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Success Story

Spanish Telco Enables Next Generation Services with Zyxel End-to-End GPON Solutions

INDUSTRY — Telco

CUSTOMER — TeleRute S.L.

REGION — Spain

SOLUTIONS — GPON End-to-End Solution

Overview

Challenges

- Replace outdated technology with modern solution
- Solution must offer proven technology with industry-leading specs
- Solution must offer good price-to-performance ratio
- Solution has to be customizable
- Customer required local support and service

Solutions

- 2U 6-slot Temperature-Hardened GPON Optical Line Terminal
- Wireless N GPON ONT IAD with 4-port GbE Switch
- ONT GPON Optical Network Unit with 1-port GbE LAN

Benefits

- Excellent return on investment
- Project requirements achieved
- Flexible and future-proof
- Reasonable cost
- Better network management
- Resolved issues with previous solution
- Energy efficient
- Delivers giga-grade bandwidth efficiently
- Lower maintenance costs

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Background

Founded 2002, TeleRute is a telco delivering cable, Internet and telephone service in the Córdoba province of Spain. Until recently, the company operated a coax network serving about 2,000 customers in two villages — Rute and Priego de Córdoba. The existing network is not only limited in terms of Internet speed, but it has also been expensive to maintain as it relies on outdated Docsys technology utilizing multiple repeaters and several other failure-prone devices. The company wanted to start fresh with a new network offering IPTV services while moving existing coax customers into the new infrastructure to take advantage of excellent Tripleplay services.

Challenges

TeleRute was hampered by outdated legacy equipment. The business was growing, but that growth was being held back by poor capacity and data bottlenecks that were degrading service and incurring significant maintenance costs. While the company's existing hardware was nearing its end-of-life point, new trends in the industry required a future-proof approach that would improve both efficiency and productivity.

Solutions and Benefits

TeleRute chose a Zyxel GPON End-to-End solution implemented by local IT solution credible partner -Autronic. Autronic chooses to work with Zyxel because the hardware maker and solution innovator has a local presence and both entities enjoy a strong working relationship. In addition, Zyxel is a well-known international brand with a reputation for excellent customer service. Zyxel offers quality products at competitive prices and is betting on GPON technology — the current trend in Spain — which makes their products and solutions an appealing choice for companies like TeleRute.

An OLT2406 2U 6-slot temperature-hardened GPON optical line terminal provides the backbone for the solution, integrating an array of security and management features, including NetAtlas GPON manager. PMG5318-B20C Wireless N GPON ONT IAD with 4-port GbE switches support network service through fiber optics. Finally, PMG1005-T20A ONT GPON optical network units allow high-speed access to existing null routers along with remote management.

One of the key advantages of the Zyxel solution is that it offers customer support and training, which helps TeleRute pass on better service and telecom products to their customers.

The GPON End-to-End solution helps TeleRute resolve performance issues and reduce maintenance costs caused by the outdated equipment it has been relying on. Not only did it fix ongoing problems, but it is fully customizable and scalable to meet future challenges. This will allow TeleRute to launch new IPTV services while maintaining their actual coax network and to start migrating their coax customers onto the new GPON network.

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Products Used

OLT2406 Series • 2U 6-slot Temperature-Hardened GPON Optical Line Terminal

- Up to 16 GPON ports
- Multi-service interfaces including GPON and AON
- Comprehensive IPTV functions for either IPv4 or IPv6 environments
- QoS and complete traffic management for triple play services
- Full redundancy for non-stop services
- Hot-swappable for easy maintenance
- Temperature-hardened for remote deployments

PMG5318-B20C • Wireless N GPON ONT IAD with 4-port GbE Switch
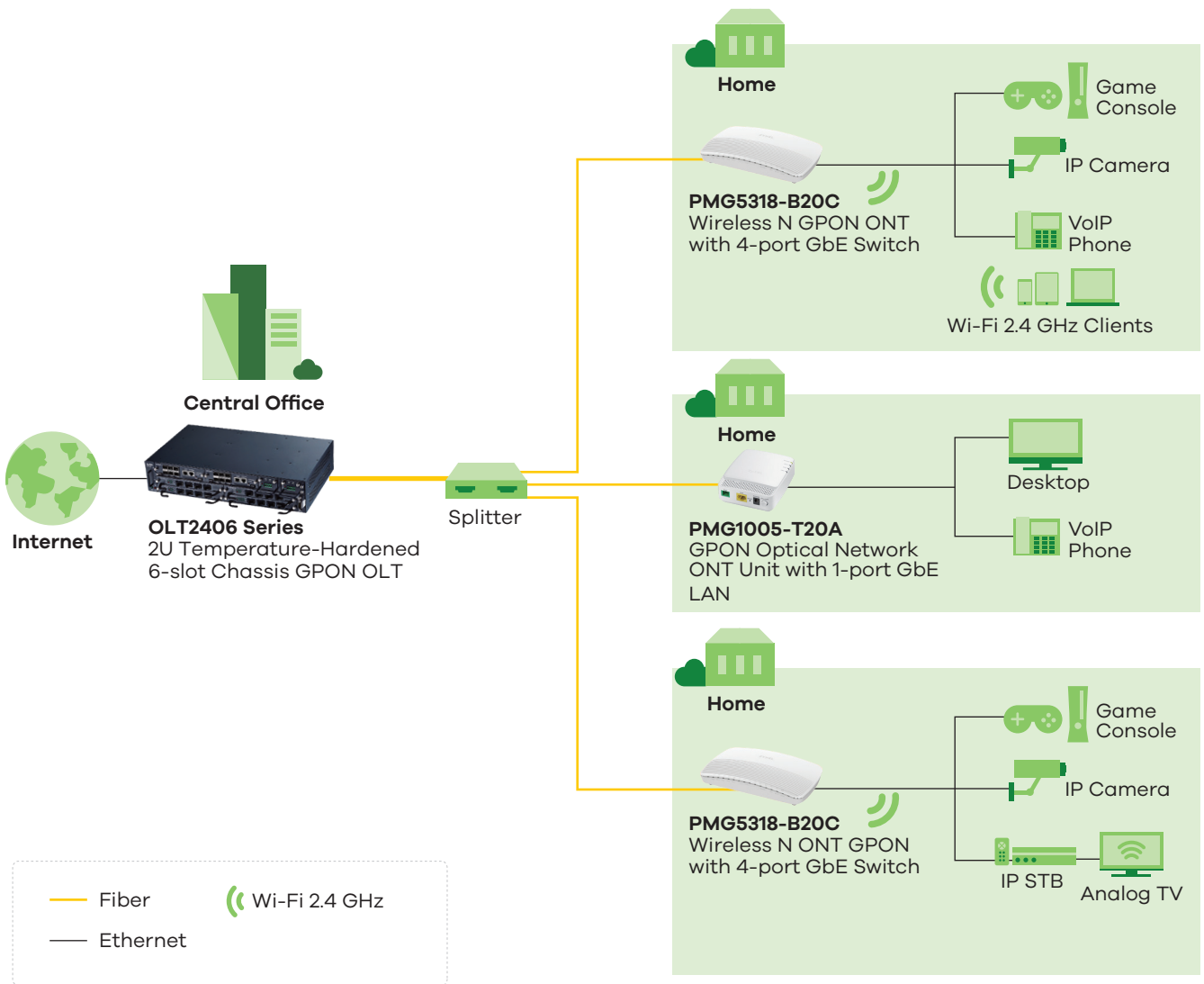
- Integrating various services through fiber optics
- 2.4 GHz 11n (2x2) for superior performance and coverage
- Advanced QoS ensures quality of triple-play services
- Provisioning and management through TR-069 and OMCI

PMG1005-T20A • ONT GPON Optical Network Unit with 1-port GbE LAN

- Integrated Internet services through fiber
- High-speed data access
- QoS ensures service quality
- OMCI remote management

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Diagram

Home

PMG5318-B20C
Wireless N GPON ONT
with 4-port GbE Switch

Game Console

IP Camera

VoIP Phone

Wi-Fi 2.4 GHz Clients

Central Office

OLT2406 Series
2U Temperature-Hardened
6-slot Chassis GPON OLT

Splitter

Internet

Home

PMG1005-T20A
GPON Optical Network
ONT Unit with 1-port GbE
LAN

Desktop

VoIP Phone

Home

PMG5318-B20C
Wireless N ONT GPON
with 4-port GbE Switch

Game Console

IP Camera

IP STB

Analog TV

—— Fiber   ((Wi-Fi 2.4 GHz
—— Ethernet

About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.