

Madagascar Link

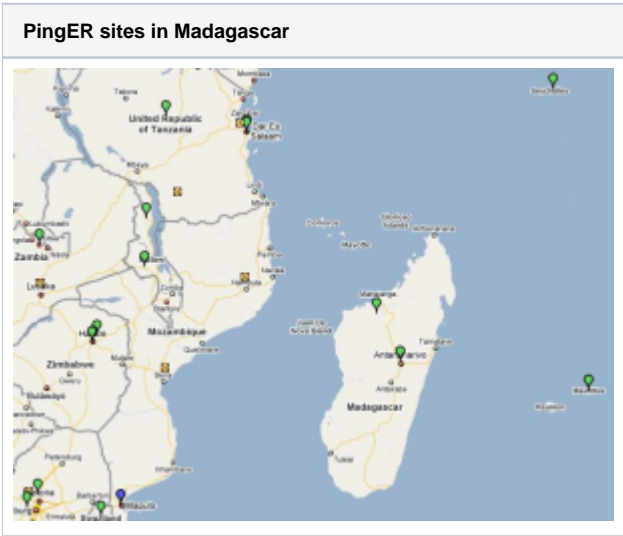
Les Cottrell (SLAC) and Umar Kalim (SLAC and NIIT)

In March 2008 France Telecom & Orange announced a plan to install a submarine fibre optic cable providing Madagascar with broadband internet. Known as Lion, the 1,800 km cable will connect Madagascar with the region's existing Sat3-Wasc-Safe cable via Reunion and Mauritius.

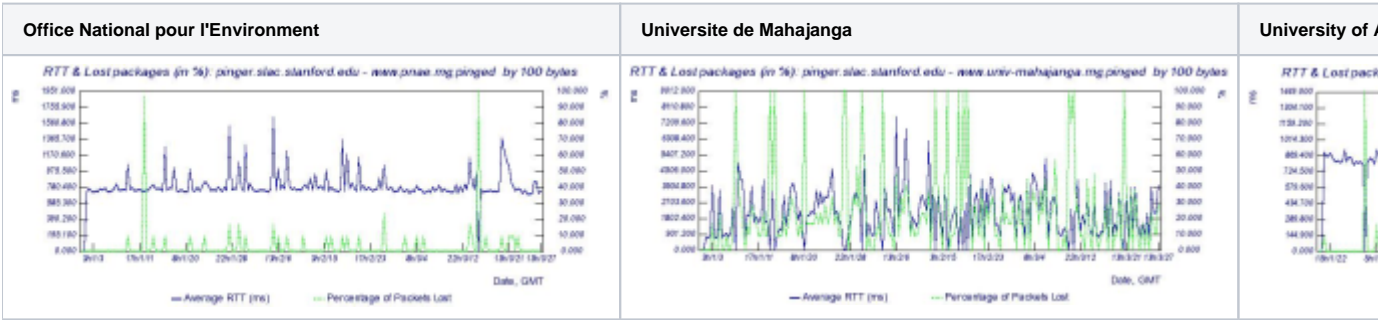
We monitor 3 hosts in Madagascar.

- Office National pour l'Environnement
- Universite de Mahajanga
- University of Antananarivo

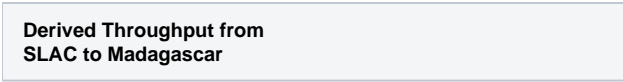
We also have a host in Mauritius and one in the Seychelles which may be affected by this new fibre. The map below shows the locations of the hosts.

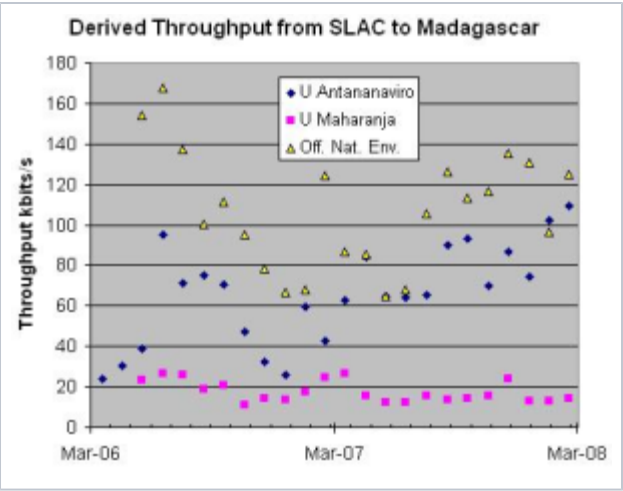


The 3 in Madagascar all have minimum Round Trip Times (RTTs) of around 700ms indicating that they are probably satellite connected today. However, Univ Mahajanga has average RTTs of 2000ms compared to 830ms for University of Antananarivo and 800ms for Office National pour l'Environnement. Also Mahajanga has losses of over 15% whereas University of Antananarivo has ~ 2% and Office National pour l'Environnement has closer to 1.5%. Looking at the map Universite de Mahajanga is more isolated and ~400km away from the capital of Antananarivo where the other two hosts are located. The losses and average RTTs for the above three hosts are shown below.



The derived TCP throughputs (derived from throughput = 1460*8 / (RTT 8 sqrt(loss)) kbits/s where RTT is in msec) are shown below for the last 2 years.





The traceroutes show that from SLAC:

The Office National pour l'Environnement goes [through France](#) from where there is a satellite link to Madascar.

The Universite de Mahajanga goes [to New York](#), then [there is no further information](#).

The University of Antananarivo goes [via Sweden](#) from where [there is a satellite hop](#) to Madagascar.

Mauritius goes to [Canada](#), then [France](#) and finally Mauritius.

The topologies obtained from the traceroutes results are shown in the annexure.

Annexure

USA (SLAC) to Madagascar - summarized	USA (SLAC) to Madagascar - detailed	USA (SLAC) to Mauritius - summarized	USA (SLAC) Maurit - detail

A [copy of the results](#) (for Madagascar, Mauritius and Seychelles) are put together in a graphical format as follows:

USA (SLAC) to Madagascar,
Mauritius and Seychelles
- detailed

