

Citrix supports the operations of leading European online pharmacy

Gemini Pharmacy uses Citrix technologies to flexibly scale and secure its e-commerce platform. Recently, this well-known pharmacy network also started using virtualized applications with the Citrix Virtual Apps and Desktops platform, to support its internal business processes



Citrix ADC virtual controllers dynamically manage workloads of the e-commerce platform in a popular online pharmacy

Challenge: dynamic increase of internet transactions volume

The launch of an online pharmacy in 2008 was a particularly important event for Gemini. Similar platforms were already in operation, but the market was relatively slow at that time, due to a lack of fully regulated legalities. Online drug sales, however, began to increase. The technology solution implemented at that time was not suitable for dynamic development of Gemini's online store. Systematic and expensive modifications to the software and hardware infrastructure did not eliminate performance problems, and reliability left much to be desired.

"The traditional architecture of the e-commerce platform was designed for smaller businesses and hindered scaling. An additional challenge was the need to properly dimension the infrastructure that would support short-term sales increases in an efficient and cost-effective manner" explains Patryk Dolewa, CIO at Gemini Pharmacies.

The company started searching for a solution that would allow scaling and handling of occurring temporary load peaks. It was also important to protect earlier hardware investment. The analysis showed that load balancing technology could be the element neutralizing limitations of the system, offering flexible adaptation to traffic increasing up to five times periodically.

Solution: reliable application controller

The most suitable solution turned out to be Citrix ADC in the VPX Premium version. It provided a comprehensive set of functions supporting application availability and load balancing, including simple, horizontal scaling, especially in the face of short-term, but significant load peaks. Citrix ADC has also brought security and business continuity protection functions to a higher level.

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Patryk Dolewa | CIO | Gemini pharmacy

"Citrix ADC is not only a classic load balancer that allows you to connect a complex server infrastructure and manage the load in such a way that new traffic goes to the node that is least busy. It also serves as a content switcher. When a client looks for a particular drug, he receives information from one server, while if he wants to take a closer look at the packaging, for example, the graphics will be served from another node. In this way, Citrix ADC allows you to optimize performance and adapt to ongoing requirements" - says Jarosław Jaworski, CEO of Vayana, which, as a Citrix partner, supported the project at Gemini Pharmacy.

The choice of the VPX version - virtual dedicated device - was dictated by the fact that it was impossible to accurately estimate the store's loads due to periodic surges. When using VPX, the company's platform is not limited by physical ADC device performance. At the same time, implementation costs can be significantly reduced. The Citrix controller was installed on the hardware infrastructure owned by Gemini Pharmacy, controlled by VMware software.

When using the virtual version of Citrix ADC, you can control the performance almost freely just by changing the license. VPX licensing comes in several models. Gemini Pharmacy uses a comprehensive monthly billed service, based on throughput. The license specifies the maximum gigabit internet traffic.

In the event of traffic increase, such as on the day of free delivery or at the beginning of the COVID-19 epidemic, all you have to do is to update your ADC license and guarantee access to more power in a virtual environment. This operation takes up to several hours, including the time needed to determine the costs of new licenses and to approve them. Technically the license update itself blocks access to the system only for a few seconds.

Gemini infrastructure is supported by two virtual Citrix ADC devices operating in a geographically dispersed active-passive configuration. The VMware virtual environment itself guarantees that, in the event of failure, the virtual device would be launched on another properly working node. However, since this operation requires a restart - lasting up to several minutes - Gemini decided to set up a cluster of two load balancers. Moreover, the Premium version of the Citrix controller offers WAF (Web Application Firewall), which protects servers against hacker attacks.

Usually, when a web server vulnerability is detected, there is a patch or a new version of software available. However, running it may be associated with the risk of the application, in this case the online store, not working properly. That is why you need to run necessary tests first. However during that period server remains vulnerable. Citrix ADC provides automatic protection against such situation. Citrix Web App Firewall hides the server infrastructure and filters network traffic before it reaches the server. If it notices a suspicious pattern, traffic is blocked.

About Gemini

Gemini Pharmacies have been present on the Polish market for almost three decades. Starting in 1990 with the first branch in Wejherowo, the company created a network of 172 pharmacies located throughout the country. Gemini online store has been in operation for over a dozen years and is constantly developing. In terms of transaction volumes, it is the leading business of this type in Poland

Benefits

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The company noticed problems resulting from the specificity of its e-commerce solution at the moment when it started operating on a medium scale. Citrix technology has enabled Gemini to effectively solve performance problems and ensure high accessibility of implemented platform. The Citrix ADC controller helped overcoming limitations and made possible to serve millions of requests without raising IT costs.

Reduced downtimes

Citrix ADC not only provides a performance increase but thanks to the geographically dispersed active-passive cluster configuration, the store also has an additional layer of failure protection. In case of any problems, the e-commerce platform faces, at most, only a few seconds of downtime. Any longer interruption in a website's operation are unacceptable in large-scale e-commerce due to the very high costs associated with such system malfunctions.

Ready for challenges

Recently, in the face of COVID-19 epidemic, Gemini Pharmacies also launched the Citrix Virtual Apps and Desktops platform. The solution provided nearly 60 employees, mostly responsible for internal processes, with instant access to a key business application.

"Our ERP system was not prepared for remote work. However, thanks to Citrix Virtual Apps and Desktops, literally within days we were able to give employees secure access to it via a web browser. In addition, using the same technology, we managed to make our contact center system available to an external call center. This was necessary because scaling our own contact center turned out to be practically impossible in the face of a rapid and exceptionally large increase of inbound calls" - concludes Patryk Dolewa.

Gemini online pharmacy



4 million visits per month

5x

load spikes during peak sales periods

Industry

- E-commerce (Pharmacy Retailer)

Key benefits

- Performance tailored to current needs
- Efficient scaling
- Increased reliability
- Upgraded security

Citrix Products

- Citrix ADC VPX Premium
- Citrix Virtual Apps and Desktops

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