need to add Umar Kalim to <http://pinger.unimas.my/pinger/contact.php>. From the 7/5/2018 meeting: Johari can't ssh into the server so he will go to it on Monday. He will also upload the new UNIMAS PingER website next week.

**Email from Johari 4/21/2019: I am still very much interested in the project but I have to manage my time better. Will try to join the next meeting and probably get someone from my side to monitor the equipment and make use of the data collected**

## SLAC (Updated 4/25/2019)

Umar fixed up the PingER deployment map at <http://wanmon.slac.stanford.edu/wan-mon/viper/pinger-coverage-gmap.html> by updating the Google map key. Also they shut down (since it did not support SSL) a web server ([www.wanmon.slac.stanford.edu](http://www.wanmon.slac.stanford.edu)) I was using which is causing some PingER web cronjobs to fail. Nothing too serious at the moment, I am working to see if the problem can be fixed. Also tighter security was imposed on https which broke some links to get the pinger.xml configuration file.

## State of MAs.

Host	State	last seen	Status
<a href="http://pinger2.if.ufrj.br">pinger2.if.ufrj.br</a>	Unable to gather data since 1st July, 2019. Senet email 6/2/2019 to Vinícius Ferrão <ferrao@if.ufrj.br>, he responded that there had been a power outage and he has re-established it.	6/1/2019	Fixed 6/3/2019
pinger.uum.edu.my	Unable to gather data since 2nd May 2019. Host is pingable. Sent email 5/5/2019 to Adib, he will contact Dr. Suhaidi. Sent reminder 5/14/2019, Adib has contacted Dr Suhaidi who will get someone to help. Still down 6/2/2019, sent another reminder to Adib.	5/2/2019	
pinger.es.net	Unable to gather data as of May 24th, 2019. Host is pingable. May have run out of disk space. Sent email 6/2/2019 to Chin Guok suggesting update ping_data.pl and install the data trimmer. Chin responded 6/3/2019, looking at updating ping_data.pl first to diagnose the problem. Installed new pinger2.pl, ping_data.pl and updated pinger.xml to add <BeaconList>.	5/24/2019	Fixed 6/5/2019
pinger6.cs.ubru.ac.th	Unable to gather data, pings. Email sent 5/24/2019	5/20/2019	Fixed 5/29/2019

pinger.unimas.my	Unable to gather data, does not ping. Email sent 5/24/2019. Johari responded that he will look at it. Sent reminder 6/2/2019.	5/20/2019	
rainbow.inp.nsk.su	Unable to gather data starting 4/19/2019, also cannot ping the host. Sent email 4/25/2019. Sergy responded 4/30/2019 he has moved on unclear there is a follow on contact. Probably will disable	April 17, 2019	Disabled 5/8/2019.
brunsvigia.tenet.ac.za	Len Lotz the contact is working on getting his people to move MA to a VM	April 17, 2019	Moved to VM 5/1/2019
netmon.physics.carleton.ca	Unable to gather data, host is pingable and <a href="http://netmon.physics.carleton.ca/cgi-bin/ping_data.pl?">http://netmon.physics.carleton.ca/cgi-bin/ping_data.pl?</a> responds. It appears the pinger.xml file is corrupted. Email sent 4/28/2019	April 23, 2019	Fixed June 30, 2019
pinger.amity.in	Unable to gather data since March 29, 2019, unable to ping it, sent email 4/3/2019, got response (4/3/2019) they will look into it.	March 29, 2019	Fixed 4/5/2019
rainbow.inp.nsk.su	Unable to gather data starting March 19, 2019. The host is pingable and web is responding. Email sent 4/3/2019. Recommend update <a href="#">ping_table.pl</a>	March 19, 2019	Fixed 4/3/2019
pinger6.cs.ubru.ac.th	Stopped being pingable 2/25/2019. Thus by default, the gathering failed. Gathering also fails to <a href="http://202.29.20.125/cgi-bin/ping_data.pl">http://202.29.20.125/cgi-bin/ping_data.pl</a> . Emailed Charnsak 3/4/2019, <b>3/15/2019</b> . Down again 4/23/2019, restored 4/27/2019.	2/25/2019	Fixed 3/16/2019.
pinger.isra.edu.pk	Down, it came up Sep 2-4, 2018. It is pingable, however, all the targets are not responding after 31 tries, email sent to Wajahat 9/18/2018. As of 10/14/2018 it is not pingable. Working again as of 1/5/2019.  It started again 1/26/2019. It does not respond to pings from SLAC but does respond to <a href="http://pinger.isra.edu.pk/cgi-bin/ping_data.pl?">http://pinger.isra.edu.pk/cgi-bin/ping_data.pl?</a> which is used to get the data. However, the data indicate that none of the pings respond, e.g.  <code>pinger.isra.edu.pk 121.52.154.228 pinger.fsktm.um.edu.my 103.18.2.152 100 1548633600 31 0</code>  i.e. all 31 pings fail and 0 give any response.  When one tries to ping from <a href="http://pinger.isra.edu.pk">pinger.isra.edu.pk</a> using <a href="http://pinger.isra.edu.pk/cgi-bin/traceroute.pl?function=ping&amp;target=www-wanmon.slac.stanford.edu&amp;options=-i%200.2">http://pinger.isra.edu.pk/cgi-bin/traceroute.pl?function=ping&amp;target=www-wanmon.slac.stanford.edu&amp;options=-i%200.2</a> the web page responds but all pings from isra fail. Email sent to Wajahat 1/28/2019. Started working again 1/30/2019. Stopped being pingable and unable to gather data 2/11/2019. 3/2/2019 can gather data but all the pings are failing. <b>This is not a normal failure mode</b> . Emailed Wajahat 3/3/2019, <b>3/15/2019</b> .	March 6, 2018	Fixed 1/5/2019  Failed again starting 1/26/2019.  Working again 1/30/2019  Disabled 4/28/2019
maggie1.seecs.edu.pk	Unable to gather data since March 26, 2019. Sent email to Wajahat 5/25/2019. Should we Disable it or is someone working on it? Wajahat said it might be an IPv6 node, however, ping6 from pinger.slac.stanford.edu to maggie1 does not work.	March 26, 2019	
cae.seecs.edu.pk	At the request of Wajahat re-enabled but unable to gather data	Over a year ago	Disabled 4/17/2019

## Umar compare ICMP and TCP Ping

Umar is looking at the scamper project from CAIDA, see <https://www.caida.org/tools/measurement/scamper/>. Les will put Umar in contact with the scamper folks (email sent 4/28/2019)

Unfortunately, for the IPv4 vs IPv6 comparison, there is insufficient data (i.e. only about targets)

## Next Meeting

Next meeting: There will be a Doodle poll, for August 8-11 8-11pm or August 15-18 at 10 pm Pacific time; a day later 10:00 am Pakistan time; 10:30 am India time; 1:00 pm Malaysian & Guangzhou time; 2:00 pm Thailand time; 7:00 am Jordan time. 6:00am Turkey time.

## Old information