仮想マシンホスティングを利用した地磁気データサービスのサーバー運用

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Server operation for geomagnetic data service using virtual machine hosting service

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The World Data Center for Geomagnetism in Kyoto, Japan, has been providing the geomagnetic data service for 44 years, since 1977. We have repeatedly faced the problem of maintaining the server system, both in terms of hardware and operating systems. To solve this problem, we moved our server systems from an on-site server room to the virtual machine (VM) hosting service provided by the Institute for Information Management and Communication (IIMC), Kyoto University. The VM hosting service ensures that free server construction is possible using an occupied server with root privileges, just as if we had purchased the actual machine. We completed the move of our web server in April 2022, and the data processing servers in December 2022. The new VM server systems share the database in a network-attached storage installed on the small device housing provided by IIMC. The VM and the small device housing have a permanent power supply, so our data services will no longer be interrupted. Our new VM server system effectively reduces the cost and effort required to operate servers, leading to continuous and long-term data service in the future.