IIISBS
15-17th April, 2019
Vinhedo - SP / Brazil

April 15, 2019

USP Data Center: infrastructure supporting the Seismology Center

Jackson Calhau*[1], Bruno Collaço[2], Marcelo Bianchi[1], Marlon Pirchiner[1], and Marcelo Assumpção[1]

[1] *Universidade de São Paulo (IAG/USP)*
[2] *Universidade de São Paulo (IEE/USP)*

Abstract

Traditionally, Brazilian seismology did not have a clear strategy for acquiring, evaluating, storing and sharing data with a long-term view. Without adequate infrastructure and effective management, the collection of seismological data may be lost or partially unusable (as it has happened many times in the past), resulting in non-uniform coverage, decreasing the chances of local and international collaboration, and making it difficult to extract scientific knowledge in the future.

Since 2009, efforts of four institutions have established the new Brazilian Seismographic Network (RSBR, Rede Sismográfica Brasileira), initially with resources from PETROBRAS to implement the network of 85 stations and adjustments in the infrastructure of these institutions, waxing in 2015. Since 2016 CPRM supports the maintenance of the Network.

The USP Seismology Center as a member of the RSBR receives in real time data from the 4 different networks (BL, BR, NB and ON), operated respectively by USP, UnB, UFRN and National Observatory. In addition, it distributes real-time and on-demand data to more than 20 sites around the world.

The Center has a robust infrastructure composed of a Tier II Data Center, an own Satellite Central (VSAT, Very Small Aperture Terminal), two NOCs (Network Operations Center), two storage arrays, dozens of servers (physical and virtual) and a motivated specialist team.

With this, one of the challenges of the Seismology Center is to maintain, manage and expand the entire built infrastructure, always in a sustainable and scalable way, to provide reliable data to society and researchers in Brazil and worldwide.

*Presenting Author.

Abstract ID: 750f3d, *Contribution type:* Oral Presentation, *Session:* Field Advances, Network Operation and Technological Developments, *Submitted by:* Jackson Calhau Souza (jackson@iag.usp.br).