The University of Tokyo and Fujitsu launch trial for Japan's first cloud-connected inter-regional workload shift based on power grid conditions

Tokyo and Kawasaki, Japan, December 24, 2025 – The University of Tokyo (UTokyo) and Fujitsu Limited today announced the commencement of a trial on inter-regional workload shifting between data centers. This initiative is part of the Watt-Bit Collaboration Project, which aims to optimize electricity supply and demand by integrating and operating power and communication systems in response to the increasing power consumption of data centers driven by AI demand. The trial will run from January 5, 2026, to March 31, 2026.

This trial is a technical verification toward the realization of the Watt-Bit Collaboration Project for Green Transformation, which the UTokyo announced with TEPCO Power Grid in October 2025. Moving forward, the partners aim to build a carbon-neutral and sustainable infrastructure and contribute to green transformation by actively utilizing renewable energy to meet electricity demand.

The two organizations will collaborate with national and related bodies to expand connected locations and plan additional verifications, including the utilization of APN (All Photonics Network), the next-generation communication infrastructure. Through open innovation and collaboration across industry, government, and academia, the organizations will develop technologies to realize a sovereign distributed data center concept ensuring data and operational sovereignty primarily in regions surrounding renewable energy sources, thereby contributing to the development of sustainable public infrastructure.

UTokyo's Center for Strategic Promotion of Green Transformation (GX) has previously promoted the introduction of renewable energy and the spatial and temporal understanding of electricity consumption and conducted trials on workload shifting based on electricity price differences between regions. In addition to these efforts, UTokyo will proceed with the integrated visualization of campus-wide electricity consumption and carbon footprint, the utilization of energy data such as from power grids, and the optimization of electricity consumption within the campus across facilities and equipment, including workload shifting and further utilization of renewable energy.

Fujitsu aims to advance the social implementation of the Watt-Bit Collaboration and make the world more sustainable by providing the sovereign cloud solution Fujitsu Cloud Service powered by Oracle Alloy and cloud-native technologies including containers, which are essential for distributed data centers.

Overview of the Trial

1. Trial Period

January 5, 2026, to March 31, 2026

2. Details

The 'Fujitsu Cloud Service powered by Oracle Alloy' computing environment, which is confidential, meets sovereign requirements, and enables secure and seamless connection with on-premises systems, operates at the University of Tokyo Kashiwa Campus Information Technology Center and Fujitsu's data center in Japan. This trial will verify whether it can perform computations irrespective of location using container technology. With the cooperation of an electric utility, the effectiveness of inter-regional workload shifting linked to power grid conditions, such as grid load status and electricity market prices, will also be verified.

3. Roles

UTokyo: Provision of supercomputer systems at the Information Technology Center and workload use cases related to AI research.

Fujitsu: Integration of workload shifting using container technology and provision of Fujitsu Cloud Service powered by Oracle Alloy.

Background

In recent years, the surge in AI demand has led to a rapid increase in power consumption by data centers due to the growing volume of computational processing. Traditional data centers are often concentrated in urban areas, leading to challenges such as strained power supply and demand, and risks during large-scale disasters.

Furthermore, from the perspective of rising global energy supply chain risks and energy security, there is a need to optimize demand around decarbonized power sources.

Against this backdrop, it is essential to decentralize data centers, particularly around renewable energy, and optimize the balance of electricity supply and demand based on power grid conditions. These efforts will also maximize the utilization of renewable energy, contributing to Japan's 2050 carbon neutrality declaration and the goal of a 60% reduction in greenhouse gas emissions by 2035 compared to 2013 levels, as submitted to the United Nations.

About Fujitsu

Fujitsu's purpose is to make the world more sustainable by building trust in society through innovation. As the digital transformation partner of choice for customers around the globe, our 113,000 employees work to resolve some of the greatest challenges facing humanity. Our range of services and solutions draw on five key technologies: AI, Computing, Networks, Data & Security, and Converging Technologies, which we bring together to deliver sustainability transformation. Fujitsu Limited (TSE:6702) reported consolidated revenues of 3.6 trillion yen (US$23 billion) for the fiscal year ended March 31, 2025 and remains the top digital services company in Japan by market share. Find out more: global.fujitsu

Press Contacts

The University of Tokyo

https://gx.u-tokyo.ac.jp/（Japanese)

Fujitsu Limited

Inquires