

A simple web-scraping tool for state of health monitoring within Covid19 times.

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P4.5-328



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ABSTRACT.

The Covid-19 pandemic speed – up the digital migration all over the world, there are critical systems such as sending and receiving data in near real time need to keep running during the worst case scenario. Nevertheless the access to technology (computer, tablets, Internet) is not fair for all citizens and workers, a need to create a simple tool to keep monitoring the State of Health is proposed.

INTRODUCTION.

Since March 2020 a Governmental Supreme Decree No. 4199 states to work from home and study from home, however the Internet access is not the best for all the city, to fulfill the contract with CTBTO we needed to re design the way of working.

En conformidad al D.S. N° 4199, de 21 de marzo de 2020, mediante el cual se declara Cuarentena Total en todo el territorio del Estado Plurinacional de Bolivia, contra el contagio y propagación del Coronavirus (COVID-19)

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Tipo Noticia: Publicaciones

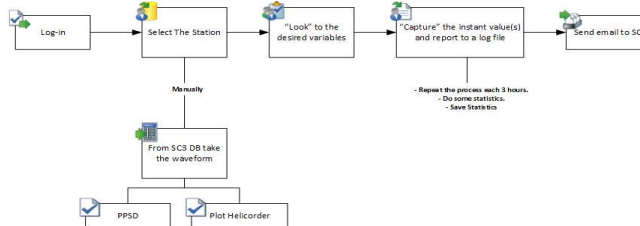
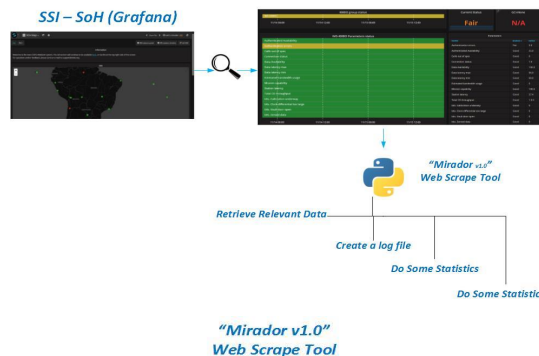


The mandatory quarantine started from March to July 2020, then a flexible quarantine was adopted until now

Disclaimer: The views expressed on this poster are those of the author and do not necessarily reflect the view of the CTBTO

METHODS

A simple Web – Scraping tool based on Python and Optical Character Recognizing were adopted to “surveillance” the GRAFANA CTBTO web page



RESULTS

A simple TXT file is sent to mobile phones or email with most important variables taken from GRAFANA SoH tool

```
mirador V1.0 log
Date 13-11-2020

Station | LPAZ
Connection Status 1.0
Authentication Availability 100.0
Authentication Errors 0.0
Data Availability 100.0
Mission Capability 100.0
Data Latency Max 71.0
Data Latency Min 37.0
Station Latency 11.7
```

DISCUSSION AND CONCLUSIONS

- As Bolivian NDC we authorized to have the most important SoH variables in a simple text format.
- Python OCR and Scraping tools were applied to fulfill the objective and keep operating the IMS stations.
- There is a need to have lighter tool for S.O and S.M in order to enhance the monitoring.

Since 2020 a huge and fast migration to information technologies (IT), remote working and digital media was observed due to the Covid-19 that put entire countries on quarantines for more than one month. Critical tasks such as State of Health monitoring for IMS certified stations needed to be performed, taking into account that not all people can have one computer turned on 24/7 at home and stable Internet access.



En conformidad al D.S. N° 4199, de 21 de marzo de 2020, mediante el cual se declara Cuarentena Total en todo el territorio del Estado Plurinacional de Bolivia, contra el contagio y propagación del Coronavirus (COVID-19)



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Tipo Noticia: Publicaciones



“The Supreme Decree No.4199 of 21th March 2020 stablish the total quarantine on Bolivia due to COVID-19”



Quarantine

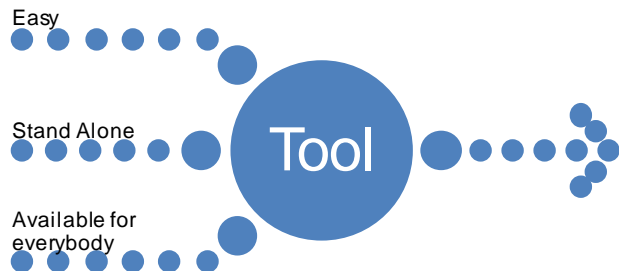
- S.D. 4199 mandates to work from home, restricted activities, no travels, no fun / parties, School and University from Home

Internet Access

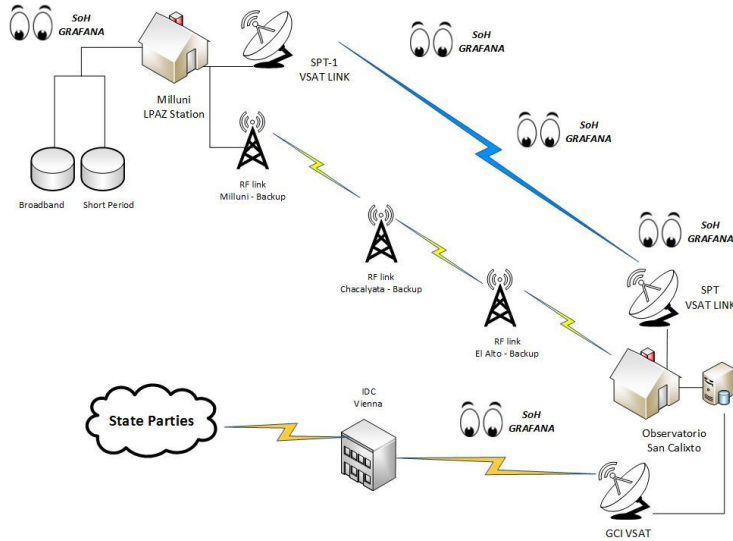
- 30\$us / Month / 300MB, however not stable and not all available in all city.

Technology Access.

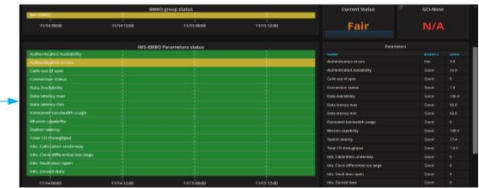
- According to last census (2012) only one PC is available at home.



- We need to have access to:
 - IMS SoH (Grafana).
 - IRS.
 - Our Own SoH of Seismic Network



SSI – SoH (Grafana)



"Mirador v1.0"
Web Scrape Tool

Retrieve Relevant Data

Create a log file

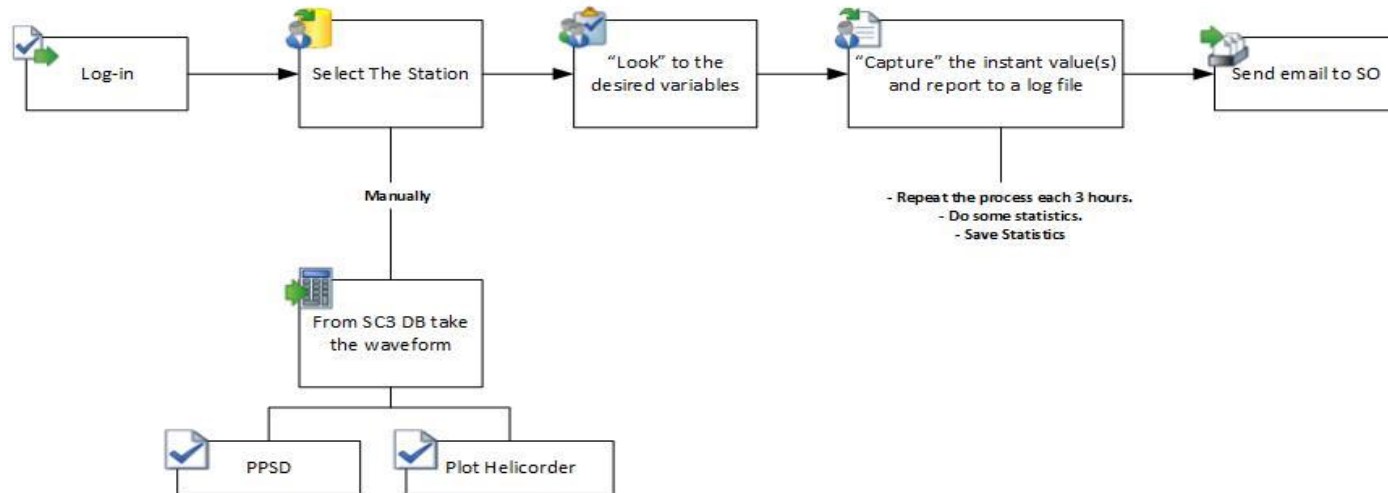
Do Some Statistics

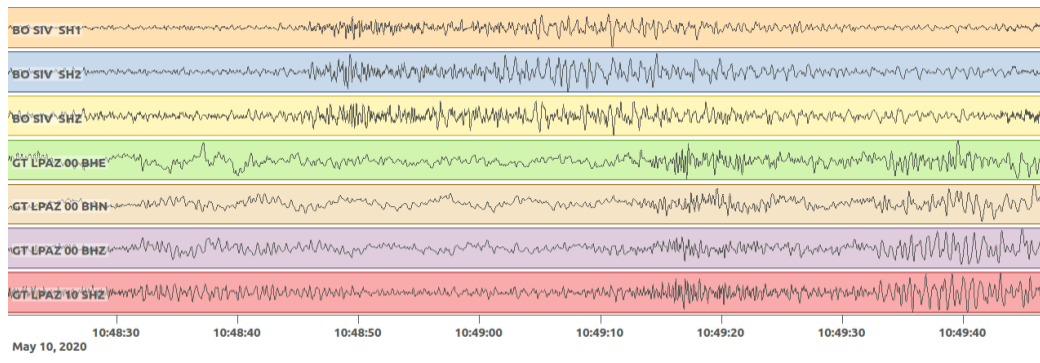
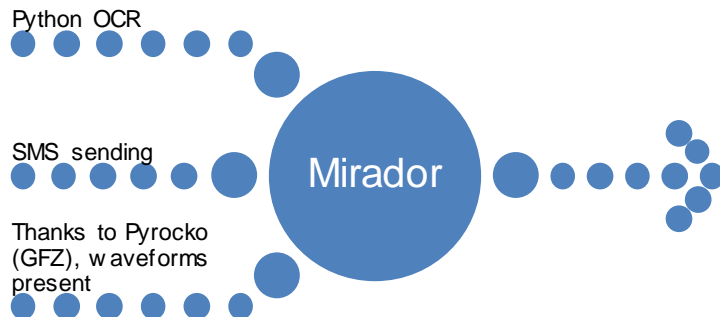
Do Some Statistics

What will happen if we “copy” the most important SoH’s from GRAFANA and “paste” to a simple plain text and send it by email?

A web scraping tool was created to help SO to have some SoH's and to keep running the IMS station

"Mirador v1.0"
Web Scrape Tool





Mirador V1.0 log
Date 13-11-2020

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Mirador WST

As SO and SM we need to have solutions to keep running our IMS stations, those solutions must be “sync” with our reality (Internet access and PC’s).

As NDC we authorize to Scrap our GRAFANA session on behalf of the workers health and science to keep running

We keep running MIRADOR Web Scraping Tool when there is a quarantine in my country.

GRAFANA showed a full set of SoH variables to study and contribute to preventive maintenance