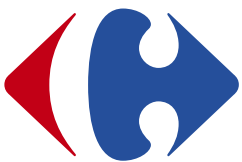


# Carrefour simplifies migrating applications to the cloud



## **NetApp cloud technologies make moving huge investments much simpler.**

The Carrefour Group has a vast digital transformation underway supported by an IT infrastructure migration plan dubbed “Build to Cloud.” The transformation aims to reposition the French retailer from its traditional retail leadership to a stronger digital leadership with Google as a key enabling partner.

With Google Cloud as its foundation, NetApp® technologies compliment and support the implementation of cloud processes and the migration from on premises to 100% cloud by 2026. Carrefour IT teams are seeing real benefits from their new cloud solution, including increased migration simplicity, guaranteed performance and resilience, clearer storage identification between hot and cold data, and ease of service delivery.

## Migrate 100% of applications to the cloud by 2026

“Thanks to the combined assets of the NetApp solutions on Google Cloud, there is no need to edit applications when migrating them to the cloud.”

François-Xavier Delmaire  
Head of Carrefour Build to Cloud

Today the French brand Carrefour is enjoying huge success, leading in the global supermarket ranking in 2020, with 320,000 employees and 13,000 stores in more than 30 countries. However, in 2018 the company experienced a structural delay in its e-commerce growth.

Carrefour Group’s digital transformation plan and strategic partnership with Google had multiple objectives. Front and center was an implementation of a solid cloud infrastructure to meet consumers’ growing demand for e-commerce. Additionally, the plan includes developing artificial intelligence solutions to facilitate the purchasing experience and strengthen customer relations by better anticipating flows, including unexpected sales. With an estimated 11 million daily transactions logged by the Carrefour Group in 2019, the challenge – and the opportunity – was significant for the IT department.



### Expertise spread over cloud and digital innovation

When Carrefour signed its strategic partnership with Google in June 2018, on the strength of Google’s public cloud offering (then called Google Cloud Platform), the transformation accelerated.

“With this agreement, Carrefour and Google were able to pool their expertise directly in a real win-win relationship in terms of economic opportunities and opportunities for digital innovation,” said François-Xavier Delmaire, head of the Carrefour Build to Cloud program.

Carrefour brought to the partnership know-how in the fields of commerce, supply, and mass distribution; Google brought data science, artificial intelligence, and client interface expertise.

Results came quickly, first in the non-food sector and then in the food sector. Specifically, a project was launched using the Google Shopping search engine: an online ordering service using voice, based on the Google Assistant interface. The resulting application created a faster and simpler online shopping experience. After 2 years’ development in a Paris innovation laboratory opened by both companies, the service was rolled out in June 2020.

With its capacity for machine learning, the voice application is now France’s most successful voice ordering experience in the food e-commerce sector. It offers increasingly accurate and customized purchases based on the shopper’s previous voice requests.

Additionally, Carrefour is now able to prevent supply chain issues by using improved optimization of suggested categorizations in product references based on ingredients or allergens. Tasks that would take a team of people several days to do now takes minutes with the help of Google AI.

“But all of that would not have been possible without NetApp’s know-how and expertise in the field of data management services within the cloud,” said François-Xavier Delmaire. “For us, the fact that NetApp’s solutions synchronize perfectly with the Google Cloud environment, while conveniently adding to it, actually represents invaluable ease of use on a day-to-day basis in the migration of our systems and applications.”

### **NetApp facilitates cloud operations**

To meet its digital ambitions as well as its numerous requirements around transitioning to the cloud, the Carrefour Group sought a data partner capable of facilitating the tasks that could also offer significant savings in time and operational costs. For dynamic management of persistent storage problems in containers, the NetApp Trident™ open source software tool, integrated into NetApp Cloud Volumes Service for Google Cloud, marked the beginning of the collaboration between Carrefour and NetApp.

“Thanks to this tool, we enjoy the double benefit of reinforced protection of persistent data in containers and also simple and rapid migration of our data flows. Using this technology, consumption outweighs management — exactly what we wanted,” said Delmaire.

Following that initial success, several other projects were developed with NetApp in response to the requirements of multiple Carrefour IT teams. For example:

- Implementation of a shared VP file system using NetApp Cloud Volumes ONTAP®
- Consolidation of a supply chain hosting solution with Azure NetApp Files
- Migration of all local data centers to virtual work stations
- Modernization of backup solutions, in collaboration with Veeam, enabling users to change the type of storage to optimize for performance

According to Delmaire, “NetApp, quite simply, needed to be able to meet 100% of our cloud expectations, as diverse as they are. Thanks to the combined and fully adequate strengths of the NetApp solutions on the Google Cloud, which, among other things, offer the same deduplication, compression, and administration tools, there is no need to edit applications during our cloud migration. Performance and data resilience are guaranteed throughout,

which is a huge asset to allow us to manage confidently, rapidly, and easily, in a significant digital transformation.”

Today, 30% of the Carrefour Group applications have been migrated from numerous local data centers to the more economical, robust, and flexible cloud environment. The target of migrating 100% of applications is set for 2026.

“NetApp solutions such as Cloud Volumes ONTAP and Cloud Volumes Services on Google Cloud allows this ambitious target,” Delmaire said. “For example, transferring data by simple replication avoids service interruptions, and short delivery time frames not only offer cost savings but also the option of being able to manage our priority orders during migration in an optimal way.”

### **Digital and data at the heart of all commercial operations**

Encouraged by the initial successes of its cloud migration, and eager to advance e-commerce to take advantage of changes in consumer habits, Carrefour Group has announced its ambition to become the European leader in digital retail by 2026.



From this ambition stems other objectives: increasing the value of the company's data; accelerating the launch of its new applications into the market; and above all, realizing the full potential of its strong desire for omnichannel services.

To achieve these goals, Carrefour Group CEO Alexandre Bompard announced the launch of a €3 billion investment plan over 5 years. The goal: tripling online transaction volume by 2026. This ambitious plan means that cloud-based IT infrastructure must be optimized to cope with the in-depth development and related changes to operational processes, with a significant contribution from artificial intelligence solutions.

The human part of the equation requires transformation as well. The initiative also includes progressive training of 320,000 Carrefour employees in cloud practices and how to use new digital workflows.

“We want to guarantee the same, or similar, work habits, without technical constraints,” said François-Xavier Delmaire. “That is exactly why we have brought on NetApp with its first-rate flexibility of Cloud Volumes ONTAP.”

## NetApp Products

NetApp Cloud Volumes ONTAP for Google Cloud

NetApp Cloud Volumes Service for Google Cloud

Azure NetApp Files



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### About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. To learn more, visit [www.netapp.com](http://www.netapp.com)



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