

## A More Efficient, Innovative and Greener 11.11 Runs Wholly on Alibaba Cloud

*Global leading cloud provider achieving more with less whilst doubling the use of clean energy at key data centers during the world's largest global shopping festival*

**Hangzhou, China, November 14, 2022** – Alibaba Cloud, the digital technology and intelligence backbone of Alibaba Group, has once again excelled in its mission of supporting the group's 11.11 Global Shopping Festival, thanks to its high-performance computing and innovative technology. Drawing on self-developed infrastructure upgrades, the group saw an 8% year-on-year saving in computing cost per resource unit from April 1 to November 11.

“The breadth and depth of cloud technology deployment during this year's 11.11 has once again showcased Alibaba's best cloud and technology practice; be it through fundamental architecture like self-proprietary technology powering high-performance computing and database products, or consumer-facing XR (extended reality) and livestreaming technologies. We intend to continue applying these proven capabilities to even better serve our customers and help them to be more efficient, innovative and greener in their own digital transformation journeys,” said **Li Cheng, Chief Technology Officer of Alibaba Group**.

### **Doing more with less through cloud-native and serverless innovations**

This year's 11.11 was powered by Alibaba Cloud's dedicated processing unit for the Apsara Cloud operating system. The upgraded infrastructure system significantly improved efficiency of computing, storage and network in data centers supporting the event, while also reducing network latency. For example, with this new upgrade supported by **cloud-native** technology, ordering, pre-sale balance payment and refunding could be launched simultaneously with an enhanced scalability and lower latency.

During this year's 11.11, the front page of Taobao, one of Alibaba's e-commerce platforms, was upgraded by the latest **serverless** technology, allowing for automatic scaling with extreme elasticity based on actual workloads.

Alibaba Cloud's **cloud-native database** products also significantly expanded the capacity of consumers' shopping carts by more than a double, from 120 items to 300. The ApsaraDB for Redis Enhanced Edition (Tair), a cloud-based in-memory database service for enterprises, supports new functions such as product grouping and sorting, enabling consumers to organize their shopping cart according to their own preferences. They could also make use of the 'select' function to enjoy cross-merchant discounts, to pre-order goods and use vouchers for a more rewarding shopping experience.

### **Innovative technology delivers more immersive consumer experience**

A more immersive shopping experience was created this year thanks to Alibaba's proprietary technology in supporting extended reality. Alibaba's technology in **3D modeling leverages a neural radiance field (NeRF)**, a neural network technology for generating novel views of complex 3D scenes. During this year's 11.11, it assisted luxurious retail and furniture brands, like Burberry, Estée Lauder and SK-II, to build virtual stores on the e-commerce platform Tmall.

Through self-developed **3D renderings** that realistically represent natural light, flames and natural flowing water, an outdoor nature scene was built for sportswear brands including Descente (Japan), to showcase its latest products in a vibrant and invigorating environment. Consumers can also view the products in three dimensions, enabling them to inspect details up close, or try on their chosen watches and accessories virtually thanks to AR technologies. Consumers are also free to arrange different items of furniture indoors, or tents for outdoor camping.

Another new expressive interaction came from an [XR-powered marketplace](#) on Tmall and Taobao. Using the **automatic 3D space creation technology** from Alibaba's research institute DAMO Academy, a virtual shopping street was built, featuring over 700 products from 70 brands including 30 internationally-recognized franchises, such as Sanrio's iconic Hello Kitty, and Hollywood's franchise Minions. Shoppers can choose their own avatars, check out the products and place them in their virtual shopping carts.

During this year's 12-day festival from October 31 to November 11, nearly 2 million packages were delivered by **Xiaomanlv** vehicles, Alibaba's last-mile logistics vehicle. This is double the package delivery volume from the same period last year. The logistics robot was deployed in over 400 campuses across China, which has greatly reduced the time of queuing for package deliveries during peak hours.

### **A greener 11.11 powered by clean energy**

In addition to its cloud computing solutions helping to reduce energy consumption, Alibaba Cloud's five hyper-scale data centers across China also doubled the amount of clean energy used to support this year's 11.11 compared to last year. More than 32 million kilowatt-hours of electricity used by Alibaba Cloud to support 11.11 this year came from renewable energy, up by 30% on a daily average basis compared to last year. Additionally, Alibaba Cloud's Heyuan data center, the cloud company's largest hyper-scale data center in South China, now runs entirely on clean energy. Alibaba Cloud's self-developed immersion cooling technology has reduced the energy consumption of the data centers, with power usage effectiveness (PUE) reaching as low as 1.09 – a world-leading level.

Alibaba Cloud has also worked with Tmall to leverage the carbon management platform, **Energy Expert**. It provided online carbon footprint modeling, calculations and certifications for more than 40 brands in various sectors, including paper & pulp, food and personal care, to help them categorize low-carbon products, identify carbon emission resources and conduct informed sustainability practices to reduce carbon emissions.

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## **About Alibaba Cloud**

Established in 2009, Alibaba Cloud ([www.alibabacloud.com](http://www.alibabacloud.com)) is the digital technology and intelligence backbone of Alibaba Group. It offers a complete suite of cloud services to customers worldwide, including elastic computing, database, storage, network virtualization services, large-scale computing, security, management and application services, big data analytics, a machine learning platform and IoT services. Alibaba maintained its position as the third leading public cloud IaaS service provider globally since 2018, according to IDC. Alibaba is the world's third leading and Asia Pacific's leading IaaS provider by revenue in U.S. dollars since 2018, according to Gartner.

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