# How Modern Infrastructure Helped NYC's Most Vulnerable Get to the Doctors

AGAPE TRANSPORTATION MANAGEMENT

## AT A GLANCE

- 5 TBs of email to be migrated
- Implementing High Availability
- Multi-phase migration
- Backup capacity increased from 0 to every 15 minutes
- 25% increase in application speed

## INTRODUCTION

Agape Transportation Management focuses on Non-Emergency Medical Transportation (NEMT) services for individuals who are not currently experiencing an emergency but need a more specialized service than what a standard taxi is able to provide. They serve the New York community with essential curb-to-curb services to provide safe transportation for patients to their desired health care facilities.

With over 900 drivers and thousands of patient rides every day, the team needs to make sure their network and custom business software (app) for driver scheduling and communication is always up and running.

## THE PROBLEM

During the initial IT Audit, Protected Harbor found issues throughout the entire IT infrastructure, starting with incorrect application configuration that caused multiple server failures. The company was forced to revert the system back to a stable point and let Protected Harbor address their three main areas of concern: points of failure, security, and performance.

The previous IT company had a poor five-port switch set up where, in case of a hardware failure, it would bring everything down, including the firewall. Although at this point, the firewall was just a theory. Agape's last team had bought an indus- try-leading firewall for protection, but it was not set up properly and had not been renewed for over a year rendering it inactive. Additionally, the stack was not utilizing an uninterruptable power supply, negating the benefits of the client's expensive backup power setup. These single points of failure were enough to bring the whole system down and needed to be addressed.

There were other major security concerns, aside from the lack of a firewall. The client was vulnerable to an increased risk of attack, data leakage, and ransomware. A host of deactivated software was still installed on the network. There were IT management and monitoring tools that had access to the system with no control or oversight. Several virtual machines had no firmware or driver updates for the clients. One host had not been rebooted in 900 days. In a classic case of MSP over-reporting and under-performing, the previous service provider supplied updates to the infrastructure that the client could tangibly see. However, there were no updates on the backend servers.

Finally, the infrastructure was not optimized to provide the High Availability (HA) environment required. The vendor was still using servers with factory settings. There was nothing customized or set up to fully utilize the client's platform. Some of the software, such as SolarWinds, was not configured properly for the environment, creating an overuse of resources and inefficiency. Finally, the database for the mobile application the company relied on to schedule and communicate with drivers was heavier than the system could handle, creating latency and connectivity problems for the drivers.

PROTECTED HARBOR

## THE SITUATION

Agape's systems were overburdened with software and tools that were either no longer needed or had expired, prompting both their replacements and much needed modification. Protected Harbor had to start with the basics. That meant first lowering the load, deciding what was necessary to keep, and then migrating the client to a new customized server setup with a focus on speed and availability.

The team started to intimately work with Limosys, Agape's critical software provider, to plan the migration. Protected Harbor replaced the Fortigates (firewall protection) with High Availability pfSenses. They then started the process of backing up hosts and configuring for monitoring the environment. Protected Harbor broke the project down into five stages.

## THE SOLUTIONS

1. **Development and Testing:** During phase one Protected Harbor developed a process for testing the Limosys software. This was an unknown entity with no historical data to reference. Everything needed to be created from scratch. The team then followed through with completing the data migration. Once this was completed, Protected Harbor tested the app and checked with the end-users for suitability.

2. **Hardware High Availability:** Following the data migration, the terminal server was upgraded, which included the creation of new accounts and domains, as well as a high-end customization and setup of Agape's devices. All of the data was transferred from local workstations to the servers and then tested with users, again.

3. **Migrating Terminal Server:** Copies of virtual machines were created and saved at Protected Harbor's datacenter. As a result, the team was able to eliminate unnecessary hardware. Once migrated, Protected Habor changed out access points and reinstalled Windows on each device. The new High Availibility model ensured that the client had two SQL servers running in HA mode and that even if one of the servers failed, the client's databases remained operational.

"Thanks to Protected Harbor's data-driven, problem-solving, and result-oriented culture, Agape has quickly become one of the top companies in medical transportation."

**Mario Sena**
**Founder, Agape**

## THE RESULT

The new network infrastructure created by Protected Harbor, which is driven by data loss prevention, aggressive backup, and synchronization, has resulted in a 25% increase in application speeds, a 50% reduction in response requests, and a 99.99% uptime for Agape, making it more effective while remaining efficient. Periodical SQL database back-ups are now performed every 15 minutes, and the backups can be restored directly into SQL using a custom solution. Furthermore, because the new network infrastructure has improved capacity, the firm has gained significant boosts in terms of new client acquisitions.