

# PingER Case Studies

This is the list of the Case Studies developed using PingER monitoring Data. They are sorted by regions and by most recent dates first.

Also see <https://www.internetperils.com/perilwatch/index.php> for routing changes occurring from major events, and [Keep it On](#) on the 213 Internet shutdowns in 2019. An internet shutdown happens when someone — usually a government — intentionally disrupts the internet or mobile apps to control what people say or do.

## Performance comparisons

- [Comparison of Speedtest download speeds vs PingER derived throughput, 2014](#)
- [Throughput vs Loss, 2000](#)
  - [Compare Mathis and Padyhe formulae](#)
- [Ookla's speedtest throughput measurements, 2007](#)
- [ZDnet Australia Speedtest , 2007](#)

## Covid-19

[PingER and COVID-19](#)

[PingER and Covid-19 and the Republic of South Africa and the impact of High Speed connectivity](#)

[Covid-19 - Visualizing the data with Motion Charts](#)

## Europe

[Impact of the Russo Ukraine war on ping response times, Feb 2022](#)

## Africa

[Uganda Social Media shutdown Jan 12, 2021](#)

[Impact of cable cuts on Southern Africa Jan 2020.](#)

[Liquid Telecom to build new undersea cable, by 2018](#)

[Forecast 2014: Africa](#)

[Sudan disconnects from the Internet, Sep 2013](#)

[Nigeria case study, 2012](#)

[Sub-Saharan Africa - Updates for year 2010](#) Created by Syed Zafar Ul Hussan Gilani on Oct 20, 2010.

[New E. Coast of Africa Fibre](#) Created by Les Cottrell Jul 24, 2009

[Sub-Saharan Africa - Revised Statistics \(2008\)](#) Created by Umar Kalim on Dec 18, 2008.

[IHY Case Study](#) Created by Shahryar Khan on Jun 12, 2007.

[Election interference and Internet shutdowns.](#) Created by Les Cottrell, 6/21/2019

## East Asia

[Japanese Earthquake March 11th, 2011](#) Created by Les Cottrell on Mar 12, 2011.

[East Asia Case Study](#) Created by Shahryar Khan on Aug 10, 2007.

## Central Asia

[Kazakhstan January 2022](#), see <https://www.theguardian.com/world/2022/jan/06/kazakhstan-bitcoin-internet-shutdown>

## Fibre Cut

[WASC Fibre Cut](#) Created by Umar Kalim on Aug 06, 2009.

[Effects of Mediterranean Fibre Cuts December 2008](#) Created by Les Cottrell on Dec 20, 2008.

[Effects of Fibre Outage through Mediterranean](#) Created by Les Cottrell on Jan 31, 2008.

## Latin America

[Colombia, 2015](#)

[Chilean Earthquake Feb 27th, 2010](#) Created by Les Cottrell on Mar 02, 2010.

[Latin America Case Study](#) Created by Shahryar Khan on Dec 18, 2006.

## Middle East

[Iran November 2019](#)

[Iraq October 2019](#)

[Syria May 7-8 2013](#)

[Syria shuts down its Internet connection](#), November 2012

[The Arab Spring 2011 and Internet Instability seen by PingER](#) Created by Les Cottrell on Feb 21, 2011.

[Egypt shuts down their Internet](#) Created by Zafar Ul Hussan Gilani on Jan 30, 2011.

[Palestine Case Study](#) Created by Les Cottrell on May 03, 2007.

## South Asia

[India revokes special status of Jammu Kashmir](#), August 2019.

[Nepal Earthquake April 2015](#)

[Change in traceroute from SLAC to NUST 2014-2015](#)

[Bangladesh case study November 2014](#)

[Afghanistan Case Study on routing](#), updated 2014

[South Asia Case Study 2010](#) Created by Les Cottrell on Apr 11, 2010.

[South Asia Case Study - 2008](#) Created by Shahryar Khan on Jan 26, 2007.

## Connecting to TEIN3

[Pakistan and TEIN3](#) Created by Les Cottrell on Apr 12, 2010.

[Indian Network Connects to TEIN3](#) Created by Les Cottrell on Apr 11, 2010.

[Nepal connects to TEIN3](#) Created by Les Cottrell on Apr 11, 2010.

[Sri Lankan LEARN network connects to TEIN3](#) Created by Les Cottrell on Apr 3, 2010.

## Pakistan

See [Monthly Reports to HEC](#)

[Traffic between Lahore and Quetta being routed to Europe](#). Sept 2012.

[Data Analysis for PERN](#) Created by Amber Madeeha Zeb on October 17, 2011.

[HEC PERN Analysis Report for September 2011](#) Created by Amber Madeeha Zeb on October 13, 2011.

[Comparison of PoP \(pingerjms.pern.edu.pk\) and Non-PoP \(pinger.usindh.edu.pk\)](#) Created by Amber Madeeha Zeb on May 19, 2011.

[UETTAXILA Analysis of changed Network](#) Created by Les Cottrell on May 13, 2011.

[Status of Pakistani monitoring hosts](#) Created by Les Cottrell on May 05, 2011.

[Pakistani Case Study 2010-2011](#) Created by Les Cottrell on Dec 30, 2010.

[SEECs to UET Taxila link](#) Created by Les Cottrell on Dec 27, 2010.

[Pakistan](#) Created by Les Cottrell on Dec 27, 2010.

[International Islamic University, Islamabad](#) Created by Les Cottrell on Apr 24, 2010.

[University of Balochistan](#) Created by Les Cottrell on Apr 24, 2010.

[University of Peshawar](#) Created by Les Cottrell on Apr 24, 2010.

[Case Study of SEECs, NUST & Pakistan - Jan '09](#) Created by Umar Kalim on Jan 21, 2009.

[NIIT/Pakistan](#) created on Jan 07, 2007.

## South East Asia

[Myanmar military shutdown Internet February 2021](#)

[Massive route leak slows down the Internet June 12, 2015](#)

[Denial of Service attack on UM Mar 2015](#)

[PingER: Malaysia Case Study 2014](#)

[AAG cable cut between Hong Kong and Vietnam](#) September 15, 2014

[Congestion at UNIMAS](#)

[Routing from UNIMAS](#)

[Malaysian Case Study](#)

[SE Asian Case Study](#)

## North America

### Traceroute anomalies

[Traceroute anomalies at UMT](#)

## Presentations on Case Studies

- [Quantifying the Digital Divide: A Scientific Overview of Network Connectivity and Grid Infrastructure in South Asian Countries](#), S. Khan, R. L. Cottrell, U. Kalim, A. Ali, CHEP07, Victoria Canada. Also [SLAC-PUB 12581](#). [Poster](#)
- [Internet Connectivity in Africa](#), presented by Les Cottrell at the Internet and Grids in Africa: An Asset for African Scientists for the Benefit of African Society, 10-12 December 2007, Montpellier France.

- [Internet View of the Digital Divide](#), Especially for Sub-Saharan Africa, presented by Les Cottrell at the IHY Africa Workshop 11-16 November 2007, Addis Ababa, Ethiopia.
- <http://www.slac.stanford.edu/grp/scs/net/talk07/icfa-mexico07.ppt>Quantifying the Digital Divide: Latin America, S. Asia, Africa, presented by Les Cottrell at the ICFA Workshop on Digital Divide Issues for Global e Science, Mexico City Oct 24-27, 2007
- [ICFA/SCIC report on Africa](#), Created Jan 07, 2007.
- [Powerpoint presentation on Sub-Saharan Africa](#) presented by Les Cottrell at the Sharing knowledge across the Mediterranean ICTP Trieste on Nov 06-08, 2006.
- [Sub-Sahara Region](#), Created by Syed Akbar Mehdi on Oct 20, 2006.

## Related Documents

[From Content Blocking to National Shutdowns: Understanding Internet Disruptions](#)