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Success Story

Colombia School Enables Seamless and Secure Network Access with Zyxel GPON Solution

INDUSTRY	CUSTOMER	COUNTRY	SOLUTION
Education	Colegio Claret	Colombia	Zyxel GPON Solution

Overview

Challenges

- Upgrade existing network with proven solutions over wide areas
- Deliver full WiFi coverage to each classroom
- Enable multi-site network access
- Ensure campus network is secure
- Develop solutions that are easy to deploy and manage for future growth

Results

- Enabled wide-area coverage and multi-site networking access
- Created separate networks for IT administrators, faculty, and students
- Provided school with a simple upgrade of its network infrastructure
- Delivered robust solution at an affordable price
- Stable and fast connectivity now available throughout the campus

Solution

- Zyxel GPON Solution

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Background

Founded by Claretian missionaries in 1959, Colegio Claret is a well-known Catholic school in Cali, Colombia. The school has been dedicated to educating students and preaching through Claretian charism, humanity, liturgical rites, and biblical doctrines, and aims to keep improving their teaching methods.

As technology continues to advance, more and more schools are required to build or to upgrade network infrastructure to enhance their teaching capabilities. The school introduced digital teaching aids and hoped to upgrade its network infrastructure to provide stable wired and wireless internet access.

Challenges

Colegio Claret previously used a typical LAN network and suffered from insufficient network access and inconvenient installation due to the massive campus area. The school was looking for solutions that could deliver wide–area coverage over its broad premises. Besides, the school needed to select reliable and affordable access network solutions with proven technologies to upgrade its existing LAN networks in the campus. It was also vital that the selected equipment come from a well-known brand, giving the teachers and students seamless and fast network access throughout the campus.

In addition, the teachers use digital teaching aids and require multimedia broadcast technology. Therefore, they hoped to have stable WiFi connectivity to each classroom. The campus is divided into several blocks to cater to

different needs. Network security and easy management are other concerns for the school. It's essential to create separate networks for students, faculty, and IT administrators for added security. Moreover, the solution should provide easily manageable connectivity to the IT administrators.

When it comes to upgrading the wired and wireless networks, the investment should be able to provide longevity and scalability while not exceeding the budget limitations.

Solutions and Benefits

Colegio Claret worked with Preyco SAS and Zyxel to deploy the top-notch GPON solution in 20 classrooms on the campus. Compared to traditional LAN, GPON is a cost-effective solution and able to deliver long-distance data transmission over 100 meters over wide areas.

Also, GPON can offer multi-site networking access and easy management for the organizations that don't want any complicated network deployment and management across different sites. Zyxel's **OLT1404A 1U Pizza Box 4-port GPON OLT** addresses the needs by using an unpowered splitter to separate fiber connections to each end location, eliminating the need to build an additional cable cabinet. Besides saving on space, it reduces utility costs like power and air conditioning. Since there's less hardware to worry about, the infrastructure doesn't require much IT maintenance. Lastly, its 1U design makes installation easier thanks to its small size and compact design.

The OLT1404A also features VLAN that separates the networks of students, faculty, and IT administrators, enhancing security and prioritizing network traffic for more efficient use of bandwidth.

Next, the school needed a wireless solution for the classroom. Zyxel proposed a multi-functional **GPON ONT PMG5317**. Zyxel's ONT is more than just a gateway. The device provides high-speed fiber access compatible with optical standard ITU-T G.984, as well as wireless IEEE 802.11 b/g/n connectivity. The product has given the school the fast and steady WiFi they required.

Colegio Claret is more than satisfied with the stable networking access and simplified deployment from Zyxel's solution. The solution also makes it a breeze for the school to upgrade the existing fiber backhaul. They plan to work with Zyxel to further extend the network infrastructure to provide internet service to other sites of the campus, like labs, gyms, and auditoriums.

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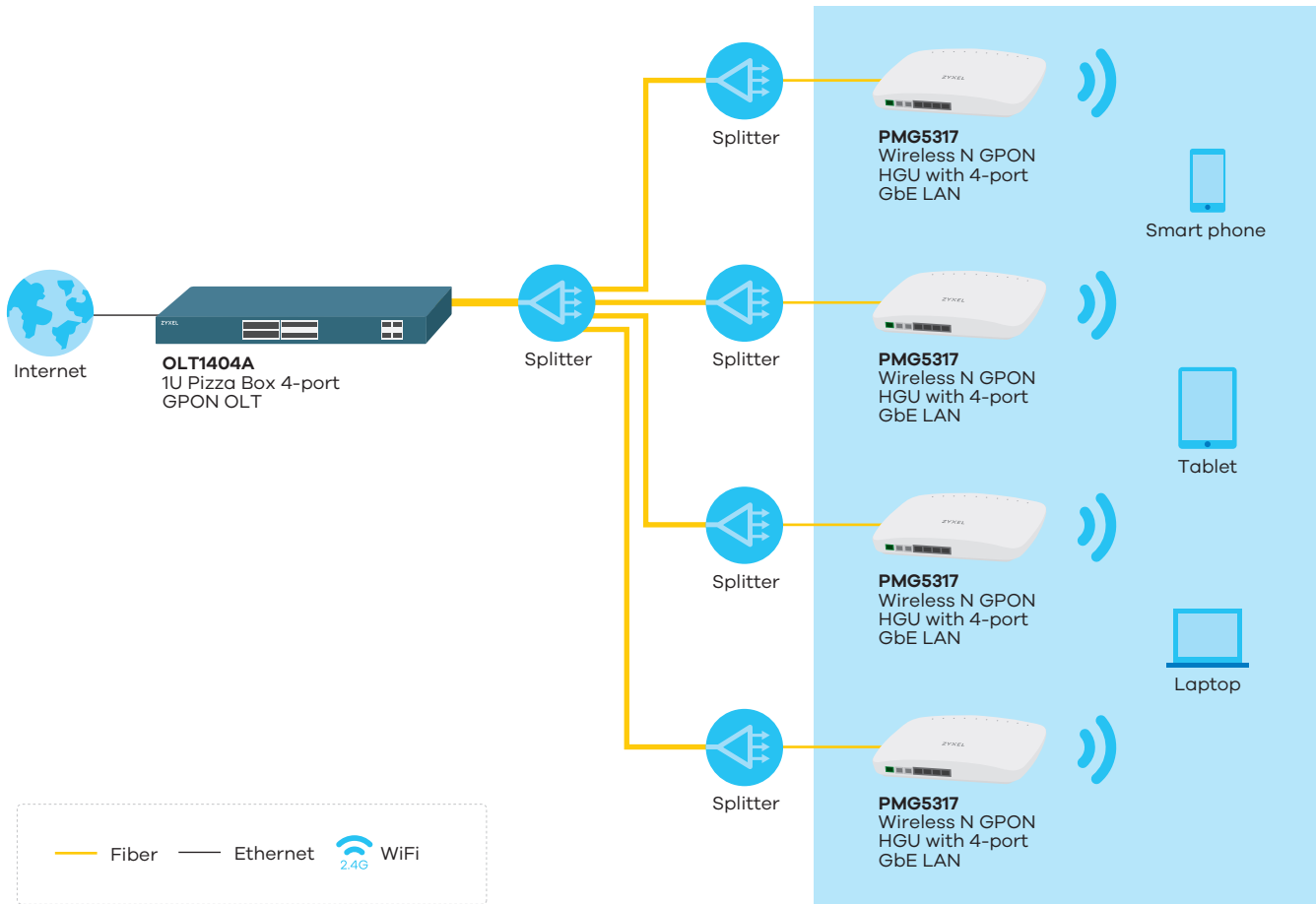## Products Used

OLT1404A • 1U Pizza Box 4-port GPON OLT

- Cost-effective solution with compact design
- Temperature-hardened for durability
- Comprehensive QoS to enhance users' triple-play experience
- Field-proven IGMP snooping and proxy for IPTV deployments
- Full management capabilities via Zyxel EMS NetAtlas

PMG5317 • Wireless N GPON HGU with 4-port GbE LAN

- Integrated Internet services through fiber optics
- Zyxel OPAL realizes modulation of the CPE feature set
- 802.11n WLAN for superior performance and coverage
- Provisioning and management through TR-069 along with OMCI

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Diagram

Internet

OLT1404A
1U Pizza Box 4-port
GPON OLT

Splitter

Splitter

PMG5317
Wireless N GPON
HGU with 4-port
GbE LAN

Smart phone

Splitter

Splitter

PMG5317
Wireless N GPON
HGU with 4-port
GbE LAN

Tablet

Splitter

PMG5317
Wireless N GPON
HGU with 4-port
GbE LAN

Laptop

Splitter

PMG5317
Wireless N GPON
HGU with 4-port
GbE LAN

—— Fiber —— Ethernet 📶 2.4G WiFi

About Zyxel

Focused on innovation and customer-centricity, Zyxel 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.