



viprinet®

#### Company profile

Istituto Nazionale di Geofisica e Vulcanologia (INGV), Italy

- Business sector: Public Body
- Headquarters: Rome, Italy
- Established: 1999
- Company sites: >20

#### Project facts

Fast installation of a stable Internet infrastructure as emergency relief measure

Hardware used:

Viprinet Multichannel VPN Router 512

4x 4G Europe/Australia

Project launch: October 2016

## CASE STUDY

### STABLE INTERNET FOR EARTHQUAKE RELIEF

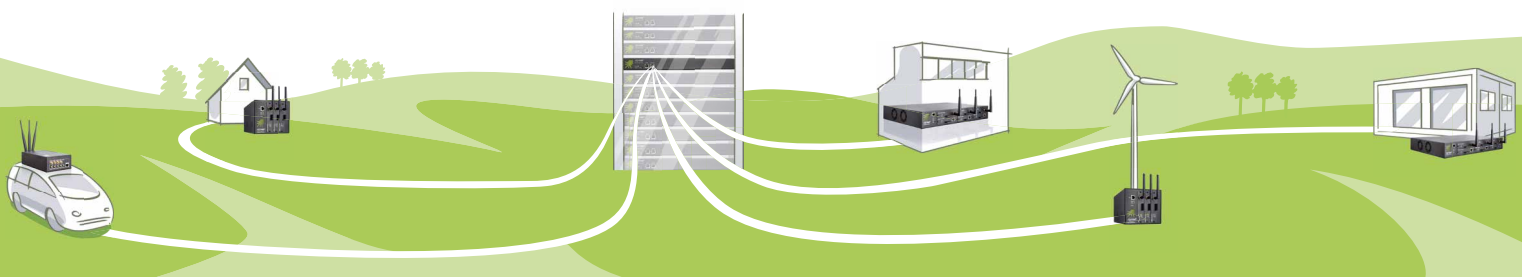
After the grave earthquake in middle Italy in October 2016, Viprinet supported Italian Institute for Geophysics and Vulcanology INGV at setting up a stable communications network in the affected region. Tragic natural catastrophes like earthquakes often leave IT and communications infrastructures destroyed or at least insufficient. In order to coordinate rescuers' operations on site and to organize subsequent reconstruction, installing a ready-to-use communications infrastructure becomes a high priority according to disaster relief. Not only need numerous organizations, authorities, and rescuers on site to be organized, but also a communications infrastructure between the hurriedly established local situation rooms and the central offices all over Italy must be installed quickly in order to broadcast relevant data e.g. from earth quake measuring stations or drone cameras to and from the affected regions.

### BENEFITS OF VIPRINET'S SOLUTION

- Provision of a powerful emergency communication
- Stable data transmission despite challenging mobile coverage
- On-site setup within only a few hours
- Bonding the available 3G/4G networks for sufficient bandwidth

### THE CHALLENGE

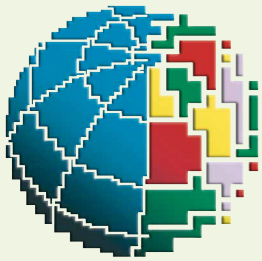
After grave earthquakes, there often is no more possibility to use wired data infrastructure on site. The only possibility to setup an infrastructure within short term is to resort to mobile connectivity that may be rudimentary after such catastrophes but still available. From the technical side of view, the challenge is to achieve an absolutely stable data connection on the one hand, and to forward large amounts of data using sufficient bandwidth to situation rooms and the many rescuers and their mobile devices on site on the other hand. Robust data broadcast and the possibility to provide various devices (PCs, mobile, proprietary) with a fast and easy Internet connection are crucial for effective deployment on site.



*"With Viprinet, we're able to set up a rugged data connection within hours, wherever needed."*

Diego Sorrentino, IT Manager,

INGV



**INGV**  
terremoti  
vulcani  
ambiente

ISTITUTO NAZIONALE  
DI GEOFISICA E VULCANOLOGIA

## IMPLEMENTATION

For that, Viprinet provided Italian INGV with a Viprinet Multichannel VPN Router 512 with four 4G modules. With this device, all available mobile networks from Vodafone can be bonded together in order to utilize their aggregated bandwidths for any kind of application. On site, Viprinet partner New Alfatel tended to configuration and adaption to local conditions. Cooperation with local organizations and authorities is of vital importance for quick starting up.

## RESULT

By using Viprinet technology to bond different mobile networks, it was possible to setup a stable and resilient Internet connection for the INGV. This enables coordinating measures on site as well as data transmission between situation rooms and central authorities all over Italy - for example to Gibilmanna and Rocca di Papa, via stable installations, and to mobile networks for temporary installations. On sporadic outages of one of the mobile networks used for the bonded access, data transmission is continued over the other bonded networks without any interruption, making the communications infrastructure extraordinarily robust. With Viprinet technology and a local Viprinet partner, implementation was completed within only a few hours.

Partners involved:



**New Alfatel 2002**

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