



Success Story

US Internet Deploys Super Fast Internet over Active Fiber Using End-to-End ZyXEL Gear, USA

“The key to me in this whole technology game is, if you can put it out and it just works, and you don’t have to babysit it, that is success. ZyXEL products just run. They just work.”

Travis Carter

Vice President Technology
US Internet, USA

Overview

Customer Name

US Internet, USA

Customer Industry

Internet and hosting service

Challenges

- Offer fiber-speed Internet services to more than 20,000 subscribers

Solutions

- ES-3124F, FSG1100HN, NBG4615

Benefits

- One-Stop Shop for all networking equipment
- Outstanding product reliability for better customer satisfaction and reduced support costs
- Uniform user interface & management capability
- Remote management and set-up
- Tiered service provisioning capability

Challenges

Founded in 1995, US Internet is a global provider of Internet, hosting, application, and digital phone services for government, institutions, business and consumers worldwide. US Internet wanted to answer the growing demand for super fast broadband Internet service in the markets they served. Having exhausted the potential offered by copper-based technologies, US Internet was evaluating a high speed fiber option for this service.

Background

US Internet headquartered in Minnesota, USA, with presence in over 4,000 cities, is a top international provider of high speed Internet and hosting services. US Internet has colocation presence in Minnetonka, USA, London, UK and Sydney, AU. As the demand for super fast broadband Internet service in the markets was growing, US Internet wanted to upgrade the infrastructure to respond to the customers’ needs. Originally US Internet attempted to deploy GPON fiber technology, but after evaluation, US Internet found out that the hardware cost of \$900 USD per customer was prohibitive, and decided instead to test far more affordable Active Ethernet-based fiber technology.

Solutions and Benefits

US Internet’s network architecture consists of a Central Office that is capable of serving a city area spanning 18 blocks by 36 blocks and approximately 20,000 subscribers. Servicing this set-up would require about 900 of ZyXEL’s ES-3124F switches in the central office. The ES-3124F switches have 24 ports, each of which is connected via fibre to subscriber premises and terminated into an Active Ethernet gateway—the FSG1100HN. The FSG1100HN is then connected to a wireless router—ZyXEL’s NBG4615 which is configured to provide high speed wireless Internet service to the establishment.

Solution Highlights

• One-Stop Shop

By sourcing end-to-end equipment from a single vendor, US Internet is able to maintain uniform product quality resulting in better service to their subscribers. ZyXEL was able to customize products for US Internet, simplifying and accelerating deployment, and smoothing logistics and technical support.

• Outstanding Equipment Reliability

US Internet has been impressed with ZyXEL products' dependability, which has not only reduced costs associated with support—improving profitability—but produced satisfied and loyal customers

• Uniform Management & User Interface

Since the entire solution is sourced from ZyXEL, all the equipment shares the same user and management interface making it easy to train US Internet personnel. The uniform management capabilities of all the equipment also simplify integrating them into US Internet's proprietary management software.

• Remote Configuration & Management

US Internet is able to remotely configure both the FSG1100HN Active Ethernet gateway and the NBG4615 wireless router so that a service technician can install and start service within 20 minutes saving both time and money. And most issues can be resolved by trouble shooting remotely without the need for a costly truck roll to the customer premise.

• Tiered Service Provisioning

ZyXEL's ES-3124F switches come with a built-in rate limiting feature that US Internet uses to control both the ingress and egress data rate. This enabled US Internet to offer different tiered services without using expensive packet shaper equipment.

By partnering with ZyXEL, US Internet has been able to affordably provide its subscribers with non-stop, and economical high-speed Internet that operates seamlessly and is designed for simple upgrading to gigabit Internet in the future.

Products Used



ES-3124F 24-port FE L2 Switch

- Multilayer-aware (L2/L3/L4) ACL for security protection and traffic optimization
- Policy-based QoS optimizes multi-service quality
- VLAN stacking (Q-in-Q) support for Layer-2 VPN
- Remote management via IEEE 802.3ah (OAM)
- IPTV manipulated by MVR and IGMP snooping v3
- Minimizes channels surfing disturbance with fast leave
- ZyXEL iStacking™ technology
- Backup Power System support



FSG1100HN Wireless N 100M Active Fiber 4-port Gateway

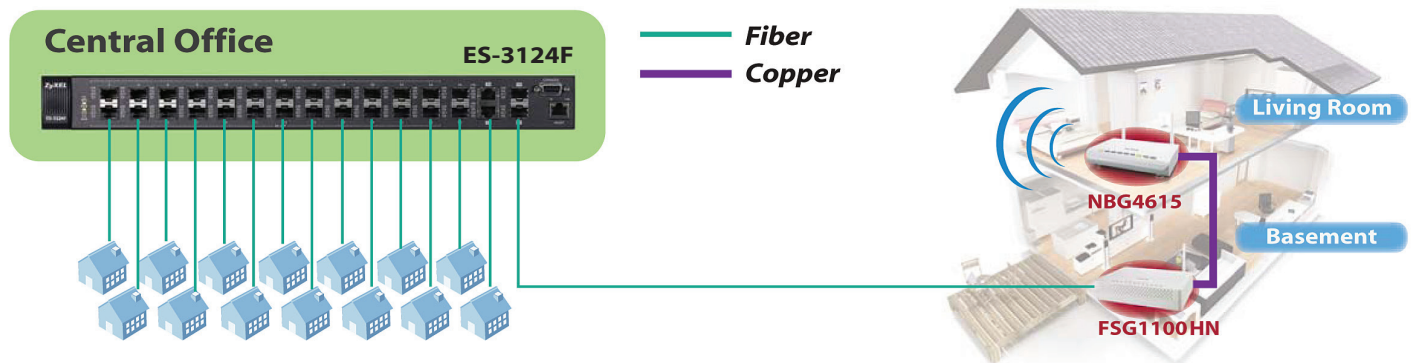
- IP based P2P Fiber for high speed Internet access
- QoS optimize time-sensitive applications
- 802.11n technology for extreme performance and coverage
- Eco-friendly wireless on/off button empowers easy way to save energy
- Easy Fiber installation for Fiber termination unit inside



NBG4615 Wireless N Gigabit NetUSB Router

- High-performance wireless N Gigabit router optimizes multimedia streaming
- NetUSB™ shares USB mass storages and printers wirelessly
- Friendly user interface for fast function navigation and setup
- Configurable QoS ensures optimal bandwidth for preferred network applications
- Easy-to-extend wireless network coverage with any existing AP
- WPS button for quick and easy wireless security setup

Diagram



About ZyXEL Communications

ZyXEL Communications Corp., founded in 1989 and headquartered in Taiwan, is the leading provider of complete broadband access solutions. As one of the early modem manufacturers, ZyXEL has undergone many transformations in the fast-paced networking industry. Today, ZyXEL is one of the few companies in the world capable of offering complete networking solutions of Telco, SME/Enterprise, and Digital Home for a wide range of deployment scenarios. Telco solutions include wired and wireless access network equipments, networking customer premises equipments, and Carrier Switches. SME and Enterprise solutions include Unified Security Gateway, LAN Switches and WLAN. Digital Home solutions include network connectivity devices and multimedia solutions.

The company has 3200 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 33 subsidiaries and sales offices and two research and development centers worldwide. For more information, visit the company's Website, <http://www.zyxel.com>.

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