viprinet®

CASE STUDY
STREAMING AND SITE-TO-SITE IN AFRICA

Company profile

Hirondelle Foundation

- Business sector: NGO
- Headquarters: Lausanne, Switzerland
- Established: 1995
- Projects: worldwide
- Employees: 187

Radio broadcasts in remote areas are tough on network solutions: They demand sufficient bandwidth, low latencies, and simple configuration. Another decisive factor are concomitant costs, especially when non-government organizations (NGOs) are concerned. Hirondelle Foundation – Media for Peace and Human Dignity is such an NGO aiming to develop and support independent and neutral media. The foundation headquarters are in Lausanne, Switzerland, while their members operate in Mail, Niger, Central Africa, the Democratic Republic of the Congo, Guinea, Burma, and Tunesia. For that, Hirondelle founds radio stations in troubled regions and war zones. Each of the foundation's stations is considered an individual project and employs mostly locals. In addition, all projects are connected to accounting in the Lausanne headquarters.

BENEFITS OF VIPRINET'S SOLUTION

- Sufficient bandwidth by bonding different Internet links
- High resilience by bonding different mobile providers
- Encrypted VPN connection to headquarters for transmission of sensitive data

Project facts

Providing all Hirondelle projects with a Viprinet solution and a connection to headquarters

Hardware used:

1 Multichannel VPN Router 1610

4 Multichannel VPN Router 2620

1 Multichannel VPN Hub 5010

18 Gigabit Ethernet Modules

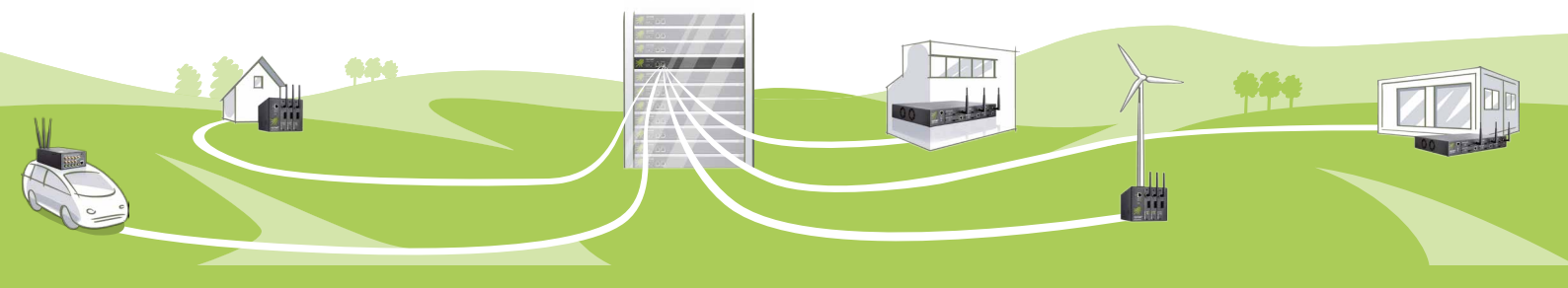
6 4G Europe/Australia/Africa Modules

Project launch: 2016

Sites/Projects connected: 5

THE CHALLENGE

Most of Hirondelle Foundation's radio stations are located in sub-Saharan Africa. In these areas, Internet access is very limited and available bandwidths seldom exceed several hundred kilobits per second. ADSL is usually unavailable, so most users are connected via WiMax which frequently causes problems during heavy rain that is common in these regions. Existing GSM mobile networks are overloaded causing outages for hours or even days. This massively impedes Hirondelle Foundation's work. Employees need extraordinarily stable connections to stream media contents and process daily data traffic with the Swiss accounting department.



"In sub-Saharan Acrica, Internet access is as difficult and scarce as access to water. Thanks to Viprinet technology, each available connection, as limited as it may be, is used to its maximum, thus enhancing network access."

Fabrice Junod, Head of Technology and IT,

Hirondelle Foundation

MEDIA FOR PEACE AND HUMAN DIGNITY
FONDATION HIRONDELLE

Partners involved:

QuadCom.ch
More than connecting...

Eldorex Advanced Engineering AG
Oberneuhofstrasse 3
CH–6340 Baar
www.quadcom.ch

IMPLEMENTATION

In order to fulfill all demands, Viprinet relies on its patented and trusted WAN bonding solution. Each project is equipped with a Multichannel VPN Router 2620 which bonds four independent connections in a safe-guarded tunnel: two WiMax Internet links from two different local providers, and two GSM data connections with SIM cards from another two local providers. WiMax links are handled by Gigabit Ethernet Modules while for GSM connections, 4G Europe/Australia/Africa Modules are used. Finally, all connections are centralized in Viprinet partner Quadcom/Eldorex AG's data center in Baar, Switzerland. Hirondelle Foundation's headquarters in Lausanne is also connected to this data centers, using two independent glass fiber cables with a Multichannel VPN Router 1610. The connection of two more sites is planned.

RESULT

Resilience and bandwidth are indispensable for Hirondelle Foundation's daily work with their projects on site. Thus, the foundation trusts in long-standing Viprinet bonding technology. Local Internet links used for bonding in the individual projects achieve bandwidths of only 50 to 500 kbps on average. The implemented Viprinet solution now guarantees consistent and effective symmetrical data throughput of 5.6 Mbps at worst; usually, the throughput is much higher with 7 Mbps in Niger, 20 in Mali and 25 in Tunesia. Compared to usual bandwidths in Northern and Middle Europe, this may in part not seem much but in sub-Saharan Africa, this bandwidth signifies a massive improvement. In addition, the Viprinet solution provides excellent resilience by bonding different access technologies and local providers, so that network failures that previously aggravated the foundation's work, now only have minor impacts on the projects. If one of the bonded Internet links fails, bandwidth decreases but data transfers are maintained without interruption via the other bonded connections. Since the Viprinet VPN is also extremely reliable in regards to data security, terminals of local employees can also be integrated into the foundation's Active Directory Domain. By that, employees can directly access the central ERP system which significantly improves the compilation of accounting data. With the Viprinet solution, Hirondelle Foundation's projects are thus future-proof even under challenging IT-infrastructural conditions.