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Success Story

Zyxel Pipes in Secure Network Infrastructure Solution for Turkish Natural Gas Supplier

INDUSTRY — SMB

CUSTOMER — Doğugaz Natural Gas

REGION — Turkey

SOLUTIONS — Zyxel wired & wireless solution

Overview

Challenges

- Create network infrastructure linking offices and providing Internet connectivity
- Network must allow legally required logs to be recorded
- Connect headquarters and the offices via site-to-site VPN
- Solution must provide adequate security with Internet traffic tracking and logging at the IP and user level
- Guest network must be isolated using VLAN and legal tracking, and allow logging of this traffic using personal details

Benefits

- Logging onto the Internet and guest networks of the offices via firewall provided
- Network infrastructure complies with Turkish regulations governing network access
- Solution provides VPN connectivity between offices
- New infrastructure logs user traffic
- Infrastructure provides centralized management of accounts and easy account creation
- Solution is scalable and future-proof

Solutions

- Next-Gen Unified Security Gateway Extreme Series
- Unified Security Gateway
- 24HP/48HP Gigabit Smart-Managed PoE Switch
- 802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Point
- Wireless N Business WLAN 1000 Series Access Point

"Our company provides services in three cities to a total population of over one million in the Eastern Anatolia region. We needed to provide seamless Internet access to our staff while fulfilling our security requirements. It was also important for us to ensure that our customers, who share the same Internet connection with us, use a secure connection. Additionally, as Law No. 5651 requires the institutions to record logs of websites visited by both staff and guests, we needed a solution that would allow us to fulfill this legal obligation. MEB Bilgisayar, a business partner of Zyxel, helped us with this project from the beginning to the end. We are glad to have chosen this solution supported by the technologies and experience of Zyxel."

Yakup Kadri Demir
IT Manager, Doğugaz

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Background

Doğugaz Bitlis Bingöl Muş is a natural gas distribution company that has been licensed since 2014 to distribute natural gas for the next 30 years to a region of eastern Turkey consisting of Bitlis, Bingöl, Muş, Tatvan, and Güroymak. The covered region has a population of over one million inhabitants. The utility is currently in the process of expanding the number of offices it has in the region. The company is based in Muş and has offices in Bingöl, Bitlis, and Tatvan, and it will soon open an office in Güroymak.

Challenges

As the company achieved rapid growth over a large region, its network infrastructure needed to be updated to keep pace with expansion. Doğugaz required a secure Internet connection linking a numerous locations, primarily between the headquarters in Muş and other satellite offices. Security was a primary concern, and required the separation of Internet traffic between staff and guests, as well as logging of Internet use in compliance with Turkish Law No. 5651.

Solutions and Benefits

Zyxel created a network infrastructure solution to meet Doğugaz needs with the assistance of MEB Bilgisayar, a local IT company and member of the ZyPartner program. The headquarters and offices were linked using a site-to-site VPN connection in accordance with the project plan. Local users were able to access the Internet via a firewall using web authentication.

Offices were then able to access the Internet using the infrastructure centered at the headquarters. Internet traffic from all users is tracked with the firewall analyzer both at the IP level and at the user level. This infrastructure solution allows Internet traffic to be logged in accordance with Turkey's Law No. 5651.

The established infrastructure provides Doğubaz with the ability to manage bandwidth at the user level, as well as to create and modify security rules. The solution isolates the new guest network via VLAN, while providing authentication for Internet access using Turkish Identity Number verification. This way, the institution can track and legally log the Internet traffic of guest users.

The solution also allows traffic from both the Internet and the guest networks of the individual offices to be logged through the firewall analyzer located in the headquarters. With Zyxel One Network, which allows all Zyxel products to be centrally managed, devices and user accounts can be managed easily. In addition to this state of the art technology, Zyxel Turkey's 24/7 technical support allows opportunities for instant response in solving problems that may arise.

"We are extremely happy and proud to be representing the most improved technologies in the world and providing institutions in need with network technology services as Zyxel's business partner. We have established a secure Internet infrastructure between the headquarters and the existing offices of Doğugaz. We are capable of implementing the same technology to the new offices that will be established in the future, both easily and rapidly." said Mustafa Nur, the General Manager of MEB Bilgisayar.

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Products Used - Headquarters

USG1100 • Next-Gen Unified Security Gateway Extreme Series

- Next Generation Firewall (NGFW) for medium and large-sized businesses and campuses
- Anti-malware protection with Anti-Virus, Anti-Spam, Content Filtering 2.0, IDP, Application Patrol and SSL inspection
- Robust SSL, IPSec and L2TP over IPSec VPN connectivity and VPN High Availability (HA)
- Unified security policy
- Cloud helper provides friendly firmware upgrade
- Device HA Pro ensures smart handover
- Hotspot management is supported

GS1920 Series • 24HP/48HP Gigabit Smart-Managed PoE Switch

- Smart managed switch with essential L2 features
- GbE RJ-45, GbE combo (RJ-45/SFP) and fixed GbE SFP connectivity
- Supports ZON Utility, Zyxel Smart Connect and iStacking facilitates easy network initialization and management
- High 375-watt power budget
- Reliable network availability with Loop Guard, IPSG, and CPU protection
- RADIUS, static MAC forwarding and 802.1x authentication -enhance network security
- Future-proofed with IPv6 support

WAC6103D-I • 802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Point

- "Dual-optimized" antenna allows pattern optimization adapting to wall- or ceiling mount installation
- 3x3 802.11ac supports combined data rates of up to 1.75 Gbps
- Load balancing on both standalone and managed modes
- Dual image supports for reliable Wi-Fi connectivity
- Zyxel One Network for standalone AP management

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Products Used - Branch Offices

USG110 • Unified Security Gateway

- Next Generation Firewall (NGFW) for small and medium sized businesses
- Complete network protection with firewall, Anti-Virus, AntiSpam,
- Content Filtering 2.0, IDP, Application Patrol
- Robust SSL, IPSec and L2TP over IPSec VPN connectivity and VPN high availability (HA)
- Unified security policy
- Device HA Pro ensures smart handover
- Cloud helper provides friendly firmware upgrade
- Hotspot management is supported

USG60 • Unified Security Gateway

- All-in-one Next Generation Firewall (NGFW) for small businesses
- Complete network protection with Anti-Virus, Anti-Spam, Contetnt Filtering 2.0, IDP and Application Patrol
- Robust SSL, IPSec and L2TP over IPSec VPN connectivity
- Unified security policy
- Cloud helper provides the friendly firmware upgrade to ensure its authenticity and reliability

GS1920 Series • 24HP/48HP Gigabit Smart-Managed PoE Switch

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NWA1121-NI • Wireless N Business WLAN 1000 Series Access Point

- Compact ceiling-mount design
- Plenum rated with LOSH material
- Coverage-enhancing 11n functions including Low Density Parity
- Check (LDPC), Maximum Likelihood Demodulation (MLD) and TX Beamforming
- Supports up to 8/16 SSIDs

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.